



Acquisition Directorate

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NCIA/ACQ/2018/1134

16 April 2018

To : All Nominated Prospective Bidders

Subject : **INVITATION FOR BID NO. IFB-CO-14604-SSSB-POL**
Provide Maritime and NATO Airborne Early Warning (NAEW) Interfaces and Associated Communications Systems Ship-Shore-Ship Buffer (SSSB) for Poland
Project Serial 5WI15001

Reference(s) : A. AC/4-D/2261 (1996 Edition)
B. AC/4-DS(2017)0007, AC/4(PP)D/27696
C. AC/4-DS(2017)0023, AC/4(PP)D/27696-ADD1
D. NCI Agency Notification of Intent NCIA/ACQ/2018/974 dated 23 February 2018

Prospective Bidders,

1. Your firm is hereby invited to participate in an International Competitive Bidding under the procedures set forth at Reference A for the provision of Maritime and NATO Airborne Early Warning (NAEW) Interfaces and Associated Communications Systems Ship-Shore-Ship Buffer (SSSB) for Poland.

2. The scope of this project will encompass the procurement and installation of the Electronic Portion comprising the radio communication, antennas, inter-site link equipment. This includes some limited Civil Works portions associated with those elements. The civil works for existing infrastructure of the SSSB Radio Sites were already completed by the Host Nation and are detailed in the Statement of Work Annex B. A minimum of one year warranty period will be required for maintenance and support of the SSSB System. In addition to warranty, an optional logistics support for the life cycle of the SSSB System up to twelve (12) years after expiry of warranty provisions may be required.

3. The project is expected to be completed after seventeen (17) months from the Effective Date of Contract (EDC).

4. The Republic of Poland is the Host Nation for this project and has the overall financial authority for the programme. The NCI Agency has been authorised to act as Technical and Procurement Agent on behalf of the Host Nation and is vested with the acquisition authority.



NATO Communications
and Information Agency
Agence OTAN d'information
et de communication
Avenue du Bourget 140
1110 Brussels, Belgium
www.ncia.nato.int

5. NATO intends placing one contract to cover the entire scope of the project. No partial bidding will be allowed.
6. Contract award will be made on a Firm Fixed Price Basis to the proposal evaluated as the lowest price, technically compliant in accordance with the selection criteria set forth in the Bidding Instructions attached to this letter.
7. The reference for the Invitation for Bid is **IFB-CO-14604-SSSB-POL**, and all correspondence concerning the IFB should reference this number.
8. **THE CLOSING TIME FOR SUBMISSION OF BIDS IN RESPONSE TO THIS INVITATION FOR BID IS 11:00 HOURS (BRUSSELS TIME) ON 9 JULY 2018.**
9. This Invitation for Bid consists of the Bidding Instructions, including Administrative Certificates and Bidding Sheets (Book I), and the Prospective Contract (Book II). The Prospective Contract contains the Schedule of Supplies and Services (Part I), Contract Special Provisions (Part II), NCI Agency Contract General Provisions (Part III), and the Statement of Work (SoW) with its Annexes (Part IV). The SoW and its Annexes thereto set forth detailed specifications governing the performance requirements of the Prospective Contract.
10. Bidders are advised that the overall security classification of this IFB Package is NATO UNCLASSIFIED. However, this document is considered NATO RESTRICTED when SoW Annex B is included. To receive a copy of SoW Annex B by commercial courier Bidders shall request this document by filling out and sending the **Certificate of Security Obligation**, which is in Book I Annex B-6, **no later than within seven (7) working days** of the release of this IFB. Additional details are provided in Book I Section 1.4.
11. Bidders are advised that the execution of the prospective Contract will require unescorted access and work of Contractor personnel at NATO Class-II security areas. Personnel of the winning bidder involved in the project, and all personnel involved in this project as a result of sub-contracts issued by the Contractor, will be required to hold individual "NATO SECRET" security clearances. Only companies maintaining appropriate personnel clearances will be able to perform the resulting Contract. Furthermore, the successful Contractor will be required to handle and store NATO classified information, and only companies maintaining a **Facility Clearance** of "NATO SECRET" may be eligible to bid on this project. Bidders are to note that Contract Award will not be delayed in order to allow Contractor personnel to obtain missing clearances.
12. Bidders have the right to request IFB clarifications as outlined in Book I Section 2.14. All requests for clarification will be dealt strictly in accordance with the procedures at Reference A.
13. **Site Surveys** are scheduled to take place on **23 May 2018** at the two radio sites in Poland (Rozewie and Rzucewo). **Bidders Conference** will be held on **24 May 2018** in Jastrzębia Góra at a venue provided to Bidders closer to the date of this event. Bidders shall be limited to a maximum of two individuals for participation in the Site Surveys and Bidders Conference (individuals do not need to be the same persons for the Site Surveys and for the Conference). The security classification of the Site Surveys is up to "NATO RESTRICTED", the Bidders Conference is "NATO UNCLASSIFIED".
14. In order to attend the Site Survey and Bidders Conference, Bidders must request access to the Host Nation Poland POC indicated in the Book I section 1.5.11. **Requests for Visits (RfVs)** attached to this letter must be submitted well in time (**at least 3 working weeks prior to the event**).

15. Further details related to Site Surveys and Bidders Conference will be provided to the appointed Bidders' representatives.

16. While not mandatory to attend these events, Bidders are strongly encouraged to, in order to gain a better understanding of site conditions. As per Book II Part II Article 6, the prospective Contractor having had the opportunity to visit the sites both at the bidding phase and at the initial phase of contract implementation, shall have no recourse to claims of additional work and cost in connection with activities performed under this Contract.

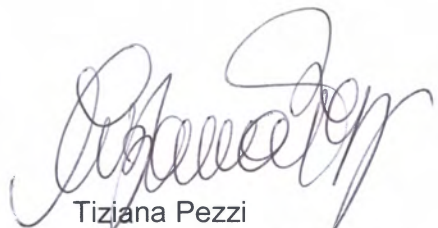
17. Recipients are requested to complete and return the enclosed "Acknowledgement of Receipt" at Attachment A within 10 working days of the date of this letter, informing the NCI Agency of their intention to bid/not to bid. Firms are not bound by their initial decision, and if a firm decides to reverse its stated intention at a later date, it is requested to advise the NCI Agency by a separate communication.

18. This Invitation for Bid does not constitute either a financial or contractual commitment at this stage. Prospective Bidders are advised that the NCI Agency reserves the right to cancel, withdraw or suspend this IFB at any time in its entirety and bears no liability for bid preparation costs incurred by firms or any other collateral costs if bid cancellation, withdrawal or suspension occurs.

19. This Invitation for Bid remains the property of the NCI Agency and shall be protected in accordance with the applicable national security regulations.

20. The NCI Agency sole point of contact (POC) for all information concerning this IFB is Ms. Viktorija Navikaitė, who may be reached at Viktorija.Navikaite@ncia.nato.int.

ON BEHALF OF DIRECTOR OF ACQUISITION:



Tiziana Pezzi
Principal Contracting Officer

Attachments:

- A) Acknowledgement of Receipt of IFB-CO-14604-SSSB-POL
- B) Request for Visit Form
- C) Invitation for Bid IFB-CO-14604-SSSB-POL

Distribution List

All Nominated Prospective Bidders 1

NATO Delegations (Attn: Investment Adviser):

Belgium	1
Bulgaria	1
Canada	1
Czech Republic	1
Denmark	1
Estonia	1
France	1
Germany	1
Greece	1
Hungary	1
Iceland	1
Italy	1
Latvia	1
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Romania	1
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Iceland	1
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Netherlands	1

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Poland	1
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Romania	1
Slovakia	1
Slovenia	1
Spain	1
Turkey	1
United Kingdom	1
United States	1
Belgian Ministry of Economic Affairs	1

Distribution for information (Blind to Bidders)

NATO HQ

<u>NATO Office of Resources</u> Management and Implementation Branch – Attn: Deputy Branch Chief	1
<u>Director, NATO HQ Communications and Information Staff</u> Attn: Executive Co-ordinator	1
SACTREPEUR – Attn: Investment Assistant	1
SACEUREP – Attn: Investment Assistant	1

Host Nation Poland

NSIP MO -Attn: Director NSIP MO	1
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NCI Agency – NATEXs

All NATEXs (except Albania, Croatia, Montenegro)	1
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Nominated Prospective Bidders

BELGIUM:

Luciad n.v.
SECURITAS

CANADA:

WaVv Business Development Inc.

CROATIA:

KING ICT d.o.o

FRANCE:

Global Technologies

GERMANY:

FREQUENTIS Deutschland GmbH
CESTRON International GmbH
Hagenuk Marinekommunikation GmbH
Rohde & Schwarz GmbH & Co. KG

GREECE:

SSA S.A.

ITALY:

LEONARDO S.p.A.
SIMETEL SpA
IES S.r.L.
I&C INTERNATIONAL CONSULTING S.r.l.

PAGE EUROPA Srl

NETHERLANDS:

UNI Business Centre BV

POLAND:

Enamor Sp. z.o.o
GMV Innovating Solutions Sp z o.o.

SPAIN:

GMV
EVERIS
DF NUCLEO
DEIMOS SPACE, S.L.U

TURKEY:

ASELSAN Elk. San ve Tic. A.S.
E4E Engineering Company Ltd.
Antensan Elektronik Sanayi

USA:

Globecomm Systems, Inc.
DRS Advanced ISR, LLC.
LEIDOS Inc
Tactical Communications Group, LLC

ATTACHMENT A
ACKNOWLEDGEMENT OF RECEIPT OF INVITATION FOR BID
IFB-CO-14604-SSSB-POL

Please complete and return (as .pdf scan) within 10 working days
by e-mail to: Viktorija.Navikaite@ncia.nato.int

Date: _____

We hereby advise that we have received Invitation for Bid IFB-CO-14604-SSSB-POL on _____, together with all enclosures listed in the Table of Contents.

PLEASE CHECK ONE:

- As of this date and without commitment on our part, we **do intend** to submit a bid.

- We **do not intend** to submit a bid (please find in return the IFB documents/or Certificate of Destruction, if applicable).

- We are reviewing the requirements of the IFB and will notify you of our decision as soon as possible.

Signature: _____
Printed Name: _____
Title: _____
Company: _____
BOA no. (if any): _____
Address: _____

POC for the Bid: _____
Tel.: _____
Fax: _____
E-mail: _____

ATTACHMENT B
Request for Visit
IFB-CO-14604-SSSB-POL

No	FULL NAME	NATIONALITY AND DATE OF BIRTH	COMPANY NAME*, POSITION OCCUPIED AND LOCATION	ID/PASSPORT NUMBER	SECURITY CLEARANCE LEVEL AND VALIDITY**	DAYS ATTENDING (23 and/or 24 May 2018)
1						
2						
3						
4						

* Subcontractors included

** Required only for the participants at the Site Surveys (NR). Bidders Conference is NU.

_____ Date

_____ Signature of Security Officer

_____ Printed Name

_____ Title

_____ Company

_____ Company Stamp

ATTACHMENT C
Invitation for Bid
IFB-CO-14604-SSSB-POL

Contents of Attachment C:

- a) BOOK I Bidding Instructions

- b) BOOK II Prospective Contract
 - i. Part I Schedule of Supplies and Services
 - ii. Part II Contract Special Provisions
 - iii. Part III NCI Agency Contract General Provisions
 - iv. Part IV Statement of Work (SoW):
 - 1. SOW ANNEX A: SYSTEM REQUIREMENT SPECIFICATIONS
 - 2. SOW ANNEX C: SECURITY ASPECT LETTER & PROJECT SECURITY INSTRUCTIONS
 - 3. SOW ANNEX D: SUPPORT TO SECURITY ACCREDITATION

To receive a copy of SoW Annex B (NATO RESTRICTED) by commercial courier Bidders shall request this document by filling out and sending the Certificate of Security Obligation, which is in Book I Annex B-6, no later than within seven (7) working days of the release of this IFB. Additional details are provided in Book I Section 1.4.

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INVITATION FOR BID

IFB-CO-14604-SSSB-POL



Book I

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IFB-CO-14604-SSSB-POL



Book I

BIDDING INSTRUCTIONS

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SECTION 1 INTRODUCTION**1.1. INVITATION FOR BID (IFB) PROCEDURE**

- 1.1.1. Poland (POL) is Host Nation (HN) under the NATO Security Investment Programme for the Ship-Shore-Ship-Buffer (SSSB) project and has the overall financial authority for the programme. The NATO Communications and Information Agency (NCI Agency) has been authorised to act as Technical and Procurement Agent on behalf of the HN (hereby referred to as the Purchaser), and is vested with the acquisition authority to conduct the NATO International Competitive Bidding (ICB) Procedure, and to award and administer the resulting Contract.
- 1.1.2. This solicitation is an International Invitation for Bid (IFB) and is issued in accordance with the NATO procedures: AC/4-D/2261 (1996 Edition). Award of a Contract pursuant to this IFB will be made to the firm that has offered the lowest evaluated price and has been determined to be technically compliant with the requirements of the IFB in accordance with the evaluation criteria. The bid evaluation criteria and the detailed evaluation procedure are described in Section IV of these Bidding Instructions.
- 1.1.3. This IFB will not be the subject of a public bid opening.
- 1.1.4. This IFB consists of procurement, implementation and installation of radio communication equipment for a SSSB system in Poland. It also includes support to the HN and NCI Agency in the commissioning of the complete SSSB System.
- 1.1.5. Award of the resulting Contract will be made on a firm fixed price basis.
- 1.1.6. The solicitation, evaluation and award processes will be conducted in accordance with the terms and conditions contained herein.
- 1.1.7. All Bidders shall provide the required certifications under Annex B.
- 1.1.8. A single Contract will be placed with one Contractor. No partial bidding shall be allowed.

1.2. SCOPE

- 1.2.1. Background
 - a. The purpose of this IFB is to implement the transmission and receiving sites of the SSSB POL system (2 sites in total, located in Rozewie and Rzucewo, POL). The system will also include a SSSB Buffer Control Centre (BCC) at the Maritime Operation Centre (MOC) in Gdynia, from where monitoring and control of communication resources is performed. The BCC, however, will be implemented by NCI Agency, not by the prospective Contractor. The prospective Contractor will support the integration of Transmission (Tx) and Reception (Rx) sites and the respective testing.

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- b. The Statement of Work (SOW) and the System Requirements Specification (SRS, SOW Annex A) are part of the prospective Contract, which is Book II of this IFB. The Contractor will be responsible for the procurement, design, manufacturing, delivering, installation, integration, testing and preparing for acceptance of the systems and shall be obligated to maintain the systems and provide logistics support for the life cycle of the systems up to nine (9) years after expiry of the systems warranty provisions if the HN decides to exercise the Contractor Logistic Support (CLS) option.
- c. The majority of the works related to Civil Works (CW) has been already contracted by Poland through national competitive bidding, have been finalised, and are out of the scope of this bid. It is not foreseen to perform any further Civil Works by HN Poland during the performance of this Contract. The scope of this bid will encompass the design, procurement, delivering, installation, testing and preparing for acceptance of the communication equipment (including antennas) of the SSSB system on Tx and Rx sites including some limited civil work components.

1.2.2. Contract Scope

- a. The prospective contract is structured in the following manner:
 - i. A Firm Fixed evaluated Price of the acquisition of CLINs 1 thru 15 (including all its sub-divisions).
 - ii. A Fixed Rate Not to Exceed (NTE) unevaluated Price of the Option for Contractor Logistic Support (CLIN 16) as stated in the Bidding Sheets. This Option will undergo technical evaluation and price realism assessment.
- b. Price evaluation will be based on the total Firm Fixed Price for CLINs 1 thru 15. The basic Contract shall consist of the CLINs 1 thru 15 only for the initial period of 74 weeks + 12 months Warranty period.

1.3. SCHEDULE FOR CONTRACT AWARD AND IMPLEMENTATION

- 1.3.1. The target date for Contract award is April 2019.
- 1.3.2. The Contractor shall achieve Final System Acceptance (FSA) within seventeen (17) months after the Effective Date of Contract (EDC), or at EDC + 74 weeks.

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1.4. SECURITY

- 1.4.1. The overall security classification of this IFB is "NATO UNCLASSIFIED". However the document will be considered "NATO RESTRICTED" when SOW Annex B is included (SOW Annex B: Site Information Data Package). SOW Annex B consists of detailed information about the radio sites and includes information on Purchaser Furnished Equipment (PFE), Civil Works and electrical power provision as well as technical drawings. The package may be communicated over the Internet without Annex B. The SOW Annex B will only be released to Bidders upon request and following receipt by the Purchaser of the **Certificate of Security Obligation which is in Book I Annex B-6, no later than within seven (7) working days of the release of this IFB**. The Purchaser POC at Par. 2.16 below shall receive the completed and signed Book I Annex B-6 by e-mail within the afore-mentioned deadline. Failure to request SOW Annex B and to provide the Certificate of Security Obligation within the stated time will not be considered as a reason for any request of extension of the Bid Closing Date.
- 1.4.2. The resulting Contract will require the prospective Contractor to handle, process and store material classified up to and including "NATO SECRET", at NATO and HN POL facilities. The Contractor shall have the appropriate clearances at the time of Contract award.
- 1.4.3. The resultant Contractor's project manager and personnel working at HN or Purchaser premises/sites shall be security cleared to "NATO SECRET" level. Any prospective Contractor personnel without such a clearance, confirmed by the appropriate national security authority, and transmitted to the cognisant NATO/HN security officer at least thirty (30) calendar days prior to any site visit, will be denied access to any of the HN or Purchaser premises/sites. Denial of such access by the Purchaser may not be used by the Contractor as the basis for a claim of adjustment or an extension of schedule nor can the denial of access be considered a mitigating circumstance in the case of an assessment of liquidated damages and/ or a determination of termination for default by the Purchaser.
- 1.4.4. This requirement also applies to all personnel involved in this project as a result of sub-contracts issued by the Contractor for effort under the prime Contract.
- 1.4.5. Bidders are advised that Contract signature will not be delayed in order to allow the processing of security clearances for personnel and, should the otherwise successful Bidder not be in a position to accept the offered Contract within a reasonable period of time, due to the fact that its personnel do not possess the appropriate security clearance(s) at the start of Contract, the Purchaser may determine the Bidder's offer to be non-compliant and offer the Contract to the next ranking compliant Bidder. In such a case, the Bidder who would not sign the Contract shall be liable for forfeiture of the bid guarantee.

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- 1.4.6. Prospective Bidders and their sub-Contractors shall comply with the security instructions presented in Book II Part IV Annex C (Security Aspect Letter & Project Security Instructions).
- 1.4.7. All NATO CLASSIFIED material entrusted to the Contractor shall be handled and safeguarded in accordance with the applicable security regulations. The Contractor shall be required to possess a Facility Clearance of "NATO SECRET" for those sites in which they intend to handle and store NATO classified material in the conduct of work under this Contract, at the time of Contract award.

1.5. SITE SURVEYS AND BIDDERS CONFERENCE

- 1.5.1. Prospective Bidders are invited to participate in a two (2) day combined Bidders Conference and Site Survey that will be held in May 2018 at the two radio sites in Poland (Rozewie and Rzucewo). The Site Surveys and Bidders' Conference will be chaired by the NCI Agency in coordination with HN Poland.
- 1.5.2. Participation to the Bidders' Conference and Site Surveys is limited to a maximum of two (2) persons per company (individuals do not need to be the same persons for the Site Surveys and for the Conference). HN POL will assist in local transportation needs to/from the radio sites, with any overnight accommodation and travel being arranged individually by the prospective Bidder companies.
- 1.5.3. The Site Surveys and the Bidders' Conference will be held in accordance with the tentative schedule below:

23 May 2018 (Site Surveys):

Agenda TBD

Rozewie and Rzucewo, Poland

24 May 2018 (Clarification Session/Bidders Conference):

Agenda TBD

Jastrzębia Góra, in vicinity of Rozewie site (exact conference venue will be provided to Bidders closer to the date of this event)

- 1.5.4. Those Bidders, who wish to participate in the Bidders' Conference and Site Survey visits at the two Polish sites, shall indicate their intention to attend not later than **3 working weeks prior to the site visit date** by confirming the names/details of the company representatives, who will attend and forward their security information using the "**Request for Visit**" form, which is enclosed to the cover letter of this IFB. A valid security clearance of a minimum of "NATO SECRET" is required only for the individuals attending the Site Surveys. Bidders Conference instead is NATO UNCLASSIFIED. The duly completed and signed "Request for Visit" form shall be submitted to the Points of Contact under Par. 1.5.11 below.

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- 1.5.5. Prospective Bidders are informed that the participation to the Site Surveys is not mandatory for bidding purposes, however it is strongly recommended to participate in the scheduled Site Visits and Bidders' Conference as the successful Bidder will be barred under the resulting Contract from making claims for differing site conditions if the basis of the claim is a matter that could have been discovered at the bidding stage by participation in the site surveys. The HN will provide access to the sites for each visit. The Bidders are responsible for the costs of travel, lodging and per diem for its representatives during the site visits/bidders conference (less transport for site visits).
- 1.5.6. The Purchaser will attempt to provide immediate answers to the questions that are asked by the potential Bidders during the Site Surveys and at the Bidders' Conference, but any answer that might appear to amend terms, conditions and/or specifications of the Contract shall be considered to be formally included in the IFB only when a written amendment to the IFB is issued in writing by the Purchaser.
- 1.5.7. Any question that the potential Bidders would like to have answered after the Bidders' Conference must be submitted in writing within one (1) week after the Bidders' Conference, but not later than twenty eight (28) calendar days prior to the Bid closing date, to the IFB Contracting officer at the address mentioned in 2.4.2 below.
- 1.5.8. Answers to all questions will be issued in writing to all Bidders as soon as practicable, whether or not the Bidders have attended a site visit(s) and the Bidders' Conference. The formal written answers will be the official response of the Purchaser, even if the written answer differs from the verbal response provided at the site visits or the Bidders' Conference. Similarly, any information provided by the HN Poland or the Purchaser during the site visits will not be considered contractually binding, unless they have been officially provided in writing by the Purchaser to all Bidders.
- 1.5.9. Irrespective of the written answers provided by the Purchaser after the Bidders' Conference, the terms, conditions and language of the IFB remains unaltered unless a formal IFB amendment is issued by the Purchaser, and is identified as such.
- 1.5.10. During the Bidders' Site Survey the Purchaser will provide TEMPEST facility zoning information (if any) to the Bidders upon request.
- 1.5.11. The Point of Contact (POC) of HN for the site visits, other than those for the Bidders Conference and Site Surveys, is as follows:

LTC Roman Mazur (Head IPO POL)

Email: roman.mazur@ncia.nato.int

CC to:

Ms Viktorija Navikaitė (NCI Agency Contracts Officer)

Email: viktorija.navikaite@ncia.nato.int

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- 1.5.12. **The HN Point of Contact above can be contacted for the submission of Request for Visit only.** All the other questions related to this IFB shall be addressed to the Purchaser POC at Par. 2.16 below.

SECTION 2 GENERAL BIDDING INFORMATION AND REQUIREMENTS FOR BID SUBMISSION

2.1. GENERAL

- 2.1.1. Bidders shall prepare and submit their Bid in accordance with the requirements and format set out in this IFB. Any definitions not detailed below can be found in Book II Part II Contract Special Provisions.

2.2. DEFINITIONS

- 2.2.1. "Assembly": As used herein, the term "Assembly" means an item forming a portion of equipment that can be provisioned and replaced as an entity and that normally incorporates replaceable parts or groups of parts.
- 2.2.2. "Bid": The term "Bid" as used herein means a binding offer to perform the work specified in the attached Prospective Contract (Book II).
- 2.2.3. "Bidder": The term "Bidder" as used herein refers to a firm, consortium, or joint venture that submits an offer in response to this solicitation. Bidders are free to Sub-Contract to eligible firms within the participating nations as specified in paragraphs 2.2.7 and 2.2.11 below. Such Sub-Contracts shall be on a prime Contract – Sub-Contract basis only. Temporary legal associations, consortia and joint ventures established to secure and perform the Contract are not considered "Bidders" for purposes of this competition and bids will not be accepted from such entities.
- 2.2.4. "Compliance": The term "Compliance" as used herein means strict conformity to the requirements and standards specified in this Invitation for Bid.
- 2.2.5. "Component": The term "Component" as used herein, means a part or combination of parts, having a specified function that can only be installed or replaced as a whole, and is also generally expendable.
- 2.2.6. "Contractor": The term "Contractor" refers to a firm of a participating country that will sign this Contract (Book II of this IFB) under which it will perform a service, manufacture a product, or carry out works specified in this IFB for NATO.
- 2.2.7. "Firm of Eligible Participating Country": A firm legally constituted or chartered under the laws of, and geographically located in, or falling under the jurisdiction of an eligible participating country; the work cannot be physically undertaken in a non-participating country.
- 2.2.8. "Host Nation": A Participating Country, major NATO Command or a NATO Agency which is responsible for implementing a Security Investment project. In this particular IFB, Host Nation refers to Poland (POL).

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- 2.2.9. “Manufacturer”: The term “Manufacturer” as used herein refers to a firm producing the goods on an industrial scale.
- 2.2.10. “Part”: The term “Part” as used herein means the lowest component of an item replaceable through a maintenance action. This could include, but not necessarily limited to, an assembly’ sub-assembly, module, printed circuit board or any single component such as a switch, plug, terminal, strip, fuse, holder, IC, capacitor, resistor extender board, hardware item (i.e., nuts, panels, bolts, printed circuit board, etc.) installed on or in an assembly, sub-assembly, module, or such other item that is or comprises an integral part of the equipment to be supplied under this Contract.
- 2.2.11. “Participating Countries”: The term “Participating Country” as used herein means one of the NATO Nations (excluding Albania, Croatia and Montenegro) that have undertaken to share the cost of this Security Investment Project. These 26 nations are namely (in alphabetical order): BELGIUM, BULGARIA, CANADA, CZECH REPUBLIC, DENMARK, ESTONIA, FRANCE, GERMANY, GREECE, HUNGARY, ICELAND, ITALY, LATVIA, LITHUANIA, LUXEMBOURG, NETHERLANDS, NORWAY, POLAND, PORTUGAL, ROMANIA, SLOVAKIA, SLOVENIA, SPAIN, TURKEY, UNITED KINGDOM and UNITED STATES.
- 2.2.12. “Procurement Agency”: The term “Procurement Agency” as used herein refers to an agency that conducts an International Competitive Bidding (ICB) exercise or procurement on behalf of one or more Host Nations. In this particular IFB, Procurement Agency refers to the NCI Agency.
- 2.2.13. “Purchaser”: The term “Purchaser” as used herein refers to the authority issuing the IFB and/or awarding the Contract. In this particular IFB, the Purchaser refers to the NCI Agency.
- 2.2.14. “SSSB POL system”: As used herein, refers to the communication hardware provided for Ship-Shore-Ship Buffer (SSSB) capabilities and High Frequency (HF) and Ultra High Frequency (UHF) radio communications to/between the MOC and communication sites in Poland.
- 2.2.15. “Sub-Assembly”: The term “Sub-Assembly” as used herein refers to a portion of an Assembly consisting of two or more parts that can be provisioned and replaced as an entity. The definition purposely excludes components and/or parts as defined in ACodP-1.

2.3. ELIGIBILITY

- 2.3.1. Only firms that have been nominated by their respective National Delegations, are eligible to engage in this competitive bidding process. In addition, all Contractors, sub-Contractors and manufacturers, at any tier, must be from within the participating countries defined in the Contract general provisions.
- 2.3.2. None of the work, including project design, labour and services shall be performed other than by firms from and within participating countries.

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- 2.3.3. No materials or items of equipment down to and including identifiable sub-assemblies shall be manufactured or assembled by a firm other than from and within an eligible country.
- 2.3.4. The intellectual property (IP) rights to all design documentation and related system operating software/firmware shall reside in NATO on behalf of the HN Poland, and no license fees or royalty charges shall be paid by the Contractor to firms, individuals or governments other than within the stated NATO participating countries.

2.4. BID DELIVERY ADDRESS

- 2.4.1. The complete bid shall be delivered or mailed in hard copy on paper and electronic media, as specified in Paragraph 3.1.5, to the following address. **Bids received by Fax or Email will not be considered.**

- 2.4.2. Bids shall be hand-carried or sent by express courier or sent via national or international postal system to the following address:

NATO Communications and Information Agency (NCI Agency)

NATO Industrial Infrastructure, Reception Service

1 Rue Arthur Maes, 1130 Brussels, BELGIUM

ATTN: Viktorija Navikaitė

Telephone: +32 2 707 8210

- 2.4.3. Regarding communication other than bid delivery, the following fax or e-mail can be used.

E-mail: viktorija.navikaite@ncia.nato.int

Fax: +32 2 707 8770

2.5. BID PACKAGING AND MARKING

- 2.5.1. The complete bid shall consist of three (3) packages, as detailed in 2.5.2, placed in a suitable container that shall be sealed and marked as follows:

- a. Name and address of the Bidder;
- b. The words "SEALED BID – NOTIFY NCIA CONTRACTING OFFICER (Ms Viktorija Navikaitė, extension: 8210) UPON RECEIPT!"
- c. The Bid Number attributed to this Invitation for Bid, "IFB-CO-14604-SSSB-POL".

- 2.5.2. The Package Content

- a. The complete Bid shall consist of three (3) separate packages as follows:

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- i. Administrative Package
 - ii. Price Proposal Package
 - iii. Technical Proposal Package
- b. Detailed requirements for the structure and content of each of these packages are contained in the following paragraphs.

2.6. BID CLOSING DATE

- 2.6.1. All bids shall be in the possession of the Purchaser at the address given above before 11:00 Central European Time (CET) on 9 July 2018, at which time and date bidding shall be closed. Bidders are advised that the closing time and date for the receipt of bids by the Purchaser includes receipt of any material of a security classified nature. Therefore Bidders shall take care to ensure that such material is transmitted in accordance with national security procedures in adequate time to be certain it arrives in the hands of the Purchaser by the date for bid closing.
- 2.6.2. Bids submitted by electronic transmission (fax or email) are not permitted and will not be considered.
- 2.6.3. Bids that are delivered to the Purchaser after the exact time and date set out for bid closing are "Late Bids" and shall not be considered for award. Such bids will be returned unopened to the Bidder at the Bidder's expense unless the Purchaser can determine that the bid in question meets the criteria for consideration as specified below.
- 2.6.4. Consideration of Late Bid – The Purchaser considers that it is the responsibility of the Bidder to ensure that the bid submission arrives by the specified bid closing time. Considering the number and quality of express delivery services, courier services and special services provided by the national postal systems, a late bid shall only be considered for award under the following circumstances;
 - a. A Contract has not already been awarded pursuant to the IFB; and
 - b. The bid was sent to the address specified in the IFB by ordinary, registered or certified mail not later than ten (10) calendar days before the Bid closing date and the delay was due solely to the national or international postal system for which the Bidder bears no responsibility (the official postmark for ordinary and Registered Mail or the date of the receipt for Certified Mail will be used to determine the date of mailing); or
 - c. The bid was hand carried, or delivered by a private courier service and the Bidder can produce a receipt that demonstrates that the delivery was made to the correct address and received by a member of the NCI Agency and the failure to be received by the Contracting Authority was due to mishandling within the Purchaser's organisation; or

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- d. The portion of the bid that is security classified shall have been introduced into the proper national channels for transmission of such material in due time. The Bidder shall maintain a record of such transmission to demonstrate that delay of receipt of such material by the Purchaser is due to the handling of such materials by national or NATO security authorities.
- 2.6.5. A late bid that was hand-carried, or delivered by a private courier service for which a proper receipt cannot be produced cannot be considered for award under any circumstances nor can late bids that bear no post marks or for which documentary evidence of mailing date cannot be produced.
- 2.6.6. Bidders are advised that personnel remaining on the Purchaser's premises outside of normal business hours may decline to sign or issue receipts for delivered items.

2.7. EXTENSION OF THE BID CLOSING DATE

- 2.7.1. Any request for extension of the closing date for the IFB shall be submitted by the Bidder **through their respective NATO Delegation** in sufficient time so as to allow the formal request made by the National Delegation of the Bidder to deliver its formal request to the Purchaser no later than fourteen (14) calendar days prior to the bid closing date.

2.8. BID VALIDITY

- 2.8.1. Bidders shall be bound by the terms of their offer for a period of twelve (12) months following the stated bid closing date or any extension of the bid closing date.
- 2.8.2. In order to comply with this requirement, the Bidder shall complete the Certificate of Bid Validity set out in Book I Annex B-3 to these bidding instructions. Bids offering a bid validity period of less than twelve (12) months shall be considered non-compliant.
- 2.8.3. The Purchaser will endeavour to complete the evaluation and make the Contract award within the bid validity period of twelve (12) months. However, should that period of time prove to be insufficient to render an award, the Purchaser reserves the right to request an extension of the bid validity period.
- 2.8.4. Upon notification by the Purchaser of such a request for a time extension a Bidder shall be at liberty to:
- a. Accept this extension of time in which case the Bidder shall be bound by the terms of its offer for the extended period of time and the bid guarantee extended accordingly;
 - b. Refuse this extension of time and withdraw its offer, in which case the Purchaser will return the bid guarantee in the full amount without penalty.
- 2.8.5. Bidders shall not have the right to modify their bids due to a Purchaser request for extension of the bid validity unless expressly stated in such a request.

2.9. BID GUARANTEE

- 2.9.1. The Bidder shall furnish with its Bid a guarantee in an amount equal to **Eighty-five-thousand Euros (€ 85,000)**. The bid guarantee shall be in the form of an irrevocable, unqualified and unconditional Standby Letter of Credit (SLC) issued by a Belgian banking institution fully governed by Belgian legislation or issued by a non-Belgian financial institution and confirmed by a Belgian banking institution fully governed by Belgian legislation. In the latter case signed original letters from both the issuing institution and the confirming institution must be provided. The confirming Belgian bank shall clearly state that it will guarantee the funds, the drawing against can be made by the NCI Agency at its premises in Belgium. Bid Guarantees shall be made payable to the Treasurer, NCI Agency.
- 2.9.2. Alternatively, a Bidder may elect to post the required guarantee by certified cheque. If this method is selected, Bidders are informed that the Purchaser will cash the cheque on the bid closing date.
- 2.9.3. If the bid closing date is extended after a Bidder's financial institution has issued a bid guarantee, it is the obligation of the Bidder to have such bid guarantee (and confirmation, as applicable) extended to reflect the revised bid validity date occasioned by such extension.
- 2.9.4. Failure to furnish the required bid guarantee in the proper amount, and in the proper form and for the appropriate duration by the bid closing date may be cause for the bid to be determined non-compliant.
- 2.9.5. The NCI Agency will make a drawing against the SLC as bid guarantee under the following conditions:
- a. The Bidder has submitted a bid and, after bid closing date (including extensions thereto) and prior to the selection of the lowest priced, technically compliant bid, withdraws its bid, or states that he does not consider its bid valid or agree to be bound by its bid.
 - b. The Bidder has submitted a bid determined by the NCI Agency to be the lowest priced, technically compliant Bid, but the Bidder declines to execute the Contract offered by the NCI Agency, such Contract being consistent with the terms of the IFB.
 - c. The Purchaser has offered the Bidder the Contract for execution but the Bidder has been unable to demonstrate compliance with the security requirements of the Contract within a reasonable time.
 - d. The Purchaser has entered into the Contract with the Bidder but the Bidder has been unable or unwilling to provide the performance guarantee required under the terms of the Contract within the time frame required.

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- 2.9.6. "Standby Letter of Credit" as used herein, means a written commitment by a Belgian financial institution either on its own behalf or as a confirmation of the Standby Letter of Credit issued by a non-Belgian bank to pay all or part of a stated amount of money, until the expiration date of the letter, upon presentation by the Purchaser of a written demand therefore. Neither the financial institution nor the Contractor can revoke or condition the Standby Letter of Credit. The term "Belgian financial institution" includes non-Belgian financial institutions licensed to operate in Belgium,
- 2.9.7. The format that may be used by the issuing financial institution to create a Standby Letter of Credit acceptable to the Purchaser is provided under Annex E of these instructions.
- 2.9.8. The validity period of the bid guarantee shall be of the same duration as the bid validity.
- 2.9.9. If the successful Bidder withdraws its bid within the period of bid validity, or upon acceptance of the bid by the Purchaser, or fails to enter into the Contract, he shall forfeit the bid guarantee in total.
- 2.9.10. Failure to furnish the required bid guarantee by the bid closing date in the proper amount, in the proper form and for the appropriate duration may be cause for the Bid to be determined non-compliant. In the event that a bid guarantee is submitted directly by a banking institution, the Bidder shall furnish a copy of said document in the Bid Administration Package.
- 2.9.11. Bid guarantees will be returned to Bidders as follows:
- a. To non-compliant Bidders forty-five (45) calendar days after notification by the Purchaser of a non-compliant Bid (except where such determination is challenged by the Bidder; in which case the bid guarantee will be returned forty-five (45) calendar days after a final determination of non-compliance);
 - b. To all other unsuccessful Bidders within thirty (30) calendar days following the award of the Contract to the successful Bidder;
 - c. To the successful Bidder upon submission of the performance guarantee required by the Contract or, if there is no requirement for such a performance guarantee, upon Contract execution by both parties.
 - d. Pursuant to paragraph 2.8.4 above

2.10. MODIFICATION OF THE IFB

- 2.10.1. The Purchaser reserves the right to revise or amend the terms, conditions or provisions of this IFB and its specifications prior to the date set for the bid closing date. Such revisions or amendments, if any, will be announced by an official amendment or amendments to this IFB.

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- 2.10.2. If the revisions or amendments to the IFB are of a nature that requires significant changes in the Bidders' proposal, the date set for the bid closing date may be postponed by such number of days as in the opinion of the Purchaser, will permit Bidders to revise their Bids. In such event, the amendment will include an announcement of the new bid closing date.
- 2.10.3. All revision or amendments issued by the Purchaser shall be acknowledged by the Bidder in its bid by completing the amendment sheet at Book I Annex B-9. Failure to acknowledge receipt of all amendments may be grounds to determine the bid to be non-compliant. The modified IFB Amendment Sheet shall be included in the Administration Package.

2.11. CANCELLATION OR WITHDRAWAL OF THE IFB

- 2.11.1. The Purchaser reserves the right to cancel or to withdraw for issuance at a later date this IFB at any time prior to Contract award. No legal liability on the part of the Purchaser for payment of any sort shall arise and in no event will any Bidder have cause for action against the Purchaser for the recovery of costs incurred in connection with submitting a bid in response to this IFB.

2.12. MODIFICATION OF THE BID

- 2.12.1. Bids, once submitted, may be modified by the Bidders, but only to the extent that the modifications are in writing, conform to the requirements of the IFB, and are received by the Purchaser prior to the exact time and date established for bid closing. Such modifications shall be considered as an integral part of the submitted Bid.
- 2.12.2. Modifications to bids that arrive after the bid closing date will be considered as "Late Modifications" and will be processed in accordance with the procedure set out above concerning "Late Bids", except that unlike a "Late Bid", the Purchaser will retain the modification until a selection is made.
- 2.12.3. A modification to a bid that is determined to be late will not be considered in the evaluation and selection process. If the Bidder submitting the modification is determined to be the successful Bidder on the basis of the unmodified bid, the modification may then be opened. If the modification makes the terms of the bid more favourable to the Purchaser, the modified bid may be used as the basis of Contract award.
- 2.12.4. The Purchaser, however, reserves the right to award a Contract to the apparent successful Bidder on the basis of the bid submitted and disregard the late modification.

2.13. WITHDRAWAL OF THE BID

- 2.13.1. A Bidder may withdraw its bid at any time prior to the bid closing date without penalty. In order to do so, an authorised agent or employee of the Bidder must provide an original statement of the firm's decision to withdraw the bid and remove the bid from the Purchaser's premises.
- 2.13.2. Except as provided in paragraph 2.8.4 above a Bidder may withdraw its bid after the bid closing date only by forfeiture of the bid guarantee.

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2.14. REQUESTS FOR IFB CLARIFICATIONS

- 2.14.1. Bidders, at the earliest stage possible during the solicitation period, are strongly encouraged to query and seek clarifications pertaining any matters of a Contractual, administrative and technical nature relevant to this IFB.
- 2.14.2. All questions and requests for clarification shall be forwarded to the Purchaser via email using the Clarification Request Form provided at Book I Annex D. All questions and requests must reference the section(s) in the IFB subject for clarifications. Such questions shall be forwarded to the point of contact specified in paragraph 2.16 below and shall be received not later than twenty-eight (28) calendar days prior to the stated "Bid Closing Date". The Purchaser is under no obligation to answer questions submitted after this deadline has elapsed. Requests for clarification must address the totality of the concerns of the Bidder for the IFB, as the Bidder will generally not be permitted to revisit areas of the IFB for additional clarification except as noted in paragraph 2.14.3 below.
- 2.14.3. Additional requests for clarification are limited only to the information provided as answers by the Purchaser to Bidder requests for clarification. Such additional requests shall arrive not later than fourteen (14) calendar days prior to the stated "Bid Closing Date".
- 2.14.4. It is the responsibility of the Bidders to ensure that all clarification requests submitted bear no mark, logo or any other form or sign that may lead to reveal the Bidders' identity in the language constituting the clarification itself. This prescription is not applicable to the mean used for the transmission of the clarification (i.e. email or form by which the clarification is forwarded).
- 2.14.5. The Purchaser declines all responsibilities associated to any and all circumstances regardless of the nature or subject matter arising from the Bidders' failure or inability to abide to the prescription in paragraph 2.14.4 above.
- 2.14.6. The Purchaser may provide for the removal of any form of identification in the body of the clarification request in those instances in which such practice is feasible as well as providing for a re-wording of the clarification request in those cases in which the original language submitted is deemed ambiguous, unclear, subject to different interpretation or revelatory of the Bidders identity.
- 2.14.7. Bidders are advised that subsequent questions and/or requests for clarification included in a bid shall neither be answered or considered for evaluation and may be considered by the Purchaser as grounds for a determination of non-compliance.
- 2.14.8. Except as provided above, all questions will be answered by the Purchaser and the questions and answers (deprived of any mean of identification of the questioner) will be issued in writing to all prospective Bidders by a formal amendment to the IFB. The published answers issued by the Purchaser shall be regarded as the authoritative interpretation of the Invitation for bids. The amendment may also contain changes to the language, terms, conditions and/or specifications of the IFB.

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- 2.14.9. The Purchaser reserves the right to decline to accept clarification requests clearly devised or submitted for the purpose of artificially extending the bidding time (e.g. clarifications re-submitted using different wording where such wording does not change the essence of the clarification being requested).

2.15. REQUEST FOR WAIVERS AND DEVIATIONS

- 2.15.1. Bidders shall note that requests for alteration to, waivers of, or deviations from the Schedules, the Special Contract Provisions, the Contract General Provisions, the Technical Specifications, the Statement of Work and any other Terms and Conditions of the Prospective Contract will not be considered after the Request for Clarification process. Requests for alterations to the other requirements, terms or conditions of the IFB or the prospective Contract may only be considered as part of the clarification process set out in paragraph 2.14 above.
- 2.15.2. Requests for alterations to the specifications, terms and conditions of the Contract that are included in a bid as submitted may be regarded by the Purchaser as a qualification or condition of the bid and may be grounds for a determination of non-compliance.

2.16. PURCHASER POINT OF CONTACT

- 2.16.1. The exclusive Purchaser Point of Contact (POC) for all information concerning this IFB is:

Ms Viktorija Navikaitė

NATO CI Agency

Acquisition Directorate

Tel: +32 (0)2 707 8210

E-mail: viktorija.navikaite@ncia.nato.int

2.17. ELECTRONIC TRANSMISSION OF INFORMATION AND DATA

- 2.17.1. The Purchaser will endeavour to communicate answers to questions and requests for clarification and amendments to this IFB to the prospective Bidders by the fastest means possible including the use of e-mail where companies have forwarded the necessary address information.
- 2.17.2. Bids received by e-mail will not be considered.

SECTION 3 BID PREPARATION INSTRUCTIONS

3.1. GENERAL

- 3.1.1. Bids shall be prepared in accordance with the instructions set out herein.

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- 3.1.2. Bidders shall prepare a complete bid that comprehensively addresses all requirements stated herein. The bid shall demonstrate the Bidder's understanding of the IFB and its ability to provide all the deliverables and services listed in the Schedule of Supplies and Services.
- 3.1.3. Partial bids will be determined to be non-compliant.
- 3.1.4. The Bidder shall not restate the IFB requirements in confirmatory terms only. Bids shall provide the level of detail necessary for the Purchaser to make an objective assessment of what is being offered and whether such an offer meets the requirements of the Contract. Bidders are admonished when bids fail to provide a level of detail or address salient aspects of the IFB in a cursory manner **may be declared non-compliant** without recourse to further clarification.
- 3.1.5. Bidders shall prepare their bid, in three (3) parts, labelled as follows:
- a. **The Administrative Envelope:** The administrative envelope shall contain signed originals (one original copy) of the required certifications and the original of the bid guarantee. Where the bid guarantee is sent to the Purchaser directly from the financial institution, a copy of the bid guarantee shall be included. The Administrative Envelope shall also include One (1) electronic soft copy of the signed certificated and bid guarantee.
 - b. **The Price Quotation:** The price quotation shall contain One (1) Original Paper and Two (2) electronic soft Copies (on CD ROM or DVD ROM in Microsoft Excel 2007- 2010; readable and searchable) of the completed bidding sheets and any supporting documentation.
 - c. **The Technical Proposal:** The technical proposal shall contain three (3) electronic soft copies (on separate CD ROM or DVD ROM) of the required material constituting the technical proposal. All document and drawings contained in the technical proposal shall be in PDF format, readable and searchable.
- 3.1.6. Bidders are advised that the Purchaser reserves the right to incorporate the successful Bidder's technical proposal in whole or in part in the resulting Contract.
- 3.1.7. Bid language shall be English.

3.2. ADMINISTRATIVE ENVELOPE

- 3.2.1. Bid Guarantee
- a. The Bidder shall provide the original of the bid guarantee required at paragraph 2.9 and 3.1.5 of these bidding instructions. If the bid guarantee is sent to the Purchaser directly from the Bidder's bank, a letter, in lieu of the actual guarantee, shall be included specifying the details of the transmittal. Bidders are reminded that the bid guarantee shall reflect any extensions to the bid validity date due to extensions in the bid closing date.

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3.2.2. Bid Certificates

- a. The Bidder shall complete and return, signed in original, the following certificates attached at Book I Annex B to this IFB: (Book I Annex B-1 through Book I Annex B-16) in order to certify that they will abide by all Terms and Conditions of Book II
 - i. Certificate of Legal Name of Bidder (Book I Annex B-1);
 - ii. Certificate of Independent Determination (Book I Annex B-2);
 - iii. Certificate of Bid Validity (Book I Annex B-3);
 - iv. Certificate of Understanding (Book I Annex B-4);
 - v. Certificate of Exclusion of Taxes and Charges (Book I Annex B-5);
 - vi. Certificate of Security Obligation (Book I Annex B-6)
 - vii. Certificate of Compliance with AQAP 2110 or ISO 9001 (Book I Annex B-7) (The Bidder shall attach a copy of the company's AQAP 2110 or ISO 9001 Certification)
 - viii. Disclosure of Requirements for the NCI Agency Execution of Supplemental Agreements (Book I Annex B-8) (the Bidder shall attach a prospective text of such Agreements, as applicable)

Bidders are required to disclose any prospective supplementary agreements that are required by national governments to be executed by NATO CI Agency as a condition of Contract performance. Supplementary agreements are typically associated with, but not necessarily limited to, national export control regulations, technology transfer restrictions, Technical Assistance Agreements, and end user agreements or undertakings. Bidders are cautioned that failure to provide full disclosure of the anticipated requirements and the terms thereof, to the best of the Bidder's knowledge and experience, may result in the Purchaser withholding award of the Contract or cancelling an executed Contract, if it is discovered that the terms of any supplementary agreements contradict salient conditions of the prospective Contract to the extent that either key objectives cannot be accomplished, or basic Contract principles and Purchaser rights have been abridged. The terms of supplemental agreements, if necessary, are the

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Bidders / Contractors responsibility and shall be totally consistent with the terms of the (Prospective) Contract, and shall not duplicate, negate, or further interpret any provisions of this Contract. The terms of the (Prospective) Contract shall take precedence over the Supplemental Agreement.

- ix. Acknowledgment of Receipt of Amendments to the IFB (Book I Annex B-9)
- x. Certification of NATO Member Country Origin of Delivered Equipment, Services, Material and Intellectual Property Rights (Book I Annex B-10)
- xi. Certification on Security Clearance (Book I Annex B-11)
- xii. Comprehension and Acceptance of Contract Special and General Provisions (Book I Annex B-12)
- xiii. List of Proposed Key Personnel (including Subcontractor Personnel) (Book I Annex B-13)

The list shall be in line with SOW Section 2 requirements.

- xiv. List of Prospective SubContractors (Book I Annex B-14)

Bidders shall identify all significant Sub-Contractors/consortium and the estimated value of the Sub-Contract. If there are no sub-Contractors/consortium members involved, the Bidder shall state this separately.

The subcontractors listed in this certificate shall be traceable in the Bidding Sheets.

- xv. List of Bidder and Subcontractor Background IPR (Annex B-15)
- xvi. Disclosure of Involvement of Former NCI Agency Employment (Annex B-16)

3.3. PRICE PROPOSAL PACKAGE

- 3.3.1. Bidders shall prepare their price proposal by completing the Bidding Sheets enclosed herein (Book I Annex A). Bidder shall propose an accurate and complete price quotation in completing the bidding sheets as defined in the Book I.
- 3.3.2. Bidders shall furnish firm fixed prices for all required CLINs (including Optional CLINs) in accordance with the format set out in the instructions for preparation of the Bidding Sheets.

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- 3.3.3. Bidders shall provide a breakdown of the cost for the CLINs – including all their sub divisions - by completing the pricing summary (see Pricing Summary Instructions in Book I Annex A) and entering the resultant firm fixed price in the appropriate columns. Bidders shall provide the completed pricing summary for each CLIN in compliance with instructions of IFB Book I Annex A. In addition, the Bidder shall identify all significant sub-contractors and provide required information about their prospective sub-contractors using the List of Prospective sub-contractors form attached to Book I Annex-B-14. The Bidder must also provide quoted prices for each individual CLIN element, which must be realistic and accurate as defined in Book I items 3.4 and 4.4.
- 3.3.4. Bidders may quote in their own national currency or in Euros. Bidders may also submit bids in multiple currencies including other NATO member state currencies under the following conditions:
- a. The currency is of a participating country in the project and
 - b. The Bidder can demonstrate either through sub-Contract arrangements, or in its proposed work methodology, that it will have equivalent expenses in that currency. All major sub-Contracts and their approximate anticipated value shall be listed on a separate sheet and included with the price proposal package.
- 3.3.5. Bidders are informed that the Purchaser is exempt from all direct taxes (including VAT), and all customs duties on merchandise imported or exported. Bidders shall therefore exclude from their price quotation all taxes, duties and customs charges from which the Purchaser is exempted from by international agreement. Bidders are reminded of the requirement to complete the certification to this effect in Book I Annex B-5.
- 3.3.6. All prices quoted in the proposal shall be DDP (Delivered Duty Paid destination) for delivery to final destinations in accordance with the International Chamber of Commerce INCOTERMS. In addition, they shall also cover all packaging, packing, preservation, insurance and transportation charges. Prices quoted shall include all costs for items supplied and delivered to the final destination.
- 3.3.7. No other documentation besides the bidding sheets and the listing of prospective sub-Contractors, shall be included in the price quotation. Any other document of a Contractual or technical nature will not be considered during evaluation and may be considered as a cause of non-compliance by the Purchaser.
- 3.3.8. Partial Bids or partial price quotations will be rejected and may be considered as a cause of non-compliance by the Purchaser.
- 3.3.9. Bidders shall insert Not to Exceed Prices for each of the option period that constitute the Contractor Logistics Support Option.

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- 3.3.10. When completing the Bidding Sheets the Bidder shall be required to insert information in all yellow cells of the bidding sheets for the relevant CLIN. The prices and quantities entered on the document shall reflect the total items required to meet the Contractual requirements. The total price shall be required to be indicated in the appropriate columns and in the currency quoted. If the price of a line item is expressed in different currencies, then these shall be identified ensuring that there are as many totals on that line item as there are currencies. In preparing the price quotation, Bidders shall ensure that the prices of the sub-items total the price of the major item of which they constitute a part. The accuracy of the inputs of the Priced Proposal Sheets is the responsibility of the Bidder. The Purchaser, at its own discretion, may resolve ambiguous computation of prices.
- 3.3.11. Where an item specified in the requirement is no longer available, Bidders shall be required to provide the nearest available equivalent that meets or exceeds the specifications of the item that it replaces. Bidders shall provide technical data on any alternative product and justify its inclusion.
- 3.3.12. The Bidder shall furnish firm fixed price quotations for all proposed items, including all options provided in this IFB, and all appropriate additions. Partial quotations shall be rejected.
- 3.3.13. The Bidder understands that there is no obligation under this Contract for the Purchaser to exercise any of the optional line items and that the Purchaser bears no liability should it decide not to exercise those options (totally or partially). Further, the Purchaser reserves the right to order another Contractor (or the same), to perform the tasks described in the optional line items of the current Contract through a new Contract with other conditions.
- 3.3.14. The Bidder shall provide a sub-section that sets out the current financial condition of the prime Contractor, demonstrating and proving that the corporation has sufficient financial resources, or the ability to obtain them, in order to undertake and complete the project. In this sub-section the Bidder shall also be required to state whether or not they are currently in receivership or have filed with any legal authorities for protection from creditors. Where the prime Contractor is a publicly held corporation, the Bidder shall provide the latest quarterly or annual financial report that it issues to its shareholders. If the prime Contractor has issued debt instruments such as corporate bonds or other credit devices, the Bidder shall provide evidence of its current debt rating made by an independent third party assessor. The Purchaser shall not require submissions containing confidential internal business analyses, projections or strategies, but shall require evidence available to the business community that demonstrates that the prime Contractor can maintain a solid financial basis with which it may complete the Contract.

3.3.15. Price Realism

- a) Should the Lowest Offered Price appear to be substantially different from the next lowest price offered, the Purchaser will review the price quotation to determine if a reasonable explanation for the differential is apparent.
- b) In those cases in which the prices quoted in relation with this IFB appear to be unreasonably low in relation to the performance required under the prospective Contract and/or the level of effort associated with the tasks, the Purchaser will reserve the right to request the Bidder to clarify further with the aim of determining the rationale behind the circumstances.
- c) Details about price realism procedures are explained at Book I paragraph 4.3.3.

3.4. TECHNICAL PROPOSAL

3.4.1. Bidders shall demonstrate a detailed understanding of the objectives, as well as operational and technical requirements, as defined in the IFB. Bidders shall prepare and submit a technical proposal and shall be required to present their proposal in each of the following areas:

- a. Table of Contents
- b. Executive Summary
- c. Section 1 Corporate Organisation/ Capital Facilities
- d. Section 2 Corporate Experience
- a. Section 3 Preliminary Project Implementation Plan (PIP)
 - i. PIP Section 1 Project Management (PM) and Control
 - ii. PIP Section 2 System Engineering and Design
 - iii. PIP Section 3 Quality Assurance (QA)
 - iv. PIP Section 4 Configuration Management (CM)
 - v. PIP Section 5 Integrated Logistics Support (ILS)
 - vi. PIP Section 6 Test and Evaluation
 - vii. PIP Section 7 Documentation
 - viii. PIP Section 8 System Acceptance
 - ix. PIP Section 9 Training
 - x. PIP Section 10 Reliability, Availability, Maintainability and Testability (RAMT)
 - xi. PIP Section 11 Contractor Logistics Support (CLS)

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- xii. PIP Section 12 Security Accreditation
- xiii. PIP Section 13 Risk Assessment and Management
- xiv. PIP Section 14 Site Installation and Civil Works

3.4.2. Bidders shall include only material relating to the Table of Contents, Executive Summary and Sections 1 to 3 above in the technical proposal. Additional materials such as brochures, sales literature, product endorsements and unrelated technical or descriptive narratives shall not be included in the technical proposal. These materials may be included in a separate volume but must not be labelled as part of the technical proposal.

3.4.3. **Table of Contents**. Bidders shall demonstrate a detailed understanding of the technical requirements. Bidders shall compile a detailed table of contents that lists not only the section headings but also the major sub-sections and topic headings required as set out in these instructions or are implicit in the organisation of the technical proposal.

3.4.4. Following the Table of Contents:

- a. The Bidder shall include a completed Technical Proposal Cross-Reference (Requirement Traceability) Table (Book I Annex C). The Bidder shall confirm that he accepts and will be able to perform and complete the requirements described in the SOW if awarded the Contract, by completing and submitting the Cross Reference/ Compliance Table as detailed in Annex C. The Bidder shall be required to complete Column three (3) (Bid Reference) of the table, citing the appropriate section of the technical proposal that corresponds to each paragraph of these instructions for the preparation of the technical proposal that describes how the respective requirements will be met. The completed table will serve as an index for the Purchaser's Technical Evaluation Panel as well as an aide memoire to the Bidder to ensure that all the required information has been provided in the technical proposal
- b. The Bidder shall provide as an introduction to this Section, a Cross-Referenced (Requirement Traceability) Matrix that lists sequentially, by paragraph in the Statement of Work (SOW) all the annexes of the SOW of the Prospective Contract, as well as each specified System Requirement Specification of the SSSB-POL System and matches that stated system requirement with the location of the corresponding information in the preliminary design as prepared by the Bidder.

3.4.5. **Executive Summary**. Bidders shall provide an overview of the salient features of their technical proposal in the form of an executive summary.

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- a. This summary shall provide general description of the major points contained in each of the required sections of the technical proposal and shall demonstrate the Bidder's comprehension of SSSB systems, their constraints, implementation environment and the problems and risks of project implementation.
- b. The Bidder shall discuss not only how the proposal meets the requirements but also how the Bidder intends to overcome the problems and mitigate the risks.

3.4.6. Section 1: Corporate Organisation/Capital Facilities

- a. This section shall describe the Corporate Structure, organisation of the prime Contractor and the administration of the prospective SSSB-POL Contract within the overall Corporate Structure. This section shall indicate the chain of authority within the prime Contractor's organisation from the Project Manager to the Chief Executive Officer.
- b. The Bidder shall describe the corporate resources (with posts or names) that are available to support the SSSB-POL Contract that reside in the organisation of the prime Contractor but not directly under the authority of the Project Manager.
- c. The Bidder shall describe the process by which the project manager will have access to in-house corporate resources and confirm what level of authority is required in the corporate hierarchy to secure the required resources.
- d. The Bidder shall is to provide evidence that the proposed Project Manager (PM) and the Deputy Project Manager (DPM) are Suitably Qualified and Experienced Personnel (SQEP) capability of managing an acquisition programme of this magnitude. The positions shall have sufficient inherent authority and visibility in the overall Corporate Structure, in order to be able execute the necessary decisions that will be required to successfully implement a project of this size and complexity.
- e. The Bidder shall describe the responsibilities of its Project Management Office (PMO) and describe the hierarchy and interlinkages of associated staff and resources.
- f. The Bidder shall identify its proposed major sub-Contractors for the SSSB-POL Contract in compliance with Book I Annex B-14. The Bidder shall also be required to submit a detailed and thorough sub-contracting plan that identifies sub-contractors/sub-vendors and their areas of responsibility/delivery. The plan shall also demonstrate the terms by which the prospective sub-Contractor(s) will agree to abide by the requirements of the prime Contract.

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- g. All major proposed sub-contractors shall adhere to all criteria as laid down in the general provisions section of the prospective Contract entitled "Sub-Contracts".
- h. The Bidder shall include a draft copy of the proposed sub-contract and a summary of the supplies and or/services to be furnished by the prospective sub-contractor. The Bidder shall include a letter of intent from the proposed sub-contractor that details its willingness to enter into a sub-contract with the Bidder, subject to the Bidder being confirmed as having been awarded the SSSB-POL Contract.
- i. With regard to major sub-contracts, the Bidder shall identify those items that are sub-contracted (assemblies and sub-assemblies) and that are considered to be on the 'Critical Path' to meeting the delivery schedule of the Contract.
- j. For such sub-contracted items, the Bidder shall provide a rationale for the selection of the sub-contracted vendor, and an analysis report on the vendor. The Bidder shall provide a description of possible alternative sources of supply should the selected sub-contractor fail to deliver the required items within the time schedule.
- k. The Bidder shall provide a sub-section that identifies the items (assemblies, sub-assemblies) and services that are to be fabricated and/or performed by the corporate resources of the prime Contractor.
- l. The Bidder shall identify the location of the production facilities which will be utilised, and/or the source within the corporate organisation of the services and expertise required.
- m. The Bidder shall show existing capital assets and provide a detailed proposal of what additional equipment, or facility that will be acquired or constructed in order to meet the Contract schedule.
- n. The Bidder shall be required to provide a description of any re-tooling efforts required and the associated time schedule/forecast required as to when these efforts are planned to be completed.
- o. The Bidder shall describe the distribution, warehousing, or order-processing capabilities that the Bidder has to enable it to provide efficient and prompt delivery of hardware. This capability will also need to take into account, and remain flexible enough, to satisfy any short notice unpredictable customer orders.

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- 3.4.7. Section 2: Summary of Corporate Experience
- a. In this section the Bidder shall be required to detail its experience in the design, development, fabrication, installation, maintenance and support of defence Radio Frequency (RF) systems. Specifically, the Bidder shall be required to describe:
 - i. The experience of the Bidder over the last five (5) years in the area of design, manufacture and installation of RF defence systems in general;
 - ii. The experience of the Bidder over the last five (5) years in the maintenance and support of similarly sized defence RF systems;
 - iii. The RF defence system as offered in its proposal that has been delivered and accepted within the last five (5) years, or that the Bidder is currently under Contract to deliver such system.
 - b. The Bidder shall be required to demonstrate that its sub-contracted source(s) for critical items have the same level of experience for their respective areas of expertise as is required by the prime Contractor. Corporate experience shall also need to encompass sub-contractors.
 - c. The Bidder shall describe its experience and expertise in providing warranty support and repair-and-replacement service for similar defence RF systems for large, geographically-dispersed organisations.
 - d. The Bidder shall confirm its experience (including its sub-contractors) in providing the implementation, CLS and warranty demonstrating examples of work performed for either other NATO or national Contracts.
 - e. Individual skill and experience. The Bidder shall provide resumes of any proposed individuals who they intend to use to perform the technical tasks under the proposed Work Packages (WP), as well as the resumes of the individuals designated as Key Personnel in Annex B-13.
- 3.4.8. Section 3: Preliminary Project Implementation Plan (PIP): The preliminary PIP shall provide detailed descriptions of how the proposed design will meet each of the specific requirements of the IFB.
- a. PIP Section 1: Project Management and Control Plan (PMCP)

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- i. The Bidder shall develop a preliminary Project Management and Control Plan (PMCP) in accordance with the SOW of the prospective Contract. This plan shall identify the significant tasks required to be accomplished and the items required to be delivered in the execution of the Contract. The plan will centre on a preliminary Project Work Breakdown Structure (PWBS) and supporting charts in accordance with the SOW of the prospective Contract.
 - ii. The Contractor shall also develop a preliminary Project Master Schedule (PMS) in accordance with the SOW of the prospective Contract that shall contain all Contract events and milestones.
 - iii. The Bidder shall be required to demonstrate a realistic and pragmatic approach to accomplish the work within the time schedule defined within the IFB.
 - iv. In the PMS, the relationship between the WPs and project deliverables shall be clearly demonstrate a schedule for management of sub-contractor performance.
 - v. The preliminary PMCP shall also consider all aspects of project management and control and shall demonstrate how all the critical milestones defined in the Book II Part I Section 2 will be met.
 - vi. The Bidder shall not alter or amend the dates for milestones (Book II Part I Section 2).
 - vii. The Bidder shall demonstrate a realistic and pragmatic approach to accomplish the work within the time schedule defined in the IFB. The dates set out in Book II Part I Section 2 shall be fully supported and coherent by/with Gantt/PERT diagrams, as well as the PWBS.
 - viii. The Bidder shall demonstrate that it has taken into account constraints related to the implementation environment and reflect this understanding in its draft preliminary PMCP.
- b. PIP Section 2: System Engineering and Design
- i. In this Section, the Bidder shall submit a Preliminary System Engineering and Design Plan (PSEDP), including a Preliminary System Safety Engineering Plan (PSSEP) and a preliminary Electromagnetic Interference/Compatibility (EMI/EMC) Control Plan as sub-plans describing the preliminary design of the proposed system.

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- ii. The Bidder shall be required to support its design with information in such a way as to convincingly demonstrate that the proposed design will meet the safety and security requirements as set out in SOW Section 4 and Section 5 of the prospective Contract, as well as any functional and technical requirements as set out in SOW Annex A and Annex B of the prospective Contract.
- iii. The PSEDP shall provide detailed descriptions of how the proposed designs shall meet each of the specific performance requirements/parameters.
- iv. The Bidders shall take into account the constraints of the site(s) and number of simultaneous transmissions, as well EMC, in its technical proposal.
- v. The PSEDP shall demonstrate that the system as delivered will meet all safety and security requirements.
- vi. The Bidder shall describe the Bidder's approach to preparing and maintaining the Engineering Documentation Package (EDP).
- vii. The Bidder shall provide equipment specifications for each capability separately as specified at Book I paragraph 4.4.9.b.vii.
- viii. The Bidder shall furnish detailed drawings, diagrams and specifications.
- ix. The Bidder shall provide predicted performance characteristics and specifications based on engineering analysis and/or extrapolations from previous data.
- x. The Bidder's technical proposed designs for the SSSB system shall provide detailed information on how the Bidder intends to meet performance, functional or architectural requirements defined in the SOW and all its annexes. Failure to provide detailed technical information for any of the bidding requirements or omission of any critical information may result in a determination of non-compliance for the entire Bid.
- xi. The Bidder shall agree to abide by and implement the security mechanism as defined in NATO Security Policies and supporting directives as laid down in the IFB references.

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- xii. The Bidder shall propose automated tools to process classified data and information that shall meet the respective performance and security requirements, as stated at Section 5 of the SOW.
 - xiii. This Section (security related) shall be required to be submitted as a self-contained volume or volumes of the Technical Proposal and shall be segregated from the other materials in so far as the nature of the responses will be subject to higher NATO security classification.
 - xiv. The Bidder shall demonstrate and confirm that any hardware to be procured in accordance with this IFB meets the hardware specifications as defined in SOW Annex A.
 - xv. The Bidder shall describe the Bidder's detailed Risk Assessment (RA) including proposing any appropriate change requests against the functional baseline.
 - xvi. The Bidder shall provide a detailed plan for the antenna farms of the 2 (two) Radio Sites containing the location and physical arrangement of, but not limited to, antenna locations, ground planes (where applicable) and transmission cable layouts represented at a suitable scale on a site layout plan.
 - xvii. The Bidder shall provide a matrix with a justified calculation of expected worst-case antenna isolation values between all antenna port pairs when measured at the antenna matrix output.
- c. PIP Section 3: Quality Assurance (QA)
- i. The Bidder shall be required to provide sufficient information to demonstrate that the Quality Assurance and Quality Control (QA/QC) Programme meets the requirements of the prospective Contract. The Bidder shall provide certification confirming that the quality programme meets the equivalent national and/or international standards.
 - ii. The Bidder shall also describe its company QA/QC organisation and the position it occupies within the management structure of the company. This shall include the proposed overall QA Manager as well as detailing how the software, hardware and documentation aspects of QA Management shall be exercised.

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- iii. The proposed QA/QC Plan shall show how procedures are developed, implemented and maintained to adequately control the design, integration, production, purchasing, installation, inspection, testing, configuration management and customer support of all services and all products (both management products and specialist products), in accordance with the requirements of this Contract.
 - iv. The proposed QA/QC Plan shall describe the quality criteria that will be applied to each of the deliverables under this Contract (i.e. the documentation as well as the system and all of its components).
 - v. The proposed QA/QC Plan shall describe the Bidder's internal process for the quality review of the deliverables before their release to the Purchaser.
 - vi. The proposed QA/QC Plan shall be required to describe how all necessary assistance is planned to be provided to the Quality Assurance Representative (QAR) or its delegated National QAR, as well as how quality records for the prime and any sub-contractors or consortium members shall be planned to be made available for evaluation.
 - vii. The Bidder shall clearly indicate the quality related activities, responsibilities, and controls for the prime and any sub-contractors and shall state how it intends to ensure compliance of its prospective sub-contractors, as well as that of prospective suppliers of Commercial-Off-The-Shelf (COTS) equipment taking into account the QA/QC requirements of the SOW of the prospective Contract.
- d. PIP Section 4: Configuration Management
- i. The Bidder shall provide a preliminary version of the Bidder's Configuration Management (CM) Plan in accordance with SOW Section 7 of the prospective Contract that shall be required to detail the processes, methods and procedures that would be used to implement the requirements as set out in the SOW of the prospective Contract.
 - ii. The Bidder shall outline how it adopts Configuration Management (CM) processes and deliverables in line with the scope of this Contract as required in the SOW Section 7.
 - iii. The Bidder shall demonstrate that the various baselines referred to under SOW Section 7 will be established using automated tools.

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- iv. In addition, the Bidder shall demonstrate that a Configuration Status Accounting (CSA) database will be maintained using software tools during the Contract.
 - v. The Bidder shall describe the Bidder's approach to conduct the Physical Configuration Audit (PCA) for each site, including the verification of delivered configuration items against the product baseline.
 - vi. The Bidder shall provide, as part of the CM Plan a project specific configuration control process description, an initial set of project specific configuration item selection criteria for the capabilities, and an initial set of project specific Configuration Items (CI) including their attributes and relationships/dependencies to other associated capabilities.
- e. PIP Section 5: Integrated Logistics Support (ILS)
- i. The Bidder shall provide a high level description of the proposed Integrated Logistics Support Plan (ILSP). This plan shall cover the requirements of the prospective Contract as set out in Section 8 of the SOW.
 - ii. The Bidder shall describe its approach to the SSSB-POL system maintenance and supply support for both hardware and software and shall be required to describe how he will meet the requirements in accordance with SOW Section 8 of the prospective Contract. The Bidder shall be required to describe the proposed spares provisioning methodology.
 - iii. The Bidder shall prepare a draft customer support concept and outline how it plans to adapt the support processes and deliverables within the scope of this Contract.
 - iv. The Bidder shall also provide detail on how it will fulfil its roles and responsibilities in relation to each of the elements of the Contractor Logistics Support (CLS) concept during Contract implementation and warranty detailed within SOW Section 8 of the Prospective Contract. In addition, the Bidder shall provide a preliminary CLS Plan as set out in SOW Section 8 of the prospective Contract.
- f. PIP Section 6: Test and Evaluation
- i. The Bidder shall describe in detail its approach to the development of test and evaluation documentation.

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- ii. The Bidder shall identify its proposed test organisation and provide preliminary test and evaluation plan by WBS for the allocation of personnel and the time line for the Test activities set out as requirements in SOW Section 10 of the prospective Contract.
 - iii. This plan shall also include a preliminary Security Test and Evaluation Plan (STEP) that meets the requirements set out in SOW Section 5 of the prospective Contract.
 - iv. The Bidder shall describe the major components, sub-assemblies and assemblies that are proposed to be submitted for acceptance on the basis of prior testing and qualification and that are expected to undergo partial testing and/or extensive testing and evaluation.
 - v. If there are elements of the system that are proposed to be submitted on the basis of a Certificate of Conformity (CoC) or based on prior test and qualification then the Bidder shall provide a summary of those particulars, especially with regards to dates of prior tests and for whom the testing was executed.
 - vi. The Bidder shall describe how the proposed CoC or request for exemption of testing based on prior qualification will be processed from the QA and CM aspects.
 - vii. The Bidder shall describe the preliminary version of procedures and controls to be employed for testing of components, sub-assemblies and assemblies that are sub-contracted and tested at sub-contractor's facilities.
- g. PIP Section 7: Documentation
- i. In this section, the Bidder shall provide a preliminary documentation plan by WBS to detail the resources allocated and the schedule of work to deliver the documentation required in SOW Section 13 of the prospective Contract.
 - ii. In this plan the Bidder shall describe how it proposes to comply with each of the documentation requirements detailed in SOW Section 13 of the prospective Contract.
 - iii. The Bidder shall also be required to identify the documentation team and the individuals responsible within its organisation for ensuring documentation is delivered on schedule and to the Contract requirements.
- h. PIP Section 8: System Acceptance

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- i. The Bidder shall provide a preliminary System Acceptance Plan (SAP), by WBS, for the allocation of personnel and the time schedule to accomplish all the activities required and ensure the timely delivery of all documentation and other deliverables required for successful Final System Acceptance (FSA).
- i. PIP Section 9: Training
 - i. The Bidder shall provide a Preliminary Training Plan (PTP) in accordance with SOW Section 14 of the prospective Contract, detailing the training methodology for training of test personnel, operators and, maintainers, schedules for the initial training of personnel, the proposed training materials and the proposed delivery schedule of those materials as separate sub-sections.
 - ii. The Bidder shall be required to describe its training organisation and demonstrate that adequate staffing in its organisation will be available to train the student population and meet the schedule without impacting on other activities.
 - iii. The Bidder shall describe its approach regarding how support staff designated by the site POC will provide training on all tasks required to operate the system, perform daily maintenance and administration, disaster recovery, troubleshooting and failure/fault rectification. The Bidder shall also describe the Bidder's approach regarding how this training shall be structured according to the first, second, and third level support concept.
- j. PIP Section 10: Reliability, Availability, Maintainability and Testability
 - i. The Bidder shall provide a preliminary Reliability, Availability, Maintainability and Testability (RAMT) plan compliant with the requirements stated in SOW Section 9 of the Prospective Contract.
 - ii. The Bidder shall provide calculations that demonstrate that the system meets the RAMT requirements set out in SOW Section 9 of the prospective Contract. The Bidder shall use calculations based on actual data derived from operational experience of fielded systems, its components and extrapolations. The Bidder shall also provide a full description of the source data used, providing equipment numbers, owners, location and inclusive dates.

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- iii. The Bidder shall be required to predict the MTBF (Main Time between Failures) of the system it proposed and justify what the total availability of the system is within the requested values as specified at the SOW.
- k. PIP Section 11: Contractor Logistics Support
- i. In this section, the Bidder shall provide a preliminary Contractor Logistic Support (CLS) Plan for the maximum support period of the installed systems describing the roles and responsibilities of the Contractor to meet the requirements for CLS concept, as described in Book II of the prospective Contract.
 - ii. The Bidder shall demonstrate that it is capable of providing CLS after the warranty period as specified in the SOW of the prospective Contract. The Bidder shall also be required to provide firm fixed pricing for all CLS, ensuring that system reliability, availability, and maintainability requirements specified in the SOW continue to be met throughout the CLS period.
 - iii. The Bidder shall identify those items (assemblies and sub-assemblies) that are to be sub-contracted for repair, refurbishment, and/or modification as well as other services to be performed through a sub-contractor. The Bidder shall also be required to identify its proposed major sub-contractors for the CLS Contract.
 - iv. The Bidder shall include a letter of intent from the proposed sub-contractor that details its willingness to enter into a sub-contract with the Bidder should the CLS Contract be awarded to the Bidder.
 - v. The Bidder shall be required to demonstrate that the proposed corporate organisation (defined as the Prime Contractor and any sub-contractors) that is proposed for the CLS effort, shall have, in the aggregate, substantial experience in the maintenance and support of similarly sized RF systems over the last five (5) years. The description shall include the number of systems supported, the Purchaser of the support and point of contact with the Purchaser for reference. The description shall also need to identify any similarities between CLS Contracts previously delivered and the requirements under this IFB.

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- vi. The Bidder shall provide a description of how its proposed Configuration Management (CM) procedures will continue to be implemented on the hardware and software/firmware during the CLS periods.
- I. PIP Section 12: Security Accreditation
 - i. In this Section the Bidder shall provide a preliminary Security Accreditation Plan (SAP) by WBS detailing the resources allocated and the schedule of work to support the Security Accreditation, in addition to meeting the security requirements set out in SOW Section 5 of the prospective Contract.
 - ii. The Bidder shall confirm that he understands and accepts security accreditation documentation review and approval procedures, as defined in the IFB Contract Special Terms and Conditions, Article 11.
- m. PIP Section 13: Risk Assessment and Management
 - i. In order to demonstrate overall comprehension of the requirements set out in the prospective Contract, the Bidder shall provide a preliminary Risk Assessment and Management Plan (RAMP) defining its strategy for risk management to meet the requirements as set out in SOW Section 2 of the prospective Contract.
- n. PIP Section 14: Site Installation and Civil Works
 - i. In this section the Bidder shall provide a preliminary plan that thoroughly describes the civil works, power and site preparation requirements that must be accomplished to properly install and operate the proposed SSSB-POL system as set out in SOW Section 12 and SOW Annexes A and B of the prospective Contract.
 - ii. The Bidder shall provide adequate information regarding the requirements to quantify the magnitude of total civil works that must be accomplished on site prior to arrival of the equipment for installation.
 - iii. The Bidder shall identify those HN stakeholders that have a requirement to be involved in any approvals of national, local or HN MoD related permit authorisation associated with site installation and civil works. It shall also provide details of time schedules, processes and procedures required in order to obtain any such permits, approvals or authorisations and thus ensure that site installation and civil works are in line with agreed schedules.

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- iv. The Bidder shall specify any characteristics of the systems that constrain the type of civil works that are to be performed to prepare the sites.
- v. In addition, in case of a potential disruption of national communications services due to the Contractor activities, the Bidder shall also be required to deliver a preliminary System Installation Transition Plan (SITP) to ensure there is minimum disruption of provision of national communications services between site preparation and RSAT for the purpose of reducing the risks of Contract cost overrun, as well as reducing risks of lengthy disruption to mission-critical HN national communications services. Generally, the plan shall provide the possibility to close down services gradually. This transition plan will be subject to the approval of HN Poland, through the Purchaser.
- vi. The Bidder shall be required to provide a plan for the management and disposal of any associated spoil, rubble or waste resulting from site installation and civil works.
- vii. The Bidder shall confirm its understanding and acceptance of the site access requirements as defined in the IFB.

SECTION 4 BID EVALUATION AND CONTRACT AWARD**4.1. GENERAL**

- 4.1.1. The evaluation of Bids will be made by the Purchaser solely on the basis of the requirements specified in this Invitation for Bid (IFB)
- 4.1.2. The evaluation of bids and the determination as to the compliance or technical adequacy of the supplies and services offered will be based only on that information furnished by the Bidder and contained in its bid. The Purchaser shall not be responsible for locating or securing any information that is not identified in the bid. Bidders' responses to all IFB requirements and compliance statements shall be assessed for compliancy, completeness of response and quality of proposals.
- 4.1.3. The Bidder shall demonstrate comprehension of technical requirements. The Bidder shall be required to demonstrate that the PIP provides detailed descriptions of how the proposed design will meet each of the specific requirements of the IFB.
- 4.1.4. To ensure that sufficient information is available the Bidder shall be required to submit and provide with its bid all information requested by the Purchaser in the section of this IFB entitled "Bid Preparation Instructions". This shall be required to ensure a complete description of the work/deliveries that will be performed by/or the supplies is provided.

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- 4.1.5. Since significant omissions and/or cursory submissions may result in a determination of non-compliance without recourse to further clarification, the information provided by the Bidder in its proposal shall be required to a level of detail necessary for the Purchaser to determine exactly what the Bidder proposes to furnish and whether the offer meets the technical, administrative and Contractual requirements of this IFB.
- 4.1.6. During the evaluation the Purchaser may request clarification on any part of bid from the Bidder. Any such clarification requests from the Bidder shall be required to be provided in sufficient detail as to permit the Purchaser to make a final determination based upon the facts. The purpose of such clarifications will be to resolve ambiguities in the bid and to permit the Bidder to clarify its intent regarding certain statements contained therein.
- 4.1.7. The purpose of the clarification stage is not to elicit additional information from the Bidder that was not contained in the original submission nor to allow the Bidder to supplement cursory answers or omitted aspects of the submitted bid. The Bidder is not permitted any alterations to the formal bid regarding technical matters and is not to make any change to its price quotation at any time.
- 4.1.8. The Bidders prompt response to the Purchaser's clarification requests is important and therefore failure to provide the requested clarifications within the time-limits set out in the specific clarification requests may cause the bid to be deemed non-compliant.
- 4.1.9. The Purchaser reserves the right, during the evaluation and selection process, to verify any statements made concerning experience, facilities, existing designs or materials by making a physical inspection of the Bidder's facilities, capital assets and by inspecting designs that are claimed to be in production or fielded. Any such physical inspection shall also apply to assertions in the proposal made on behalf of proposed sub-Contractors. The Bidder shall be responsible for providing access to its own or sub-Contractors facilities, fielded equipment and systems within national security limitations.
- 4.1.10. Any Contract resulting from the IFB will be awarded to the Bidder whose offer, as evaluated by the Purchaser, is the lowest priced bid in compliance with the requirements of this IFB. The evaluation will be conducted in accordance with NATO Procedures. Evaluation of this IFB will be conducted in accordance with the "One Envelope" procedure in which only the Technical Proposal of the lowest Bidder is evaluated for compliance with the requirements of the IFB. The Bidder who has offered the lowest priced, technically compliant bid will then be offered the Contract for award.
- 4.1.11. Failure to satisfy any of the bidding requirements may result in a determination of non-compliance for the entire bid. In such a case the technical proposal of the Bidder who has submitted the apparent next lowest priced bid will be evaluated.

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4.2. ADMINISTRATIVE COMPLIANCE

- 4.2.1. Prior to opening the price quotation envelopes, bids will be reviewed for compliance with the bid submission requirements of this IFB. These are as follows:
- a. The bid was received by the bid closing date and time.
 - b. The bid was packaged and marked properly.
 - c. The Bidder has submitted a bid guarantee in the required form, in the required amount and for the required validity in the Administrative Package.
 - d. The Administrative Package contained all the information required with originally signed copies of the required Certificates as set out and required in Book I Annex B.
- 4.2.2. Any bids that fails to conform to the above requirements **may be declared non-compliant** and may not be evaluated further by the Purchaser.
- 4.2.3. If it is discovered, during either the technical or price evaluation, that the Bidder has taken exception to the terms and conditions of the prospective Contract, has qualified and/or otherwise conditioned its offer on a modification or alteration of the terms and conditions or the language of the SOW then the Bidder **may be determined to submit a non-compliant Bid**.

4.3. PRICE EVALUATION

- 4.3.1. Price Evaluation Criteria. The Bid will be evaluated against the following criteria:
- a. Compliance with the requirements for preparation and submission of the price quotation set out in the bid preparation section. To that extent Bidders are advised that the nature of the prices supplied is expected to be Firm Fixed for the fulfilment of all SOW objectives. Furthermore, such prices shall not be conditional in nature (i.e. pricing caveated to a particular condition imposed by the Bidder). Any comments supplied in the bidding sheets that are conditional in nature may render the bid non-compliant.
 - b. All pricing data (i.e., quantities, unit prices) shall be provided as reflected in the bidding sheets.
 - c. Bid prices shall include all costs for items supplied, delivered, and supported.
 - d. All prices shall be required to be accurately entered and totalled into appropriate columns.
 - e. The Bidder is to provide accurate unit prices (where required) and total price for each line item.
 - f. The grand total shall be accurate.

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- g. The currency of all line items shall be clearly indicated.
- h. The Bidder shall indicate that in accordance with the treaties governing the terms of business with NATO, it has excluded from its prices all taxes, duties and customs charges from which the Purchaser has been exempted.
- i. Price quotes for each individual item(s), and totalled prices shall be accurate and realistic (based on historic data, and/or market and competitive trends in the specified industrial sector(s)) as stated at Book I paragraph 4.4.
- j. A bid that fails to meet the compliance standards defined in this section may be declared non-compliant and may not be evaluated further by the Purchaser.
- k. Lowest determined total Firm Fixed Price offered for the basic Contract effort (CLINs 1 thru 15). The optional CLIN 16 is treated as 'Unevaluated Option' and will not be part of the price evaluation, but will be evaluated for Price Realism.

4.3.2. Determination of Lowest Firm Fixed Price

- a. General. In order to determine the lowest offered price, the Purchaser will convert all prices quoted into Euros for purposes of comparison. The exchange rate to be used by the Purchaser will be the average of the official buying and selling rates of the European Central Bank at close of business on the last working day preceding the bid closing date, or any extension thereof.
- b. Basis of Price Comparison. The Total Price Offered for the Basic Contract for CLIN 1 thru 15 will be compared on the basis of the prices offered converted to Euros as stated in paragraph 4.3.2.a above.

The Option CLIN 16 will not be part of the price evaluation but will be evaluated for Price Realism.

4.3.3. Price Realism Procedure

- a. Any successful Bidders that submit a price quotation that is perceived by the Purchaser to be so low that it is not a realistic reflection of the objective cost of performance of the associated technical proposal, may be considered by the Purchaser to submit an unrealistic offer and that offer may be determined to be non-compliant.
- b. Indicators of an unrealistically low bid may be, but not limited to, the following:

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- i. Labour costs that, when amortised over the expected or proposed direct labour hours, indicate average labour rates far below those prevailing in the Bidder's locality for the types of labour proposed.
 - ii. Direct materiel costs that are considered to be too low for the amounts and types of materiel proposed, based on prevailing market prices for such materiel.
 - iii. Numerous line item prices for supplies and services that are provided at no cost or at nominal prices.
 - iv. Lowest offered price appear to be substantially different from the next lowest prices offered.
- c. If the Purchaser has reason to suspect that a Bidder has artificially debased its prices in order to secure Contract award, the Purchaser will request clarification of the bid in this regard and the Bidder shall be required to provide an explanation on one of the following bases:
- i. An error was made in the preparation of the price quotation. In such a case, the Bidder must document the nature of the error and show background documentation concerning the preparation of the price quotation that makes a convincing case that a mistake was made by the Bidder. In such a case the Bidder shall petition the Purchaser to either remain in the competition or accept the Contract at the offered price, or to withdraw from the competition.
 - ii. The Bidder has a competitive advantage due to prior experience or industrial/technological processes that demonstrably reduce the costs of Bidder performance and therefore the price offered is realistic. Such an argument must support the technical proposal offered and convincingly and objectively describe the competitive advantage and the net savings achieved by this advantage over standard market practices and technology.
 - iii. The Bidder recognises that the submitted price quotation is unrealistically low compared to its cost of performance and, for business reasons, the Bidder is willing to absorb such a loss. Such a statement can only be made by the head of the business unit submitting the bid and will normally be made at the level of Chief Operating Officer or Chief Executive Officer. In such a case, the Bidder shall be required to estimate the potential loss and show that the financial resources of the Bidder are adequate to withstand such reduction in revenue.

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- d. If a Bidder fails to submit a comprehensive and compelling response on any one of the bases above, the Purchaser may determine the bid submitted as non-compliant. If the Bidder responds on the basis of paragraph 4.4.1.a) above and requests to withdraw from the competition, the Purchaser may, depending on the nature and gravity of the mistake, allow the Bidder to withdraw with or without penalty in terms of drawing on the Bid Guarantee.
- e. If the Purchaser accepts the Bidders explanation of mistakes in paragraph 4.4.1.c above and allows the Bidder to accept the Contract at the offered price, or the Purchaser accepts the Bidders explanation pursuant to paragraph 4.3.1 above, then the Bidder shall agree that the supporting pricing data submitted with its bid will be incorporated by reference in the resultant Contract. The Bidder shall be required to agree, as a condition of Contract signature, that the pricing data will be the basis of determining fair and reasonable pricing for all subsequent negotiations for modifications of or additions to the Contract and that no revisions of proposed prices will be made.
- f. If the Bidder presents a convincing rationale pursuant to paragraph 4.4.1.c above no additional action will be warranted. The Purchaser, however, reserves its right to reject such an argument if the rationale is not compelling or capable of objective analysis. In such a case the bid may be determined to be non-compliant.
- g. The Purchaser reserves the right to request prime Contractors, or the sub-Contractor(s) to separately identify each of the direct/indirect costs, advise why each is required and provide supporting documentation to substantiate each charge such as:
 - i. Catalogue price lists and any applicable discounts.
 - ii. Copies of the sub-Contractor's orders from others for the same or similar items, including explanations for cost variations.
 - iii. Sub-Contractor's internal cost estimate, or documentation of whatever means the sub-Contractor used to arrive at the charge.

4.4. TECHNICAL EVALUATION

- 4.4.1. Upon determination of the lowest-priced bid as described above, the bid shall be evaluated to confirm compliance with the SOW associated with the respective sections of the Technical Proposal (TP).
- 4.4.2. In order for a bid to be determined to be technically compliant, the Bidder shall be required to submit a Technical Proposal (TP) that has met the following criteria after evaluation by the Purchaser:

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- 4.4.3. Bidders shall have compiled a detailed Table of Contents (ToC) that lists not only the section headings but also the major sub-sections, and topic headings required as set out in these Instructions or implicit in the organisation of the TP.
- 4.4.4. Following the ToC, the Bidder shall include the completed TP Cross-Reference (Requirement Traceability) as detailed in the table at Book I Annex C. The Bidder shall be required to complete Column 3 (Bid Reference) of the table referred to above, citing the appropriate section of the TP that corresponds to each paragraph of these instructions for the preparation of the TP. The completed table will serve as an index for the Purchaser's Technical Evaluation Panel (TEP) and also as an aide memoire to the Bidder to ensure that all the required information has been provided in the TP.
- 4.4.5. The Bidder shall be required to provide an overview of the salient features of their TP in the form of an executive summary as follows:
- a. This summary shall be required to provide a general description of the major points contained in each of the required sections of the TP shall demonstrate the Bidder's understanding of the project, implementation environment and the problems and risks associated with project implementation.
 - b. The Bidder shall be required to discuss in detail not only how the proposal meets the requirements, but also how the Bidder intends to overcome the problems and mitigate the risks.
- 4.4.6. The Technical Evaluation Criteria are cited in the following paragraphs:
- 4.4.7. Section 1 - Corporate Organisation/Capital Facilities
- a. The Bidder shall have proposed a Corporate Structure and organisation of the prime Contractor and its associated administrative structure demonstrating that the SSSB-POL systems Contract has high visibility within the overall corporate organisation. This section shall describe the chain of authority within the prime Contractor's organisation from the Project Manager (PM) to the Chief Executive Officer (CEO). The Corporate Structure shall be required to describe in detail and depth those resources within the overall corporate organisation that will ensure a reserve capability in order to successfully deliver the Contract aims and objectives.
 - b. The Corporate Structure description shall need to demonstrate and confirm that the PM has sufficient authority within the organisation to access, in a timely manner, corporate resources as a priority that are not directly under its control as PM.
 - c. The Bidder shall describe the process by which the PM may have access to these "in-house" corporate resources and what level of authority is required in the corporation hierarchy to secure the needed resources.

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- d. The Bidder shall provide the comprehensive Curriculum Vitae (CV) for the proposed PM for this project and also the Deputy Project Manager (DPM). The Bidder shall provide a narrative describing the rationale for the selection of these individuals for these posts provided to ensure the individuals are Suitably Qualified and Experienced Personnel (SQEP). This section shall describe the authority and responsibility (and the limits) of the Project Manager and the Deputy Project Manager within the overall corporate organisation. The narrative shall describe the circumstances at which the Project Manager must refer decision-making authority to the next level of corporate management.
- e. The Bidder shall be required to describe the responsibilities of its Project Management Office (PMO) and describe associated staffing and resources. The management, staffing and resources of the PMO shall include everything needed to conduct and support the management and administration of operations in order to meet the aims and objectives of the project needs to be described, including taking all reasonable steps to include continuity/succession planning/shadow appointments of personnel assigned to work on this project.
- f. The Bidder shall be required to identify its major proposed prospective sub-contractors for the SSSB-POL system, as stated in Book I Annex B-14. The Bidder shall also need to ensure it has submitted a detailed and thorough sub-contracting plan that identifies all major sub-contractors/sub-vendors and their areas of responsibility/delivery. The plan shall be required to comply with the Project Control Plan, in that delivery of sub-contracted items and assemblies, critical components are identified. The plan shall be required to demonstrate that the Bidder can effectively manage, monitor and control the proposed sub-Contractors and that the sub-contractors will agree to abide by the requirements of the prime Contract as with regard to flow-down provisions. Declarations by sub-contractors to abide by the requirements of the prime Contract shall be confirmed and available in the Bidder's proposal.
- g. Major proposed sub-contractors, for purposes of this subsection, shall have referred to the criteria set out in the general provision of the prospective Contract entitled 'Sub-Contracts'. The Bidder shall identify the firm, the nation of origin, the estimated value of the sub-contract and the major items (assemblies, sub-assemblies) or services that the proposed sub-contractor will be required to furnish.

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- h. The Bidder shall be required to include a draft copy of the proposed sub-contract, as applicable. The Bidder is also to include a letter of intent from the proposed sub-contractor that details its willingness to enter into a sub-contract with the Bidder should the Bidder be awarded the SSSB-POL Contract. It will also need to summarise all of the supplies and/or services to be furnished by the prospective sub-contractor.
- i. With regard to major sub-contracts, the Bidder shall be required to identify those items that are sub-contracted (assemblies and sub-assemblies) and that are considered to be on the 'Critical Path' in meeting the delivery schedule of the Contract.
- j. The Bidder shall provide a description of the parts of the project that it intends to sub-contract and demonstrate that the chosen sub-contractors have adequate assets and capacity to fulfil their role that they have been allocated. The Bidder shall demonstrate that sub-contracted facilities and assets are available to meet the anticipated schedule and provide sufficient alternative arrangements to mitigate the failure to deliver of critical sub-contracted items.
- k. The Bidder is to provide a sub-section that identifies the items (assemblies, sub-assemblies) and services that are to be fabricated and/or performed by the corporate resources of the prime Contractor.
- l. The Bidder shall be required to confirm the location of the production facilities that will be utilized, and/or the source within the corporate organisation of the services and expertise required. For corporate production facilities, the Bidder shall have provide analytical evidence that adequate capacity exists in order that the required items will be manufactured within the time schedule of the prospective Contract.
- m. The Bidder shall demonstrate that existing capital assets are available and provide a detailed proposal of what additional equipment or facilities will be acquired or constructed in order to meet the Contract schedule.
- n. In addition, the Bidder shall further be required to provide a description of any re-tooling efforts required as well as an anticipated time forecast of when these capabilities would be ready for use.
- o. The Bidder shall describe the distribution, warehousing, or order-processing capabilities that the Bidder has that enables it to provide efficient and prompt delivery of hardware in order to satisfy short-notice or unpredictable customer orders. The description must provide sufficient evidence to confirm that the Bidder will be able to meet the timelines and other shipment and task requirements of the SOW.

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4.4.8. Section 2: Corporate Experience

- a. The Bidder shall be required to confirm that it has been an established electronics manufacturer and systems integrator having substantial experience in the last five (5) years in the design, manufacturing, installation, maintenance and support of RF defence systems.
 - i. The Bidder shall be required to demonstrate evidence that it has delivered, within the last five (5) years, or is under Contract to deliver, similar RF defence systems. Alternatively, the Bid shall be required to be based on an existing design that has been operationally tested with the test results certified by national authorities. The design need not be identical to the requirements of this Contract but must be of sufficient similarity that cardinal modifications to the basic design will not have to be undertaken, thus increasing the confidence of the Bidder's ability to deliver within schedule.
 - ii. The Bidder shall be required to demonstrate experience over the last five (5) years in maintenance and support of similarly sized defence RF Systems.
 - iii. The Bidder shall be required to show documented evidence that it has delivered a RF defence system as offered in its proposal and gained acceptance in the last five (5) years, or currently be under Contract to deliver similar systems in an operational capacity. In this context, "operational capacity" shall not include a current research and development Contract or a Contract for any prototype system(s), but a system already planned or in use and operated as part of a national and/or NATO communications system.
- b. The Bidder shall provide the same information required above in para 4.4.8.a for the major sub-contractors for critical assemblies and subassemblies. The sub-contractors need not be manufacturers of the RF Systems as a whole, but must demonstrate a level of experience for capabilities that they are proposing to deliver, or services for which they are proposing to perform.
- c. The Bidder shall be required to describe its experience and expertise in providing warranty support and repair-and-replacement service for similar Defence RF systems for large, geographically-dispersed organisations. The Bidder shall have provide evidence of its experience and expertise for warranty support, repair and replacement services as well as any associated document requirements.

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- d. The Bidder shall confirm that it, and if required its sub-contractors, have demonstrable evidence and experience in providing implementation + CLS + warranty of work performed through previous NATO or national Contracts.
 - e. Individual skill and experience. The Bidder shall be required to provide SQEP resumes of any proposed individuals, planned to perform the technical tasks under the proposed Work Packages (WP) in addition to the resumes of the individuals designated as Key Personnel in Annex B-13. For each role identified, the resumes shall need to demonstrate that they have the expected knowledge, capability and experience to meet the requirements of this Contract.
- 4.4.9. Section 3: Preliminary Project Implementation Plan (PIP): Bidders shall demonstrate that the Preliminary PIP provide detailed descriptions of how the proposed design will meet each of the specific requirements of the IFB. The preliminary PIP document shall have met the requirements detailed in Book I from 3.4.8 a through n as well as from 4.4.9.a through n.
- a. PIP Section 1: Project Management and Control
 - i. The Bidder shall submit a preliminary Project Management and Control Plan (PMCP) that conforms to the requirements of SOW Section 2 of the prospective Contract. This plan shall identify significant tasks required to be accomplished and items to be delivered in the execution of the Contract. The preliminary Project Work Breakdown Structure (PWBS), the preliminary Project Master Schedule (PMS) and supporting charts shall describe in sufficient detail the steps necessary to achieve delivery of the SSSB-POL System within the Contract terms and schedule. The preliminary PMCP shall be logical and realistic, demonstrating the Bidder's appreciation of the complexity of the project and its experience in managing large programmes.
 - ii. The Contractor shall also develop a preliminary Project Master Schedule (PMS) in accordance with SOW Section 2 of the prospective Contract that shall contain all Contract events and milestones. The PMS shall have correlated with the PWBS. The PMS shall include activity network, activity GANTT / Program Evaluation Review Technique (PERT) charts, milestone, and critical path views of the project schedule, showing detailed and high level schedules with associated resources. This plan shall have been detailed to a level at which all deliverable items required under the Contract are identified and accounted for by a work path that shows the interconnectivity of the various task.

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- iii. The Bidder shall demonstrate the realism of approach to accomplish the work within the time schedule defined in the IFB. The Bidder shall submit a PMCP compliant with Book II Part I Section 2 and the Gantt/PERT diagrams set out in Book II Part I Section 2.
 - iv. In PMS, the relationship between the WPs and project deliverables shall have been clearly demonstrated as well as the schedule of sub-contracted performance and deliveries shall clearly be integrated into this plan.
 - v. This preliminary PMCP shall also have considered all aspects of project management and control and shall demonstrate how all the critical milestones defined in the Book II Part I Section 2 will be met.
 - vi. The Bidder shall propose the dates for milestones (Book II Part I Section 2), within the boundaries established in the IFB. These dates shall be incorporated into the resultant Contract of the successful Bidder.
 - vii. The Bidder shall demonstrate a realism of approach to accomplish the work within the time schedule defined in the IFB. The dates proposed in Book II Part I Section 2 shall have been fully supported and coherent by/with the Gantt/PERT diagrams as well as the PWBS. Where dates offered are earlier than those set out in the prospective Contract, the Purchaser may, at its discretion, accept such dates and the alternative milestone schedule will be inserted in the resultant Contract.
 - viii. The Bidder shall demonstrate that it has taken into account the constraints of the implementation environment and reflected this understanding in its draft preliminary Project Management and Control Plan (PMCP).
- b. PIP Section 2: System Engineering and Design
- i. The Bidder shall submit a Preliminary System Engineering and Design Plan (PSEDP) describing the preliminary design of the proposed system and including a preliminary System Safety Engineering Plan (SSEP) and a preliminary Electromagnetic Interference and Compatibility (EMI/EMC) Control Plan as sub-plans that conform to the requirements of SOW Section 4 of the prospective Contract.

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- ii. The Bidder shall have supported this design with sufficient information as to convincingly demonstrate that the proposed design will meet the safety and security requirements as set out in SOW Section 4 and Section 5 of the prospective Contract as well as functional and technical requirements as set out in SOW Annex A and Annex B of the prospective Contract. The Bidder's proposed technical design shall need to provide sufficient detailed information on how the Bidder intends to meet performance, functional or architectural requirements as defined in the IFB. Failure to provide sufficient detailed technical information on any of the bidding requirements, or omission of the critical information, may result in a determination of non-compliance for the entire Bid.
- iii. The PSEDP shall provide sufficient detailed descriptions of how the proposed designs for the project shall have met each of the specific performance requirements/parameters of the areas detailed at SOW Section 4 of the prospective Contract.
- iv. The Bidders shall have taken into account the constraints of the site and the number of simultaneous transmissions, as well as EMC, in its technical proposal. An EMC study of the transmitter site shall have been submitted as part of the Bid to show that public and occupational exposure levels are within international and national guidelines.
- v. The PSEDP shall contain sufficient detail as is practicable in order to demonstrate that the system as delivered, will meet the safety and security requirements as set out in SOW Section 4 and SOW Section 5 of the prospective Contract, as well as functional and technical requirements as set out in SOW Annex A and Annex B of the prospective Contract.
- vi. The Bidder shall describe the Bidder's approach to preparing and maintaining the Engineering Documentation Package (EDP) throughout the design, integration, test and site surveys activities, ensuring consistency between all the documents included in that documentation package.
- vii. Equipment specification: For each capability separately;

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- For each Hardware Contract Line Item Number (CLIN); the Bidder shall include in its Bid a detailed list of the COTS components proposed to be supplied as part of that CLIN. The product name, manufacturer name, and manufacturer's part number, version, or release number shall have been stated. If a generic or non-vendor specific component is proposed, the Bidder shall provide the item name.
 - The Bidder shall include in its Bid a detailed specification sheet for each item of equipment the Bidder proposes to provide in satisfaction of Contractual requirements.
- viii. The Bidder shall furnish drawings, diagrams and specifications. If the proposed SSSB-POL system is based on a design that has been tested with the results certified by a national authority, then the test performance data shall also be required to be provided and data projections included for elements that were not tested.
- ix. The Bidder shall provide predicted performance characteristics and specifications based on engineering analysis and/or extrapolations from previous data.
- x. Bidder's proposed technical designs shall provide detailed information on how the Bidder intends to meet performance, functional or architectural requirements defined in the SOW and all its annexes. Failure to provide detailed technical information for any of the bidding requirements or omission of the critical information may result in a determination of non-compliance for the entire Bid.
- xi. The Bidder shall agree to abide by and implement the security mechanism as defined in the NATO Security Policy and supporting directives as per Section 5 of the SOW.
- xii. The Bidder shall propose automated tools to process classified data and information that shall meet the respective security requirements as stated at Section 5 of the SOW.
- xiii. The section related to security shall be submitted as a self-contained volume or volumes of the Technical Proposal (TP) and shall be segregated from the other materials insofar as the nature of the responses will be subject to security classification.

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- xiv. The Bidder shall demonstrate and confirm that the hardware to be procured in accordance with this IFB meets the hardware specifications as defined in SOW Annex A.
 - xv. The Bidder shall describe the Bidder's Risk Assessment (RA) including proposing any appropriate change requests against the functional baseline.
 - xvi. The Bidder shall provide a detailed plan for the antenna farms of the 2 (two) Radio Sites containing the location and physical arrangement of, but not limited to, antenna locations, ground planes (where applicable), and transmission cable layouts represented at a suitable scale on a site layout plan.
 - xvii. The Bidder shall provide a matrix with a justified calculation of expected worst-case antenna isolation values between all antenna port pairs, when measured at the antenna matrix output.
- c. PIP Section 3: Quality Assurance (QA)
- i. The Bidder shall submit a preliminary version of the Quality Assurance/Quality Control (QA/QC) Plan in accordance with SOW Section 6 of the prospective Contract. Within this plan, the Bidder shall have addressed all the requirements of the Contract concerning QA and QC as set out in Article 24 of the Contract Special Provisions and SOW Section 6 of the prospective Contract. The Bidder shall have also identified the QA/QC systems (NATO, National, company) that it intended to apply to the performance of this Contract and shall demonstrate that its choice complies with the applicable requirements.
 - ii. The Bidder shall provide sufficient evidence that the QA/QC organization in its company has enough competence with demonstrable capability in managing the quality programme of a project of this magnitude. The QA/QC organisation and the QA Manager shall have sufficient inherent authority and visibility in the overall Corporate Structure to properly execute the software, hardware and documentation aspects of QA management of a project of this size and complexity.

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- iii. The proposed QA/QC plan shall demonstrate how procedures are developed, implemented and maintained to adequately control the design, integration, production, purchasing, installation, inspection, testing, configuration management and customer support of all services and all products (both management products and specialist products), in accordance with the requirements of this Contract.
 - iv. The proposed QA/QC Plan shall describe the quality criteria that will be applied to each of the deliverables under this Contract (i.e. the documentation as well as the system and all of its components)
 - v. The proposed QA/QC Plan shall describe the Bidder's internal process for the quality review of the deliverables before their release to the Purchaser.
 - vi. The proposed Quality Plan (QP) shall describe how all necessary assistance shall be provided to the Quality Assurance Representative (QAR) or its delegated National QAR, and show how quality records for the prime and any sub-contractors or consortium members will be made available for evaluation.
 - vii. The Bidder shall provide information similar to that set out in sub-paragraphs of 4.4.9.c above in order to demonstrate the conformance to the QA/QC Contract requirements by the major sub-contractors and suppliers. It shall also state how it intends to ensure compliance of its prospective sub-contractors and, where applicable, those of the prospective suppliers of Commercial-Off-The-Shelf (COTS) equipment with QA/QC requirements of the SOW of the prospective Contract.
- d. PIP Section 4: Configuration Management (CM)
- i. The Bidder shall submit a preliminary Configuration Management Plan (CMP) that conforms to the requirements of SOW Section 7 of the prospective Contract. The Bidder shall demonstrate that its proposed configuration management procedures meet the requirements of SOW Section 7 of the prospective Contract. The Bidder shall further provide details of its existing CM organisation.
 - ii. The Bidder shall outline how it adopts the configuration management processes and deliverables within the scope of this Contract as requested in the SOW Section 7.

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- iii. The Bidder shall demonstrate how the various baselines referred under SOW Section 7 will be established using automated tools.
 - iv. In addition, the Bidder shall demonstrate that a Configuration Status Accounting (CSA) database will be maintained using software tools during the Contract.
 - v. The Bidder shall describe the Bidders approach to conducting the physical Configuration Audit (CA) for each site, including the verification of delivered configuration items against the product baseline.
 - vi. The Bidder shall provide, as part of the CM Plan, a project specific configuration control process description, an initial set of project specific Configuration Item (CI) selection criteria for the capabilities, an initial set of project specific CIs including their attributes and relationships among each other for the capabilities.
- e. PIP Section 5: Integrated Logistics Support (ILS)
- i. The Bidder shall provide a high level description of the proposed ILS Plan. This plan shall have covered the requirements of the prospective Contract as set out in Section 8 of the SOW.
 - ii. The Bidder shall describe its approach and how it will meet the requirements for the SSSB-POL system maintenance and supply support for both hardware and software in accordance with SOW Section 8 of the prospective Contract. The Bidder shall describe the proposed spares provisioning methodology.
 - iii. The Bidder shall prepare a draft Customer Support Concept and outline how it adopts the support processes and deliverables within the scope of this Contract. The Bidder shall provide as part of the draft support concept:
 - A project specific, problem management process description including all Bidder resources (number and labour categories of staff, nature and quantities of any other required resources) that it will use to provide 2nd Level Support.

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- A Problem Analysis Report Template.
 - Draft Maintenance Concept. The Bidder shall outline how it adapts the maintenance processes and deliverables to the scope of this Contract.
 - Draft Transportation Plan. The Bidder shall outline how it adopts its transport/manifest processes and deliverables within the scope of this Contract.
- iv. The Bidder shall provide information on how it fulfils its roles and responsibilities in accordance with the Contractor Logistics Support (CLS) concept during Contract implementation and warranty detailed at SOW Section 8 of the prospective Contract. In addition, the Bidder shall also provide a preliminary CLS Plan as set out in SOW Section 8 of the prospective Contract, describing the services Contractor shall perform during the Post Warranty period. The Bidder shall have stated if he is capable of providing full CLS after warranty period, as specified in the SOW of the prospective Contract.
- f. PIP Section 6: Test and Evaluation
- i. The Bidder shall describe in detail its approach to developing test and evaluation documentation.
 - ii. The Bidder shall submit a preliminary version of the Test and Evaluation Plan (TEP) for FAT, RSAT and SAT for the allocation of personnel and the time line for the test activities that meets the overall requirements and objectives of SOW Section 10 of the prospective Contract.
 - iii. If applicable, the Bidder shall submit as an integral part of the testing activities provide a preliminary Security Test and Evaluation Plan (STEP) that meets the requirements set out as in SOW Section 5 of the prospective Contract.
 - iv. The Bidder shall provide comprehensive information about the major components, sub-assemblies and assemblies that are expected to undergo partial testing and extensive testing and evaluation prior to FAT, RSAT and SAT.
 - v. If there are elements of the system that are proposed to be submitted on the basis of a Certificate of Conformity (CoC) and based on prior test and qualification, the Bidder shall also provide a summary of the particulars, especially the dates of the prior tests and for whom the testing were executed.

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- vi. The Bidder shall describe how the proposed CoC will be processed from QA and CM aspects.
 - vii. The Bidder shall have adequately described its proposed methods to ensure the testing in compliance with Contract requirements of components, sub-assemblies and assemblies that are sub-contracted and tested at sub-contractor facilities.
- g. PIP Section 7: Documentation
- i. In this Section, the Bidder shall provide a preliminary Documentation Plan by WBS to detail the resources allocated and the schedule of work to deliver the documentation required in SOW Section 13 of the Prospective Contract.
 - ii. In this plan, the Bidder shall describe how it proposes to comply with each of the documentation requirements detailed in SOW Section 13 of the prospective Contract.
 - iii. The Bidder shall also identify the documentation team and the individual responsible within its organisation for ensuring such documentation is delivered on schedule and to the Contract requirements.
- h. PIP Section 8: System Acceptance
- i. The Bidder shall provide a preliminary System Acceptance Plan (PSAP) by WBS for the allocation of personnel as well as the time schedule to accomplish all the activities required. It shall ensure the timely delivery of all documentation and other deliverables required for successful Provisional System Acceptance (PSA) and Final System Acceptance (FSA), in order to meet the requirements as set out in SOW Section 11 of the prospective Contract.
- i. PIP Section 9: Training
- i. The Bidder shall submit a preliminary training plan that demonstrates that he fully understands the training requirements set out in SOW Section 14 of the prospective Contract, detailing the training methodology for training of test personnel, operators and maintainers, schedules for the initial training of personnel, the proposed training materials and the proposed delivery schedule of those materials and thoroughly addresses the salient features of such requirements, such as schedule, material, media and content.

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- ii. The Bidder shall describe its training organisation and demonstrate that adequate staffing in its organisation will be available to train the student population and meet the schedule without impacting on other activities. The Bidder shall describe the medium/media to be used in its proposed training method.
 - iii. The Bidder shall describe its approach regarding how support staff designated by the site POC will be provided training on all tasks required to operate the system, perform daily maintenance and administration, disaster recovery, and problem isolation. The Bid shall describe the Bidder's approach regarding how this training shall be structured according to the first, second, and third-level support concept.
- j. PIP Section 10: Reliability, Availability, Maintainability and Testability
- i. The Bidder shall provide a preliminary Reliability, Availability, Maintainability and Testability (RAMT) Plan compliant with the requirements stated in SOW Section 9 of the prospective Contract.
 - ii. The Bidder shall provide calculations that convincingly demonstrate that the proposed SSSB-POL systems design will meet the RAMT requirements set out in Section 9 of the SOW of the prospective Contract. The Bidders shall provide these calculations based, as much as possible, on actual data derived from operational experience of fielded systems and components and extrapolations therefrom, and shall provide a full description of the source data used, providing equipment numbers, owners, location and inclusive dates.
 - iii. The Bidder shall have predicted the Mean Time between Failures (MTBF) of the system he proposed and justify that the total availability of the system is within the requested values as specified at SOW. The Bidder shall provide calculations that demonstrate that the SSSB-POL System meets the RAMT requirements of the IFB.

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- k. PIP Section 11: Contractor Logistic Support
- i. The Bidder shall provide a preliminary Contractor Logistic Support (CLS) Plan for the maximum support period of the installed system, describing the roles and responsibilities of the Contractor to meet the requirements for CLS concept, as described in SOW Section 8 of the prospective Contract, covering all the aspects as set out in SOW Section 8 of the prospective Contract, describing the services the Contractor shall perform during the warranty period and during all Contracted CLS periods if exercised.
 - ii. The prospective CLS agreement will be executed by the NCIA on behalf of HN POL not later than the end of the warranty period, should the option for CLS be exercised. If exercised, the prospective CLS agreement shall provide for up to a duration as stipulated in the SSS of the prospective Contract. Bidders shall note that the post-warranty CLS agreement is an optional requirement of the prospective Contract for the manufacture and installation of the SSSB-POL System. The Bidder shall demonstrate that he is capable of providing CLS after the warranty period as specified in the SOW of the prospective Contract. The Bidder shall provide firm fixed pricing for all CLS option CLINs ensuring that system reliability, availability, and maintainability requirements specified in the SOW continue to be met during CLS period.
 - iii. Sub-Contractors. The Bidder shall identify those items (assemblies and subassemblies) that are to be sub-contracted for repair, refurbishment, and/or modification, or other services to be performed through a sub-contractor. The Bidder shall also identify its major proposed sub-contractors for the CLS Contract. The Bidder shall demonstrate that firm commitments have been made with sub-contractors. The Bidder shall identify the firm, the nation of origin, the major items (assemblies, sub-assemblies) or services that the proposed sub-contractor will be required to furnish, repair, modify and perform.
 - iv. The Bidder shall include a letter of intent from the proposed sub-contractor that details its willingness to enter into a sub-contract with the Bidder should the CLS Contract would be awarded to the Bidder.

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- v. The Bidder shall demonstrate that the elements of the Bidders proposed organisation that are planned to carry out the CLS effort have adequate experience in the maintenance and support of major RF defence systems. The experience described shall expand on the corporate experience descriptions required by paragraph 3.5.8 above to specifically highlight the prime Contractor's and sub Contractors' Contracted maintenance and supply efforts for a similar size RF defence system over the last five (5) years. The description shall include the number of systems supported, the Purchaser of the support, and point of contact with the Purchaser for reference. The description shall identify any similarities between CLS Contracts previously delivered and the requirements under this IFB.
 - vi. The Bidder shall convincingly demonstrate that the proposed CM procedures will effectively ensure configuration control during the CLS Periods.
- I. PIP Section 12: Security Accreditation
- i. The Bidder shall submit a preliminary Security Accreditation Plan (PSAP) and shall have convincingly demonstrated that the proposed plan will meet the security requirements set out in SOW Section 5 of the prospective Contract.
 - ii. The Bidder shall have confirmed that he understands and accepts security accreditation documentation review and approval procedures as defined in the IFB Contract Special Terms and Conditions, Article 11.
- m. PIP Section 13: Risk Assessment and Management
- i. The Bidder shall provide a preliminary Risk Assessment and Management Plan (RAMP) defining its strategy for risk management to meet the requirements as set out in SOW Section 2 of the prospective Contract. The Bidder shall demonstrate adequacy of monitoring and control activities to ensure early detection of problem areas and to schedule risk. The Bidder shall identify the possible risks involved in the performance of the Contract and shall have convincingly demonstrated that its approach offers adequate, logical and pragmatic means for risk/issue identification, assessment, mitigation, monitoring, and reporting of risks/issues, as well as methods for overcoming setbacks to the project throughout the Contract duration.

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- n. PIP Section 14: Site Installations and Civil Works
- i. The Bidder shall provide specific and comprehensive information regarding civil works, power and site preparation requirements that must be accomplished to correctly install and operate the proposed SSSB-POL system as set out in SOW Section 12 and SOW Annexes A and B of the prospective Contract. The Bidder shall demonstrate its concept and technical solutions including sufficient degrees of detail. The Bidder shall also provide specific and comprehensive information concerning the civil works, power and site preparation requirements necessary to have been completed prior to the installation of the delivered SSSB-POL System.
 - ii. Requirements such as, but not limited to load bearing capacity of concrete, special structural supports, pilings, platforms, reinforcements, power supply requirements etc., shall have been indicated in order to verify the infrastructure capabilities provided by HN on the two (2) radio sites prior to arrival of the equipment for installation. This information shall also be required to indicate and quantify the magnitude of total civil works that must be accomplished.
 - iii. The Bidder shall provide specific details of those HN stakeholders that have a requirement to be involved in approvals of national, local or HN MoD related permit and authorisation associated with site installation and civil works. The bidder shall also provide detailed time schedules, processes and procedures required in order to obtain any such permits, approvals or authorisations and thus ensure that site installation and civil works are in line with agreed schedules.

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- iv. The Bidder shall adequately specify any characteristics of the SSSB-POL System that may constrain the type of civil works needed to be performed in site preparation. The type of constraints may be of the nature of working and implementation, environmental, special material requirements or prohibited materials, location of power supplies, location of conduits for cabling, or operating characteristics that require the maintenance of a specialised or customised environment (e.g., minimum distance from high tension lines, specific climate conditions etc.). It shall also identify and procure all associated permits and approvals required to complete civil works and ensure associated procurement timelines for these have been included in planning schedules. In its proposal, the Bidder shall demonstrate an appropriate understanding of the user involvement and of required coordination with the user during the development of the implementation. The Bidder shall explain its Concept of Analysis (CoA) and how this analysis and associated conclusions relate to identified civil work constraints.
- v. The Bidder shall deliver a preliminary System Installation Transition Plan (SITP) to ensure minimum disruption of provision of national communications services between site preparation and RSAT. It shall enable NCI Agency to assess the Bidder's understanding of the installation requirements in the HN to reduce the risk of Contract cost overrun, and to reduce the risk of lengthy disruption to mission-critical HN communications services. Preliminary SITP shall include but not be limited to, a work schedule and task list, as well as analysis provided as to how it intends to plan, organise and execute works for system installation that maximises the amount of on-air time and minimized off-air time for HN communications services, until the HN communications services could be supported as part of the SSSB-POL system.
- vi. The Bidder shall provide a plan for the management and disposal of any associated spoil, rubble or waste resulting from site installation and civil works.
- vii. The Bidder shall have confirmed its understanding and acceptance of the site access requirements as defined in the IFB.

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INVITATION FOR BID

IFB-CO-14604-SSSB-POL



NATO Communications and Information Agency
Agence OTAN d'information et de communication

BOOK I

ANNEX A

BIDDING SHEETS FILLING INSTRUCTIONS, BIDDING SHEETS AND CONTRACTOR PRICING SUMMARY

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ANNEX A-1 Instructions for the Preparation of the Bidding Sheets

1. INTRODUCTION

Bid pricing requirements as addressed in this Annex are mandatory. Failure to abide to the prescriptions of Bid submission referred in this section may lead to the Bid being declared non-compliant and not being taken into consideration for award.

No alteration of the Bidding sheets including but not limited to quantity indications, descriptions or titles are allowed with the sole exception of those explicitly indicated as allowed in this document. Additional price columns may be added if multiple currencies are Bid, including extra provisions for all totals.

2. GENERAL REQUIREMENTS

Bidders are required, in preparing their Price Quotation to utilise the Bidding Sheets following the instructions detailed in Book I Section 3.3 and hereunder.

The prices and quantities entered on the document shall reflect the total items required to meet the Contractual requirements. The total price shall be indicated in the appropriate columns and in the currency quoted.

In preparing the Bidding Sheets, Bidders shall ensure that the prices of the Sub-items total the price of the major item of which they constitute a part.

All metrics (e.g., cost associated with labour) will be assumed to be standard or normalised to 7.6 hour/day, for a five day working week at NATO and National sites and Contractor facilities and 8 hours/day at NATO sites and Contractor facilities located in the United States.

Should the Bid be in other than Euro currency, the award of the Contract will be made in the currency or currencies of the Bid.

Bidders are advised that formulae are designed to ease evaluation of the Bidders proposal have been inserted in the electronic copies of the Bidding Sheets. Notwithstanding this the Bidder remains responsible for ensuring that their figures are correctly calculated and should not rely on the accuracy of the formulae used in the electronic copies of the Bidding Sheets.

If the Bidder identifies an error in the spreadsheet, it should notify the Purchaser who will make a correction and notify all the Bidders of the update.

Prices shall not include any provision for taxes or duties for which the Purchaser is exempt.

3. INSTRUCTIONS FOR COMPLETION OF BIDDING SHEETS

A. COMPLETING SECTION 1 (Offer Summary Sheet)

Bidders are to complete the offer summary sheet by providing the grand totals from the CLIN Summary sheets in the corresponding line on the offer summary sheet.

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B. COMPLETING SECTION 2 (CLIN Summary Sheet)

Section 2 corresponds to the Schedule of Supplies and Services of the Prospective Contract.

Bidders shall fill in the CLIN summary sheet based on the information provided in the detailed bidding sheets (CLIN Price Breakdown Bidding sheets). The detailed bidding sheets are broken down in to the categories listed in Section C below. Bidders are expected to aggregate the prices in the detailed bidding sheets that make up the line items in the CLIN summary sheet. The line items in the CLIN Summary Sheet shall be all INCLUSIVE of the price being bid in order to fulfil the requirement for the line item in the CLIN Summary Sheet. Bidders shall make sure that the total price indicated in the CLIN Price Breakdown Sheets matches the price stated in the CLIN summary sheet for the same corresponding CLIN or sub-CLIN. For the CLINs that do not have CLIN Price Breakdown sheets, the unit prices are to be only filled in on the CLIN summary sheets. The Grand total on the CLIN Summary sheets must be traceable to the Offer Summary Sheet.

C. COMPLETING SECTION 3 (CLIN Price Breakdown Bidding Sheets)

Bidders are instructed to prepare their cost proposals in sufficient detail to permit thorough and complete evaluation. For each of the CLINs the Bidder shall use the separate Sheets as provided, adding additional sheets if multiple currencies are used. Change the currency in the header (drop down) of the Sheets if necessary.

C.1. MATERIAL

A. Purchased Parts: Provide a consolidated priced summary of individual material quantities included in the various tasks, orders, or contract line items being proposed and the basis for pricing.

(1) Raw Material: Consists of material in a form or state that requires further processing. Provide priced quantities of items required for the proposal. Show total cost.

(2) Standard Commercial Items: Consists of items that the Bidder normally fabricates, in whole or in part, and that are generally stocked in inventory. Provide an appropriate explanation of the basis for pricing on attached schedule.

(3) The Bidder shall provide a level of detail down to the unique sellable item level (e.g. A server, a laptop, a printer).

(4) In the CLIN breakdown sheets the Bidder shall provide unit prices that shall be EXCLUSIVE of any applicable overhead, general and administrative costs, profit, costs associated to travel, per-diem and/or incidentals as well as Personnel Installation costs at the sites of performance. Factors for overhead shall be applied in the MATERIAL LABOUR OVERHEAD section of the detailed bidding sheet to the total cost of material.

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C.2 DIRECT LABOUR

Show the hourly rate by year and the total hours for the categories and disciplines of direct labour proposed.

Unit prices shall be EXCLUSIVE of any applicable overhead, general and administrative costs, profit, costs associated to travel, per-diem and/or incidentals as well as Personnel Installation costs at the sites of performance. Factors for overhead shall be applied in the DIRECT LABOUR OVERHEAD section of the detailed bidding sheet to the total cost of direct labour.

C.3 SUBCONTRACT LABOUR

Show the hourly rate by year and the total hours for the categories and disciplines of subcontract labour proposed.

Unit prices shall be EXCLUSIVE of any applicable overhead, general and administrative costs, profit, costs associated to travel, per-diem and/or incidentals as well as Personnel Installation costs at the sites of performance. Factors for overhead shall be applied in the SUBCONTRACT LABOUR OVERHEAD section of the detailed bidding sheet to the total cost of subcontract labour.

C.4 TRAVEL

Show the number of trips being made, the number of people travelling, the number of days per trip, the cost of traveling (e.g. flight costs), and the daily per diem rate. Insert comments/descriptions/references/explanation of calculation method under the 'Notes' column including the location & reference to the SoW.

C.5 OTHER DIRECT COSTS (ODC)

A. Special Tooling/Equipment. Identify and support specific equipment and unit prices. Use a separate schedule if necessary.

B. Individual Consultant Services. Identify and support the proposed contemplated consulting. State the amount of services estimated to be required and the consultant's quoted daily or hourly rate.

C. Other Costs. List all other direct charge costs not otherwise included in the categories described above (e.g., services of specialized trades, computer services, preservation, packaging and packing, leasing of equipment, ex-pat costs etc.) and provide bases for pricing.

D. GRAND TOTAL

This is the Bidders final Firm Fixed Price total for the identified CLIN or sub-CLIN and should match the price entered in the corresponding CLIN Summary sheet in Section 2 of the bidding sheets.

E. SPECIAL INSTRUCTIONS

CLINs 1 through 15 of Base Contract and Optional unevaluated CLIN 16 shall be priced at the lowest sub-CLIN level and rolled up to the next highest sub-CLIN or CLIN level.

Optional CLIN 16 will not be part of the price evaluation but will be evaluated for Price Realism.

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ANNEX A-2 BIDDING SHEETS

The Bidding Sheets are contained in the electronic file "IFB-CO-14604-SSSB-POL_Bidding-Sheets.xls" submitted as part of this IFB.

The structure of the Bidding Sheets enclosed is as follows:

Section 1: Offer Summary Sheet

Section 2: CLIN Summary Sheet (Schedule of Supplies and Services)

Section 3: CLIN Price Breakdown Bidding Sheets

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ANNEX A-3 Contractor Pricing Summary

On behalf of the firm stated below I hereby offer the Purchaser the services and deliverables (collectively referred as "ITEMS") set forth in the attached schedules¹, at the specified prices, and subject to the terms and conditions stated in IFB-CO-14604-SSSB-POL.

_____	_____
Date	Signature of Authorised Representative

	Printed Name

	Title

	Company

¹ Bidders must fill out, print, and attach to this cover page a hardcopy of the worksheets contained in the file "IFB-CO-14604-SSSB-POL_Bidding-Sheets.xls" that was submitted to them as part of the IFB package.

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INVITATION FOR BID

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NATO Communications and Information Agency
Agence OTAN d'information et de communication

BOOK I ANNEX B REQUIRED CERTIFICATIONS

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ANNEX B-1
CERTIFICATE OF LEGAL NAME OF BIDDER

This bid is prepared and submitted on behalf of the legal corporate entity specified below:

FULL NAME OF CORPORATION: _____
DIVISION (IF APPLICABLE): _____
SUB DIVISION (IF APPLICABLE): _____
OFFICIAL MAILING ADDRESS: _____

TELEPHONE: _____
BOA N° (IF AVAILABLE): _____
POINT OF CONTACT REGARDING THIS BID:
NAME: _____
POSITION: _____
TELEPHONE: _____
E-MAIL ADDRESS: _____
ALTERNATIVE POINT OF CONTACT:
NAME: _____
POSITION: _____
TELEPHONE: _____
E-MAIL ADDRESS: _____

Date	Signature of Authorised Representative
	Printed Name
	Title
	Company

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ANNEX B-2

CERTIFICATE OF INDEPENDENT DETERMINATION

1. The Bidder hereby certifies that in connection with this procurement:
 - a. This Bid has been arrived at independently, without consultation, communication or agreement, for the purpose of restricting competition, with any other Bidder or with any competitor;
 - b. The contents of this bid have not been knowingly disclosed by the Bidder and will not knowingly be disclosed by the Bidder prior to award, directly or indirectly to any other Bidder or to any competitor, and
 - c. No attempt has been made, or will be made by the Bidder, to induce any other person or firm to submit, or not to submit, a Bid for the purpose of restricting competition.
 - d. The Bidder has not engaged in any anticompetitive practice while preparing a Bid to include, without limitation, price fixing, group boycott, bid rigging, sharing markets or customers, market sharing, exclusivity arrangements with subcontractors, and abuse of dominant position.

2. I, the undersigned, hereby certify that:
 - a. I am the person in the Bidder's organization responsible within the organization for decisions regarding the bid and that the Bidder's organization has not participated and will not participate in any action contrary to 1(a) through 1(d) above, or
 - b. (i) I am not the person in the Bidder's organization responsible within the organization for the bid but that I have been authorised in writing to act as agent for the persons responsible for such a decision in certifying that the Bidder's organization has not participated, and will not participate in any action contrary to 1(a) through 1(d) above, and as their agent do hereby so certify, and

(ii) I have not participated and will not participate in any action contrary to 1(a) through 1(d) above.

3. Misrepresentations under this Certificate may be grounds for administrative non-compliance in the course of the present bidding process, or for termination for default should this be discovered after contract award.

Date

Signature of Authorised Representative

Printed Name

Title

Company

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ANNEX B-3
CERTIFICATE OF BID VALIDITY

I, the undersigned, as an authorised representative of the firm submitting this bid, do hereby certify that the pricing and all other aspects of the offer in response to IFB-CO-14604-SSSB-POL will remain valid for twelve (12) months following the Bid Closing Date of this Invitation for Bid.

Date

Signature of Authorised Representative

Printed Name

Title

Company

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ANNEX B-4
CERTIFICATE OF UNDERSTANDING

I certify that

.....
.....

Company has read and fully understands the requirements of this Invitation for Bid (IFB-CO-14604-SSSB-POL) and that the Bid recognizes these requirements in total.

I also certify to the best of my expert knowledge that this bid is within the “state of the art” boundaries as they exist at the time of bidding for this project.

Date

Signature of Authorised Representative

Printed Name

Title

Company

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ANNEX B-5
CERTIFICATE OF EXCLUSION OF TAXES AND CHARGES

I hereby certify that the prices offered in the price quotation of this bid in response to IFB-CO-14604-SSSB-POL exclude all taxes, duties (including VAT) and customs charges from which the purchaser has been exempted by international agreement.

Date

Signature of Authorised Representative

Printed Name

Title

Company

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ANNEX B-6
CERTIFICATE OF SECURITY OBLIGATION

CONTRACT NUMBER CO-14604-SSSB-POL

DURATION OF CONTRACT: _____

This is to certify that I:

FULL NAME: _____

MILITARY RANK AND NUMBER (where applicable): _____

DATE/PLACE OF BIRTH: _____

NATIONALITY: _____

WHERE EMPLOYED: ` _____

PURPOSE AND DURATION OF VISIT: _____

PASSPORT/IDENTITY CARD NUMBER: _____

ISSUED AT: _____ DATED: _____

Have been fully briefed on NATO security procedures relating to the handling, storage and dissemination of NATO RESTRICTED information. In addition, I fully acknowledge my personal security responsibilities and obligations and the consequences that the law or administrative or executive order of my nation provides when classified information passes into unauthorized hands, whether by intent or through personal negligence.

Considering the above, we hereby request an Electronic Soft Copy (on CD ROM) of Book II Part IV SOW Annex B. We hereby confirm that our company shall safeguard such documents in accordance with NATO Security Regulations. Book II Part IV SOW Annex B shall be posted to the following address: _____ .

SIGNED: _____ DATE: _____

Date

Signature of Authorised Representative

Printed Name

Title

Company

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N A T O U N C L A S S I F I E D

ANNEX B-7
CERTIFICATE OF AQAP 2110 OR ISO 9001 COMPLIANCE

I hereby certify that Company
possesses and applies Quality Assurance Procedures / Plans that are equivalent to AQAP
2110 or ISO 9001:2000.

A copy of the quality certification is attached herewith.

Date

Signature of Authorised Representative

Printed Name

Title

Company

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ANNEX B-8

DISCLOSURE OF REQUIREMENTS FOR THE NCI AGENCY EXECUTION OF SUPPLEMENTAL AGREEMENTS

I, the undersigned, as an authorized representative of _____, certify the following statement:

- 1. All supplemental agreements, defined as agreements, documents and/or permissions outside the body of the Contract but required by my Government, and the governments of my subcontractors, to be executed by the NCI Agency (NCIA) as a condition of my firm's performance of the Contract, have been identified, as part of the bid.
2. These supplemental agreements if applicable for this IFB listed as follows: (insert list of supplemental agreements or specify "none")

- 3. Examples of the terms and conditions of these agreements have been provided in our Offer. The anticipated restrictions to be imposed on NATO, if any, have been identified in our offer along with any potential conflicts with the terms, conditions and specifications of the prospective contract, see _____. These anticipated restrictions and potential conflicts are based on our knowledge of and prior experience with such agreements and their implementing regulations. We do not certify that the language or the terms of these agreements will be exactly as we have anticipated.
4. The processing time for these agreements has been calculated into our delivery and performance plans and contingency plans made in the case that there is delay in processing on the part of the issuing government(s), see _____.
5. We recognize that additional supplemental agreements, documents and permissions presented as a condition of Contract performance or MOU signature after our firm would be selected as the successful bidder may be cause for the NCI Agency (NCIA) to determine the submitted bid to be non-compliant with the requirements of the IFB.
6 We accept that should the resultant supplemental agreements issued in final form by the government(s) result in an impossibility to perform the contract in accordance with its schedule, terms or specifications, the contract may be terminated by the purchaser at no cost to either party.

Date

Signature of Authorised Representative

Printed Name

Title

Company

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ANNEX B-9
ACKNOWLEDGMENT OF RECEIPT OF AMENDMENTS TO THE IFB

I confirm that the following amendments to Invitation for Bid No IFB CO-14604-SSSB-POL have been received and the bid as submitted reflects the content of such amendments:

AMENDMENT NO.	DATE OF ISSUE BY THE PURCHASER	DATE OF RECEIPT BY THE BIDDER

Date

Signature of Authorised Representative

Printed Name

Title

Company

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ANNEX B-10
CERTIFICATION OF NATO MEMBER COUNTRY ORIGIN OF DELIVERED
EQUIPMENT, SERVICES, MATERIALS AND INTELLECTUAL PROPERTY
RIGHTS

The Bidder hereby certifies that, if awarded the Contract pursuant to this solicitation, he will perform the contract subject to the following conditions:

- (a) None of the work, including project design, labour and services shall be performed other than by firms from and within an eligible NATO Participating Countries;
- (b) No material or items of equipment down to and including identifiable sub-assemblies shall be manufactured or assembled by a firm other than from and within an eligible NATO Participating Country. (A sub-assembly is defined as a portion of an assembly consisting of two or more parts that can be provided and replaced as an entity)*; and
- (c) The intellectual property rights to all design documentation and related system operating software shall reside in NATO on behalf of the HN Poland, and no license fees or royalty charges shall be paid by the Contractor to firms, individuals or governments other than within the eligible NATO Participating Countries.

Date

Signature of Authorised Representative

Printed Name

Title

Company

*This definition purposely excludes components and/or parts (as defined in AcodP-1) that are not subject to this certification.

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ANNEX B-11
CERTIFICATION ON SECURITY CLEARANCE

The bidder hereby certifies that the proposed personnel have the required Security Clearance or that all necessary actions have been undertaken to insure that the proposed personnel will be in possession of such Security Clearance at the time of Contract award. The Bidder also acknowledges that this requirement applies also to all personnel involved in this project as a result of subcontracts issued by the Contractor for effort under the prime Contract.

The bidder hereby certifies that he is fully aware that resulting contract will require the Contractor to handle classified material to the level of "NATO SECRET" and that the Contractor shall have "NATO SECRET" Facility clearances for those sites in which it intends to handle and store such material, at the time of Contract award.

Date

Signature of Authorised Representative

Printed Name

Title

Company

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ANNEX B-12

Comprehension and Acceptance of Contract Special and General Provisions

The Bidder hereby certifies that he has reviewed the Contract Special Provisions and the NCI Agency Contract General Provisions set forth in the Prospective Contract, Book II of this Invitation for Bid (IFB-CO-14604-SSSB-POL). The Bidder hereby provides his confirmation that he fully comprehends the rights, obligations and responsibilities of the Contractor as set forth in the Articles and Clauses of the Prospective Contract. The Bidder additionally certifies that the offer submitted by the Bidder is without prejudice, qualification or exception to any of the Terms and Conditions and he will accept and abide by the stated Contract Special Provisions and Contract General Provisions if awarded the Contract as a result of this Invitation for Bid.

This company foresees no difficulty in obtaining acceptance of any prime contract terms and conditions that are required to be passed on to subcontractors.

Date

Signature of Authorised Representative

Printed Name

Title

Company

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**ANNEX B-13
LIST OF PROPOSED KEY PERSONNEL (INCLUDING SUBCONTRACTOR
PERSONNEL)**

Role	SOW Ref.	Labour Category / Position within Organisation	Name	Designation Period*	Subcontractor Name**
Project Manager	SOW 2.2, 5.6				
Deputy Project Manager	SOW 2.2, 5.6				
Technical Lead	SOW 2.2, 5.6				
Test Director	SOW 10.2, 5.6				
Quality Assurance Manager	SOW 2.3.4, 5.6, 6				
Configuration Management Manager	SOW 2.3.5, 5.6, 7				
Logistic Support (ILS/Training/Doc) Manager	SOW 8, 13, 14				
Others					

* For example, EDC thru Contract expiration date

** In case the proposed personnel is not directly employed by the Bidder

Date

Signature of Authorised Representative

Printed Name

Title

Company

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**ANNEX B-14
LIST OF PROSPECTIVE SUB-CONTRACTORS**

Name and Address of Sub-Contractor, its Country of origin/registration	DUNS Number ¹	Primary Location of Work	Items/Services to be Provided (reference to SSS CLIN N')	Estimated Amount of Sub-Contract ²

If no sub-Contractors are involved, state this here:

Date

Signature of Authorised Representative

Printed Name

Title

Company

¹ Data Universal Numbering System (DUNS). Bidders are requested to provide this data in order to help NCI AGENCY to correctly identify Subcontractors. If a Subcontractor's DUNS is not known this field may be left blank.

² Shall be traceable in the Bidding Sheets of the Bid

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**ANNEX B-15
List of Bidder and Subcontractor Background IPR**

I, the undersigned, as an authorised representative of Bidder _____, warrant, represent, and undertake that:

- a) The Contractor and Subcontractor Background IPR specified in the table below will be used for the purpose of carrying out work pursuant to the prospective Contract³.

ITEM	DESCRIPTION	SUBCONTRACTOR NAME*

* If applicable

- b) The stated Bidder has and will continue to have, for the duration of the prospective Contract, all necessary rights in and to the Background IPR specified above necessary to perform the Contractor’s obligations under the Contract.
- c) The Background IPR stated above complies with the terms specified in Clauses 29 and 30 of NCI Agency Contract General Provisions and Articles 25 and 26 of the Contract Special Provisions.

Date	Signature of Authorised Representative
	Printed Name
	Title
	Company

³ Indicate solely items the provision of which is necessary for the purpose of installing, maintaining and regularly operating the system (i.e. development environment, testing environment etc. items shall not be included).

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ANNEX B-16

Disclosure of Involvement of Former NCI Agency Employment

The Bidder hereby certifies that, in preparing its Bid, the Bidder did not have access to solicitation information prior to such information been authorized for release to Bidders (e.g., draft statement of work and requirement documentation).

The Bidder hereby acknowledges the post-employment measures applicable to former NCI Agency Personnel as per the NCI Agency Code of Conduct.

The Bidder hereby certifies that its personnel working as part of the company's team, at any tier, preparing the Bid:

- Have not held employment with NCI Agency within the last two years.
- Has obtained a signed statement from the former NCI Agency personnel below, who departed the NCI Agency within the last two years, that they were not previously involved in the project under competition (as defined in the extract of the NCI Agency Code of Conduct provided below):

Employee Name	Former NCIA Position	Current Company Position

The Bidder also hereby certifies that it does not employ and/or receive services from former NCI Agency Personnel at grades A5 and above or ranks OF-5 and above, who departed the NCI Agency within the last 12 months. This prohibitions covers negotiations, representational communications and/or advisory activities.

Date

Signature of Authorised Representative

Printed Name

Title

Company

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Excerpt of NCI Agency AD. 05.00, Code of Conduct dated May 2017

Article 14 PROCUREMENT AND CONTRACTORS

- 14.1 NCI Agency Personnel are required to maintain unquestionable integrity and impartiality in relation to procurements initiated by the NCI Agency.
- 14.2 NCI Agency Personnel shall not disclose any proprietary or contract related information regarding procurement directly or indirectly to any person other than a person authorized by the NCI Agency to receive such information. NCI Agency Personnel shall not disclose any documentation related to a procurement action to any third party without a need to know¹ (e.g., draft statement of work, statement of requirements) unless this is expressly provided under NATO Procurement Regulations or authorized in writing by the Director of Acquisition. During an on-going selection, NCI Agency Personnel shall not disclose any information on the selection procedure unless authorized by the Chairman of the award committee/board. The NCI Agency Personnel concerned will ensure that proper access controls are put in place to prevent disclosure of procurement information that has not yet been authorized for release for outside distribution, including draft statements of work and requirement documentations.
- 14.3 NCI Agency Personnel will not participate in a source selection if an offer has been provided by a friend, family member, a relative, or by a business concern owned, substantially owned, or controlled by him/her or by a friend, family member or a relative. NCI Agency Personnel appointed as part of an evaluation shall report such links to the Director of Acquisition immediately upon becoming aware of it.
- 14.4 Contractors and consultants shall not be allowed to participate in the drafting of the statement of work or in the source selection process unless they and their company/employer will be excluded from competition of the related contract. The same will apply to contractors and consultants involved in the definition and development of requirements.
- 14.5 Contractors will be given specific and coherent statements of work, providing precise explanation of how she/he is going to be employed. Tasks to be performed and minimum qualifications are to be well defined from the start. In addition, supervisors will ensure that contractors do not occupy managerial positions within the Agency.
- 14.6 NCI Agency Personnel shall not enter into authorized commitments in the name of NCI Agency or NATO unless specifically authorized. NCI Agency Personnel must abstain from making promises or commitment to award or amend a contract or otherwise create the appearance of a commitment from the NCI Agency unless properly authorized by the NCI Agency.
- 14.7 NCI Agency Personnel shall not endorse directly or indirectly products from industry. Therefore, NCI Agency Personnel shall not name or make statements endorsing or appearing to endorse products of specific companies.
- 14.8 Industry partners will need to abide with the post-employment measures under this Directive upon submission of their bids / proposals to the NCI Agency. As part of the selection process, industry will be requested to agree with an ethical statement.

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15 INDUSTRY INITIATIVES

- 15.1 Industry initiatives may include loans, displays, tests or evaluation of equipment and software, requesting NCI Agency speakers at industry gatherings and conferences, inviting speakers from industry to NCI Agency events, consultancy or studies of technical or organizational issues, etc. These initiatives are usually at no cost to the NCI Agency and take place at a pre-contractual phase or before the development of requirements and specifications. While there are benefits associated with the early involvement of industry in the definition of requirements and specifications, this also raises the potential for unfair treatment of potential competitors.
- 15.2 Industry initiatives which go beyond routine interaction in connection with on-going contracts must be reported to and coordinated by the NCI Agency Acquisition Directorate for approval. Industry initiatives shall be properly documented and governed by written agreements between the NCI Agency and the company concerned where relevant. Such agreements may contain provisions describing the nature of the initiative, the non-disclosure of NCI Agency/NATO information, NCI Agency ownership of any resulting work, the NCI Agency's right to release such work product to future competitors for any follow-on competition or contract, the requirement that any studies must provide non-proprietary solutions and/or an acknowledgement that the participating companies will not receive any preferential treatment in the contracting process.
- 15.3 Any authorized industry initiatives must be conducted in such a way that it does not confer an unfair advantage to the industry concerned or create competitive hurdles for potential competitors.

16 POST EMPLOYMENT MEASURES

- 17.1 The NCI Agency will not offer employment contracts to former NCI Agency Personnel who departed less than 2 years earlier, unless prior approval by the General Manager has been received.
- 17.2 Former NCI Agency Personnel will not be accepted as consultants or commercial counterpart for two (2) years after finalization of their employment at NCI Agency, unless the General Manager decides otherwise in the interest of the Agency and as long as NATO rules on double remuneration are observed. Such decision shall be recorded in writing. Commercial counterparts include owners or majority shareholders, key account managers, or staff member, agent or consultant of a company and/or subcontractors seeking business at any tier with the NCI Agency in relation to a procurement action in which the departing NCI Agency staff member was involved when he/she was under the employment of the NCI Agency. As per the Prince 2 Project methodology, a Project is defined as a "temporary organization that is created for the purpose of delivering one or more business products according to an agreed business case". For the purpose of this provision, involvement requires (i) drafting, review or coordination of internal procurement activities and documentation, such as statement of work and statement of requirement; and/or (ii) access to procurement information that has not yet been authorized for release for outside distribution, including draft statements of work and requirement documentations; and/or (iii) being appointed as a representative to the Project governance (e.g., Project Board) with access to procurement information as per (ii) above; and/or (iv) having provided strategic guidance to the project, with access to procurement information as per (ii) above.

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- 17.3 In addition to Section 17.2 above, former NCI Agency Personnel at grades A5 and above or ranks OF-5 and above are prohibited during twelve months following the end of their employment with the NCI Agency to engaging in negotiations, representational communications and/or advisory activities with the NCI Agency on behalf of a private entity, unless this has been agreed in advance by the NCI Agency General Manager and notified to the ASB.
- 17.4 NCI Agency Personnel leaving the Agency shall not contact their former colleagues in view of obtaining any information or documentation about procurement activities not yet authorized' release. NCI Agency Personnel shall immediately report such contacts to the Director of Acquisition.
- 17.5 The ASB Chairman will be the approving authority upon recommendation by the Legal Adviser when the NCI Agency Personnel concerned by the above is the NCI Agency General Manager and will notify the ASB.
- 17.6 NCI Agency Personnel leaving the Agency shall sign a statement that they are aware of the post-employment measures set out in this Directive.
- 17.7 The post-employment measures set out in this Directive shall be reflected in the NCI Agency procurement documents, such as IFBs, and contract provisions.

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INVITATION FOR BID

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BOOK I

ANNEX C

TECHNICAL PROPOSAL CROSS REFERENCE TABLE

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BIDDING INSTRUCTION	ASSOCIATED BID EVALUATION CRITERIA in BOOK I	BID REFERENCE
<p>Paragraph 3.4.6 – Section 1:</p> <p>Corporate Organisation/Capital Facilities</p> <p>3.4.6.a This section shall describe the Corporate Structure, organisation of the prime Contractor and the administration of the prospective SSSB-POL Contract within the overall Corporate Structure. This section shall indicate the chain of authority within the prime Contractor’s organisation from the Project Manager to the Chief Executive Officer.</p>	<p>Paragraph 4.4.7 Section 1:</p> <p>Corporate Organisation/Capital Facilities</p> <p>4.4.7.a. The Bidder shall have proposed a Corporate Structure and organisation of the prime Contractor and its associated administrative structure demonstrating that the SSSB-POL systems Contract has high visibility within the overall corporate organisation. This section shall describe the chain of authority within the prime Contractor’s organisation from the Project Manager (PM) to the Chief Executive Officer (CEO). The Corporate Structure shall be required to describe in detail and depth those resources within the overall corporate organisation that will ensure a reserve capability in order to successfully deliver the Contract aims and objectives.</p>	

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BIDDING INSTRUCTION	ASSOCIATED BID EVALUATION CRITERIA in BOOK I	BID REFERENCE
<p>Paragraph 3.4.6 – Section 1:</p> <p>Corporate Organisation/Capital Facilities</p> <p>3.4.6.b The Bidder shall describe the corporate resources (with posts or names) that are available to support the SSSB-POL Contract that reside in the organisation of the prime Contractor but not directly under the authority of the Project Manager.</p>	<p>Paragraph 4.4.7 Section 1:</p> <p>Corporate Organisation/Capital Facilities</p> <p>4.4.7.b The Corporate Structure description shall need to demonstrate and confirm that the PM has sufficient authority within the organisation to access, in a timely manner, corporate resources as a priority that are not directly under its control as PM.</p>	
<p>Paragraph 3.4.6 – Section 1:</p> <p>Corporate Organisation/Capital Facilities</p> <p>3.4.6.c The Bidder shall describe the process by which the project manager will have access to in-house corporate resources and confirm what level of authority is required in the corporate hierarchy to secure the required resources.</p>	<p>Paragraph 4.4.7 Section 1:</p> <p>Corporate Organisation/Capital Facilities</p> <p>4.4.7.c The Bidder shall describe the process by which the PM may have access to these “in-house” corporate resources and what level of authority is required in the corporation hierarchy to secure the needed resources.</p>	

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BIDDING INSTRUCTION	ASSOCIATED BID EVALUATION CRITERIA in BOOK I	BID REFERENCE
<p>Paragraph 3.4.6 – Section 1:</p> <p>Corporate Organisation/Capital Facilities</p> <p>3.4.6.d The Bidder shall provide evidence that the proposed Project Manager (PM) and the Deputy Project Manager (DPM) are Suitably Qualified and Experienced Personnel (SQEP) capability of managing an acquisition programme of this magnitude. The positions shall have sufficient inherent authority and visibility in the overall Corporate Structure, in order to be able execute the necessary decisions that will be required to successfully implement a project of this size and complexity.</p>	<p>Paragraph 4.4.7. Section 1:</p> <p>Corporate Organisation/Capital Facilities</p> <p>4.4.7.d The Bidder shall provide the comprehensive Curriculum Vitae (CV) for the proposed PM for this project and also the Deputy Project Manager (DPM). The Bidder shall provide a narrative describing the rationale for the selection of these individuals for these posts provided to ensure the individuals are Suitably Qualified and Experienced Personnel (SQEP). This section shall describe the authority and responsibility (and the limits) of the Project Manager and the Deputy Project Manager within the overall corporate organisation. The narrative shall describe the circumstances at which the Project Manager must refer decision-making authority to the next level of corporate management.</p>	

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BIDDING INSTRUCTION	ASSOCIATED BID EVALUATION CRITERIA in BOOK I	BID REFERENCE
<p>Paragraph 3.4.6 – Section 1:</p> <p>Corporate Organisation/Capital Facilities</p> <p>3.4.6.e The Bidder shall describe the responsibilities of its Project Management Office (PMO) and describe the hierarchy and interlinkages of associated staff and resources.</p>	<p>Paragraph 4.4.7. Section 1:</p> <p>Corporate Organisation/Capital Facilities</p> <p>4.4.7.e The Bidder shall be required to describe the responsibilities of its Project Management Office (PMO) and describe associated staffing and resources. The management, staffing and resources of the PMO shall include everything needed to conduct and support the management and administration of operations in order to meet the aims and objectives of the project needs to be described, including taking all reasonable steps to include continuity/succession planning/shadow appointments of personnel assigned to work on this project.</p>	

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BIDDING INSTRUCTION	ASSOCIATED BID EVALUATION CRITERIA in BOOK I	BID REFERENCE
<p>Paragraph 3.4.6 – Section 1:</p> <p>Corporate Organisation/Capital Facilities</p> <p>3.4.6.f The Bidder shall identify its proposed major sub-contractors for the SSSB-POL Contract in compliance with Book I Annex B-14. The Bidder shall also be required to submit a detailed and thorough sub-contracting plan that identifies sub-contractors/sub-vendors and their areas of responsibility/delivery. The plan shall also demonstrate the terms by which the prospective sub-Contractor(s) will agree to abide by the requirements of the prime Contract.</p>	<p>Paragraph 4.4.7. Section 1:</p> <p>Corporate Organisation/Capital Facilities</p> <p>4.4.7.f The Bidder shall be required to identify its major proposed prospective sub-contractors for the SSSB-POL systems, as stated in Book I Annex B-14. The Bidder shall also need to ensure it has submitted a detailed and thorough sub-contracting plan that identifies all major sub-contractors/sub-vendors and their areas of responsibility/delivery. The plan shall be required to comply with the Project Control Plan, in that delivery of sub-contracted items and assemblies, critical components are identified. The plan shall be required to demonstrate that the Bidder can effectively manage, monitor and control the proposed sub-contractors and that the sub-contractors will agree to abide by the requirements of the prime Contract as with regard to flow-down provisions. Declarations by sub-contractors to abide by the requirements of the prime Contract shall be confirmed and available in the Bidder’s proposal.</p>	

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BIDDING INSTRUCTION	ASSOCIATED BID EVALUATION CRITERIA in BOOK I	BID REFERENCE
<p>Paragraph 3.4.6 – Section 1:</p> <p>Corporate Organisation/Capital Facilities</p> <p>3.4.6.g All major proposed sub-contractors shall adhere to all criteria as laid down in the general provisions section of the prospective Contract entitled “Sub-Contracts”.</p>	<p>Paragraph 4.4.7. Section 1:</p> <p>Corporate Organisation/Capital Facilities</p> <p>4.4.7.g Major proposed sub-contractors, for purposes of this sub-section, shall have referred to the criteria set out in the general provision of the prospective Contract entitled ‘Sub-Contracts’. The Bidder shall identify the firm, the nation of origin, the estimated value of the sub-contract and the major items (assemblies, sub-assemblies) or services that the proposed sub-contractor will be required to furnish.</p>	
<p>Paragraph 3.4.6 – Section 1:</p> <p>Corporate Organisation/Capital Facilities</p> <p>3.4.6.h The Bidder shall include a draft copy of the proposed sub-contract and a summary of the supplies and or/services to be furnished by the prospective sub-contractor. The Bidder shall include a letter of intent from the proposed sub-contractor that details its willingness to enter into a sub-contract with the Bidder, subject to the Bidder being confirmed as having been awarded the SSSB-POL Contract.</p>	<p>Paragraph 4.4.7. Section 1:</p> <p>Corporate Organisation/Capital Facilities</p> <p>4.4.7.h The Bidder shall be required to include a draft copy of the proposed sub-contract, as applicable. The Bidder is also to include a letter of intent from the proposed sub-contractor that details its willingness to enter into a sub-contract with the Bidder should the Bidder be awarded the SSSB-POL Contract. It will also need to summarise all of the supplies and/or services to be furnished by the prospective sub-contractor.</p>	

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BIDDING INSTRUCTION	ASSOCIATED BID EVALUATION CRITERIA in BOOK I	BID REFERENCE
<p>Paragraph 3.4.6 – Section 1:</p> <p>Corporate Organisation/Capital Facilities</p> <p>3.4.6.i With regard to major sub-contracts, the Bidder shall identify those items that are sub-contracted (assemblies and sub-assemblies) and that are considered to be on the ‘Critical Path’ to meeting the delivery schedule of the Contract.</p>	<p>Paragraph 4.4.7. Section 1:</p> <p>Corporate Organisation/Capital Facilities</p> <p>4.4.7.i With regard to major sub-contracts, the Bidder shall be required to identify those items that are sub-contracted (assemblies and sub-assemblies) and that are considered to be on the ‘Critical Path’ in meeting the delivery schedule of the Contract.</p>	

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BIDDING INSTRUCTION	ASSOCIATED BID EVALUATION CRITERIA in BOOK I	BID REFERENCE
<p>Paragraph 3.4.6 – Section 1:</p> <p>Corporate Organisation/Capital Facilities</p> <p>3.4.6.j For such sub-contracted items, the Bidder shall provide a rationale for the selection of the sub-contracted vendor, and an analysis report on the vendor. The Bidder shall provide a description of possible alternative sources of supply should the selected sub-contractor fail to deliver the required items within the time schedule.</p>	<p>Paragraph 4.4.7. Section 1:</p> <p>Corporate Organisation/Capital Facilities</p> <p>4.4.7.j The Bidder shall provide a description of the parts of the project that it intends to sub-contract and demonstrate that the chosen sub-contractors have adequate assets and capacity to fulfil their role that they have been allocated. The Bidder shall demonstrate that sub-contracted facilities and assets are available to meet the anticipated schedule and provide sufficient alternative arrangements to mitigate the failure to deliver of critical sub-contracted items.</p>	
<p>Paragraph 3.4.6 – Section 1:</p> <p>Corporate Organisation/Capital Facilities</p> <p>3.4.6.k The Bidder shall provide a sub-section that identifies the items (assemblies, sub-assemblies) and services that are to be fabricated and/or performed by the corporate resources of the prime Contractor.</p>	<p>Paragraph 4.4.7. Section 1:</p> <p>Corporate Organisation/Capital Facilities</p> <p>4.4.7.k The Bidder is to provide a sub-section that identifies the items (assemblies, sub-assemblies) and services that are to be fabricated and/or performed by the corporate resources of the prime Contractor.</p>	

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BIDDING INSTRUCTION	ASSOCIATED BID EVALUATION CRITERIA in BOOK I	BID REFERENCE
<p>Paragraph 3.4.6 – Section 1:</p> <p>Corporate Organisation/Capital Facilities</p> <p>3.4.6.I The Bidder shall identify the location of the production facilities which will be utilised, and/or the source within the corporate organisation of the services and expertise required.</p>	<p>Paragraph 4.4.7 – Section 1:</p> <p>Corporate Organisation/Capital Facilities</p> <p>4.4.7.I The Bidder shall be required to confirm the location of the production facilities that will be utilized, and/or the source within the corporate organisation of the services and expertise required. For corporate production facilities, the Bidder shall have provide analytical evidence that adequate capacity exists in order that the required items will be manufactured within the time schedule of the prospective Contract.</p>	

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BIDDING INSTRUCTION	ASSOCIATED BID EVALUATION CRITERIA in BOOK I	BID REFERENCE
<p>Paragraph 3.4.6 – Section 1:</p> <p>Corporate Organisation/Capital Facilities</p> <p>3.4.6.m The Bidder shall show existing capital assets and provide a detailed proposal of what additional equipment, or facility that will be acquired or constructed in order to meet the Contract schedule.</p>	<p>Paragraph 4.4.7 – Section 1:</p> <p>Corporate Organisation/Capital Facilities</p> <p>4.4.7.m The Bidder shall demonstrate that existing capital assets are available and provide a detailed proposal of what additional equipment or facilities will be acquired or constructed in order to meet the Contract schedule.</p>	
<p>Paragraph 3.4.6 – Section 1:</p> <p>Corporate Organisation/Capital Facilities</p> <p>3.4.6.n The Bidder shall be required to provide a description of any re-tooling efforts required and the associated time schedule/forecast required as to when these efforts are planned to be completed.</p>	<p>Paragraph 4.4.7 – Section 1:</p> <p>Corporate Organisation/Capital Facilities</p> <p>4.4.7.n In addition, the Bidder shall further be required to provide a description of any re-tooling efforts required as well as an anticipated time forecast of when these capabilities would be ready for use.</p>	

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BIDDING INSTRUCTION	ASSOCIATED BID EVALUATION CRITERIA in BOOK I	BID REFERENCE
<p>Paragraph 3.4.6 – Section 1:</p> <p>Corporate Organisation/Capital Facilities</p> <p>3.4.6.o The Bidder shall describe the distribution, warehousing, or order-processing capabilities that the Bidder has to enable it to provide efficient and prompt delivery of hardware. This capability will also need to take into account, and remain flexible enough, to satisfy any short notice unpredictable customer orders.</p>	<p>Paragraph 4.4.7 – Section 1:</p> <p>Corporate Organisation/Capital Facilities</p> <p>4.4.7.o The Bidder shall describe the distribution, warehousing, or order-processing capabilities that the Bidder has that enables it to provide efficient and prompt delivery of hardware in order to satisfy short-notice or unpredictable customer orders. The description must provide sufficient evidence to confirm that the Bidder will be able to meet the timelines and other shipment and task requirements of the SOW.</p>	
<p>Paragraph 3.4.7 – Section 2: Corporate Experience</p> <p>3.4.7.a In this section the Bidder shall be required to detail its experience in the design, development, fabrication, installation, maintenance and support of defence Radio Frequency (RF) system. Specifically, the Bidder shall be required to describe:</p>	<p>Paragraph 4.4.8 Section 2: Corporate Experience</p> <p>4.4.8.a. The Bidder shall be required to confirm that it has been an established electronics manufacturer and systems integrator having substantial experience in the last five (5) years in the design, manufacturing, installation, maintenance and support of RF defence systems.</p>	

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<p>Paragraph 3.4.7 – Section 2: Corporate Experience</p> <p>3.4.7.a.i. The experience of the Bidder over the last five (5) years in the area of design, manufacture and installation of RF defence systems in general.</p>	<p>Paragraph 4.4.8 Section 2: Corporate Experience</p> <p>4.4.8.a.i. The Bidder shall be required to demonstrate evidence that it has delivered within the last five (5) years, or is under Contract to deliver, similar RF defence systems. Alternatively, the Bid shall be required to be based on an existing design that has been operationally tested with the test results certified by national authorities. The design needs not be identical to the requirements of this Contract but must be of sufficient similarity that cardinal modifications to the basic design will not have to be undertaken, thus increasing the confidence of the Bidder’s ability to deliver within schedule.</p>	
<p>Paragraph 3.4.7 – Section 2: Corporate Experience</p> <p>3.4.7.a.ii. The experience of the Bidder over the last five (5) years in the maintenance and support of similarly sized defence RF systems.</p>	<p>Paragraph 4.4.8 Section 2: Corporate Experience</p> <p>4.4.8.a.ii The Bidder shall be required to demonstrate experience over the last five (5) years in maintenance and support of similarly sized defence RF Systems.</p>	

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<p>Paragraph 3.4.7 – Section 2: Corporate Experience</p> <p>3.4.7.a.iii The RF defence system as offered in its proposal that has been delivered and accepted within the last five (5) years, or that the Bidder is currently under Contract to deliver such system.</p>	<p>Paragraph 4.4.8 Section 2: Corporate Experience</p> <p>4.4.8.a.iii The Bidder shall be required to show documented evidence that it has delivered a RF defence system as offered in its proposal and gained acceptance in the last five (5) years, or currently be under Contract to deliver similar systems in an operational capacity. In this context, “operational capacity” shall not include a current research and development Contract or a Contract for any prototype system(s), but a system already planned or in use and operated as part of a national and/or NATO communications system.</p>	

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<p>Paragraph 3.4.7 – Section 2: Corporate Experience</p> <p>3.4.7.b The Bidder shall be required to demonstrate that its sub-contracted source(s) for critical items have the same level of experience for their respective areas of expertise as is required by the prime Contractor. Corporate experience shall also need to encompass sub-contractors.</p>	<p>Paragraph 4.4.8 Section 2: Corporate Experience</p> <p>4.4.8.b. The Bidder shall provide the same information required above in para 4.4.8.a for the major sub-contractors for critical assemblies and subassemblies. The sub-contractors need not be manufacturers of the RF systems as a whole, but must demonstrate a level of experience for capabilities that they are proposing to deliver, or services for which they are proposing to perform.</p>	
<p>Paragraph 3.4.7 – Section 2: Corporate Experience</p> <p>3.4.7.c The Bidder shall describe its experience and expertise in providing warranty support and repair-and-replacement service for similar defence RF systems for large, geographically-dispersed organisations.</p>	<p>Paragraph 4.4.8. Section 2: Corporate Experience</p> <p>4.4.8.c. The Bidder shall be required to describe its experience and expertise in providing warranty support and repair-and-replacement service for similar defence RF systems for large, geographically-dispersed organisations. The Bidder shall have provide evidence of its experience and expertise for warranty support, repair and replacement services as well as any associated document requirements.</p>	

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<p>Paragraph 3.4.7 – Section 2: Corporate Experience</p> <p>3.4.7.d. The Bidder shall confirm its experience (including its sub-contractors) in providing the implementation, CLS and warranty demonstrating examples of work performed for either other NATO or national Contracts.</p>	<p>Paragraph 4.4.8. Section 2: Corporate Experience</p> <p>4.4.8.d. The Bidder shall confirm that it, and if required its sub-contractors, have demonstrable evidence and experience in providing implementation + CLS + warranty of work performed through previous NATO or national Contracts.</p>	
<p>Paragraph 3.4.7 – Section 2: Corporate Experience</p> <p>3.4.7.e. <u>Individual skill and experience</u>. The Bidder shall provide resumes of any proposed individuals who they intend to use to perform the technical tasks under the proposed Work Packages (WP), as well as the resumes of the individuals designated as Key Personnel in Annex B-13.</p>	<p>Paragraph 4.4.8. Section 2: Corporate Experience</p> <p>4.4.8.e Individual skill and experience. The Bidder shall be required to provide SQEP resumes of any proposed individuals, planned to perform the technical tasks under the proposed Work Packages (WP) in addition to the resumes of the individuals designated as Key Personnel in Annex B-13. For each role identified, the resumes shall need to demonstrate that they have the expected knowledge, capability and experience to meet the requirements of this Contract.</p>	

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<p>Paragraph 3.4.8 – Section 3: Preliminary Project Implementation Plan (PIP)</p> <p>The preliminary PIP shall provide detailed descriptions of how the proposed design will meet each of the specific requirements of the IFB.</p>	<p>Paragraph 4.4.9. Section 3: Preliminary Project Implementation Plan (PIP)</p> <p>Bidders shall demonstrate that the Preliminary PIP provide detailed descriptions of how the proposed design will meet each of the specific requirements of the IFB. The preliminary PIP document shall have met the requirements detailed in Book I from 3.4.8 a through n as well as from 4.4.9.a through n.</p>	

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<p>Paragraph 3.4.8 – Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.a. PIP Section 1: Project Management and Control Plan (PMCB)</p> <p>3.4.8.a.i The Bidder shall develop a preliminary Project Management and Control Plan (PMCP) in accordance with the SOW of the prospective Contract. This plan shall identify the significant tasks required to be accomplished and the items required to be delivered in the execution of the Contract. The plan will centre on a preliminary Project Work Breakdown Structure (PWBS) and supporting charts in accordance with the SOW of the prospective Contract.</p>	<p>Paragraph 4.4.9. Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.a. PIP Section 1: Project Management and Control Plan (PMCB)</p> <p>4.4.9.a.i The Bidder shall submit a preliminary Project Management and Control Plan (PMCP) that conforms to the requirements of SOW Section 2 of the prospective Contract. This plan shall identify significant tasks required to be accomplished and items to be delivered in the execution of the Contract. The preliminary Project Work Breakdown Structure (PWBS), the preliminary Project Master Schedule (PMS) and supporting charts shall describe in sufficient detail the steps necessary to achieve delivery of the SSSB-POL System within the Contract terms and schedule. The preliminary PMCP shall be logical and realistic, demonstrating the Bidder's appreciation of the complexity of the project and its experience in managing large programmes.</p>	

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<p>Paragraph 3.4.8. – Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.a. PIP Section 1: Project Management and Control Plan (PMCB)</p> <p>3.4.8.a.ii The Contractor shall also develop a preliminary Project Master Schedule (PMS) in accordance with the SOW of the prospective Contract that shall contain all Contract events and milestones.</p>	<p>Paragraph 4.4.9. Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.a. PIP Section 1: Project Management and Control</p> <p>4.4.9.a ii The Contractor shall also develop a preliminary Project Master Schedule (PMS) in accordance with SOW Section 2 of the prospective Contract that shall contain all Contract events and milestones. The PMS shall have correlated with the PWBS. The PMS shall include activity network, activity GANTT / Program Evaluation Review Technique (PERT) charts, milestone, and critical path views of the project schedule, showing detailed and high level schedules with associated resources. This plan shall have been detailed to a level at which all deliverable items required under the Contract are identified and accounted for by a work path that shows the interconnectivity of the various task.</p>	

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<p>Paragraph 3.4.8 – Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.a. PIP Section 1: Project Management and Control Plan (PMCB)</p> <p>3.4.8.a.iii The Bidder shall be required to demonstrate a realistic and pragmatic approach to accomplish the work within the time schedule defined within the IFB.</p>	<p>Paragraph 4.4.9. Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.a. PIP Section 1: Project Management and Control</p> <p>4.4.9.a.iii The Bidder shall demonstrate the realism of approach to accomplish the work within the time schedule defined in the IFB. The Bidder shall submit a PMCP compliant with Book II Part I Section 2 and the Gantt/PERT diagrams set out in Book II Part I Section 2.</p>	

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<p>Paragraph 3.4.8 – Section 3: Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.a. PIP Section 1: Project Management and Control Plan (PMCB)</p> <p>3.4.8.a.iv In the PMS, the relationship between the WPs and project deliverables shall be clearly demonstrate a schedule for management of sub-contractor performance.</p>	<p>Paragraph 4.4.9. Section 3: Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.a. PIP Section 1: Project Management and Control</p> <p>4.4.9.a iv In PMS, the relationship between the WPs and project deliverables shall have been clearly demonstrated as well as the schedule of sub-contracted performance and deliveries shall clearly be integrated into this plan.</p>	

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<p>Paragraph 3.4.8 – Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.a. PIP Section 1: Project Management and Control Plan (PMCB)</p> <p>3.4.8.a.v The preliminary PMCP shall also consider all aspects of project management and control and shall demonstrate how all the critical milestones defined in Book II Part I Section 2 will be met.</p>	<p>Paragraph 4.4.9. Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.a. PIP Section 1: Project Management and Control</p> <p>4.4.9.a v This preliminary PMCP shall also have considered all aspects of project management and control and shall demonstrate how all the critical milestones defined in the Book II Part I Section 2 will be met.</p>	
<p>Paragraph 3.4.8 – Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.a. PIP Section 1: Project Management and Control Plan (PMCB)</p> <p>3.4.8.a.vi The Bidder shall not alter or amend the dates for milestones (Book II Part I Section 2).</p>	<p>Paragraph 4.4.9. Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.a. PIP Section 1: Project Management and Control</p> <p>4.4.9.a vi The Bidder shall propose the dates for milestones (Book II Part I Section 2), within the boundaries established in the IFB. These dates shall be incorporated into the resultant Contract of the successful Bidder.</p>	

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<p>Paragraph 3.4.8 – Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.a. PIP Section 1: Project Management and Control</p> <p>3.4.8.a.vii The Bidder shall demonstrate a realistic and pragmatic approach to accomplish the work within the time schedule defined in the IFB. The dates set out in Book II Part I Section 2 shall be fully supported and coherent by/with Gantt/PERT diagrams, as well as the PWBS.</p>	<p>Paragraph 4.4.9. Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.a. PIP Section 1: Project Management and Control</p> <p>4.4.9.a.vii The Bidder shall demonstrate a realism of approach to accomplish the work within the time schedule defined in the IFB. The dates proposed in Book II Part I Section 2 shall have been fully supported and coherent by/with the Gantt/PERT diagrams as well as the PWBS. Where dates offered are earlier than those set out in the prospective Contract, the purchaser may, at its discretion, accept such dates and the alternative milestone schedule will be inserted in the resultant Contract.</p>	

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<p>Paragraph 3.4.8 – Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.a. PIP Section 1: Project Management and Control</p> <p>3.4.8.a.viii The Bidder shall demonstrate that it has taken into account constraints related to the implementation environment and reflect this understanding in its draft preliminary PMCP.</p>	<p>Paragraph 4.4.9. Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.a. PIP Section 1: Project Management and Control</p> <p>4.4.9.a.viii The Bidder shall demonstrate that it has taken into account the constraints of the implementation environment and reflected this understanding in its draft preliminary Project Management and Control Plan (PMCP).</p>	

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<p>Paragraph 3.4.8. – Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.b. PIP Section 2: System Engineering and Design</p> <p>3.4.8.b.i In this Section, the Bidder shall submit a Preliminary System Engineering and Design Plan (PSEDP), including a Preliminary System Safety Engineering Plan (PSSEP) and a preliminary Electromagnetic Interference/Compatibility (EMI/EMC) Control Plan as sub-plans describing the preliminary design of the proposed system.</p>	<p>Paragraph 4.4.9. Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.b. PIP Section 2: System Engineering and Design</p> <p>4.4.9.b.i The Bidder shall submit a Preliminary System Engineering and Design Plan (PSEDP) describing the preliminary design of the proposed system and including a preliminary System Safety Engineering Plan (SSEP) and a preliminary Electromagnetic Interference and Compatibility (EMI/EMC) Control Plan as sub-plans that conform to the requirements of SOW Section 4 of the prospective Contract.</p>	

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<p>Paragraph 3.4.8 – Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.b. PIP Section 2: System Engineering and Design</p> <p>3.4.8.b.ii The Bidder shall be required to support its design with information in such a way as to convincingly demonstrate that the proposed design will meet the safety and security requirements as set out in SOW Section 4 and Section 5 of the prospective Contract, as well as any functional and technical requirements as set out in SOW Annex A and Annex B of the prospective Contract.</p>	<p>Paragraph 4.4.9. Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.b. PIP Section 2: System Engineering and Design</p> <p>4.4.9.b ii The Bidder shall have supported this design with sufficient information as to convincingly demonstrate that the proposed design will meet the safety and security requirements as set out in SOW Section 4 and Section 5 of the prospective Contract as well as functional and technical requirements as set out in SOW Annex A and Annex B of the prospective Contract. The Bidder’s proposed technical design shall need to provide sufficient detailed information on how the Bidder intends to meet performance, functional or architectural requirements as defined in the IFB. Failure to provide sufficient detailed technical information on any of the bidding requirements, or omission of the critical information, may result in a determination of non-compliance for the entire Bid.</p>	

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<p>Paragraph 3.4.8 – Section 3: Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.b. PIP Section 2: System Engineering and Design</p> <p>3.4.8.b.iii The PSEDP shall provide detailed descriptions of how the proposed designs shall meet each of the specific performance requirements/parameters.</p>	<p>Paragraph 4.4.9. Section 3: Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.b. PIP Section 2: System Engineering and Design</p> <p>4.4.9.b.iii The PSEDP shall provide sufficient detailed descriptions of how the proposed designs for the project shall have met each of the specific performance requirements/parameters.</p>	

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<p>Paragraph 3.4.8 – Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.b. PIP Section 2: System Engineering and Design</p> <p>3.4.8.b.iv The Bidders shall take into account the constraints of the site(s) and number of simultaneous transmissions, as well EMC, in its technical proposal.</p>	<p>Paragraph 4.4.9. Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.b. PIP Section 2: System Engineering and Design</p> <p>4.4.9.b iv The Bidders shall have taken into account the constraints of the site and the number of simultaneous transmissions, as well as EMC, in its technical proposal. An EMC study of the transmitter site shall have been submitted as part of the Bid to show that public and occupational exposure levels are within international and national guidelines.</p>	

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<p>Paragraph 3.4.8 – Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.b. PIP Section 2: System Engineering and Design</p> <p>3.4.8.b.v The PSEDP shall demonstrate that the system as delivered will meet all safety and security requirements.</p>	<p>Paragraph 4.4.9. Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.b. PIP Section 2: System Engineering and Design</p> <p>4.4.9.b.v The PSEDP shall contain sufficient detail as is practicable in order to demonstrate that the system as delivered, will meet the safety and security requirements as set out in SOW Section 4 and SOW Section 5 of the prospective Contract, as well as functional and technical requirements as set out in SOW Annex A and Annex B of the prospective Contract.</p>	

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<p>Paragraph 3.4.8 – Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.b. PIP Section 2: System Engineering and Design</p> <p>3.4.8.b.vi The Bidder shall describe the Bidder’s approach to preparing and maintaining the Engineering Documentation Package (EDP).</p>	<p>Paragraph 4.4.9. Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.b. PIP Section 2: System Engineering and Design</p> <p>4.4.9.b vi The Bidder shall describe the Bidder’s approach to preparing and maintaining the Engineering Documentation Package (EDP) throughout the design, integration, test and site surveys activities, ensuring consistency between all the documents included in that documentation package.</p>	

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<p>Paragraph 3.4.8 – Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.b. PIP Section 2: System Engineering and Design</p> <p>3.4.8.b.vii The Bidder shall provide equipment specifications for each capability separately as specified at Book I paragraph 4.4.9.b.vii.</p>	<p>Paragraph 4.4.9. Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.b. PIP Section 2: System Engineering and Design</p> <p>4.4.9.b.vii Equipment specification: For each capability separately;</p> <p>For each Hardware Contract Line Item Number (CLIN); the Bidder shall include in its Bid a detailed list of the COTS components proposed to be supplied as part of that CLIN. The product name, manufacturer name, and manufacturer’s part number, version, or release number shall have been stated. If a generic or non-vendor specific component is proposed, the Bidder shall provide the item name.</p> <p>The Bidder shall include in its Bid a detailed specification sheet for each item of equipment the Bidder proposes to provide in satisfaction of Contractual requirements.</p>	

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<p>Paragraph 3.4.8 – Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.b. PIP Section 2: System Engineering and Design</p> <p>3.4.8.b.viii The Bidder shall furnish drawings, diagrams and specifications.</p>	<p>Paragraph 4.4.9. Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.b. PIP Section 2: System Engineering and Design</p> <p>4.4.9.b.viii The Bidder shall furnish drawings, diagrams and specifications. If the proposed SSSB-POL system is based on a design that has been tested with the results certified by a national authority, then the test performance data shall also be required to be provided and data projections included for elements that were not tested.</p>	

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<p>Paragraph 3.4.8 – Section 3: Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.b. PIP Section 2: System Engineering and Design</p> <p>3.4.8.b.ix The Bidder shall provide predicted performance characteristics and specifications based on engineering analysis and/or extrapolations from previous data.</p>	<p>Paragraph 4.4.9. Section 3: Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.b. PIP Section 2: System Engineering and Design</p> <p>4.4.9.b ix The Bidder shall provide predicted performance characteristics and specifications based on engineering analysis and/or extrapolations from previous data.</p>	

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<p>Paragraph 3.4.8 – Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.b. PIP Section 2: System Engineering and Design</p> <p>3.4.8.b.x The Bidder’s technical proposed designs for the SSSB system shall provide detailed information on how the Bidder intends to meet performance, functional or architectural requirements defined in the SOW and all its annexes. Failure to provide detailed technical information for any of the bidding requirements or omission of any critical information may result in a determination of non-compliance for the entire Bid.</p>	<p>Paragraph 4.4.9 – Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.b. PIP Section 2: System Engineering and Design</p> <p>4.4.9.b.x Bidder’s proposed technical designs shall provide detailed information on how the Bidder intends to meet performance, functional or architectural requirements defined in the SOW and all its annexes. Failure to provide detailed technical information for any of the bidding requirements or omission of the critical information may result in a determination of non-compliance for the entire Bid.</p>	

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<p>Paragraph 3.4.8 – Section 3: Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.b. PIP Section 2: System Engineering and Design</p> <p>3.4.8.b.xi The Bidder shall agree to abide by and implement the security mechanism as defined in the NATO Security Policy and supporting directives as per the IFB references.</p>	<p>Paragraph 4.4.9. Section 3: Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.b. PIP Section 2: System Engineering and Design</p> <p>4.4.9.b xi The Bidder shall agree to abide by and implement the security mechanism as defined in the NATO Security Policy and supporting directives as per Section 5 of the SOW.</p>	
<p>Paragraph 3.4.8 – Section 3: Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.b. PIP Section 2: System Engineering and Design</p> <p>3.4.8.b.xii The Bidder shall propose automated tools to process classified data and information that shall meet the respective performance and security requirements, as stated at Section 5 of the SOW.</p>	<p>Paragraph 4.4.9. Section 3: Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.b. PIP Section 2: System Engineering and Design</p> <p>4.4.9.b xii The Bidder shall propose automated tools to process classified data and information that shall meet the respective security requirements as stated at Section 5 of the SOW.</p>	

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<p>Paragraph 3.4.8 – Section 3: Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.b. PIP Section 2: System Engineering and Design</p> <p>3.4.8.b.xiii This Section (security related) shall be submitted as a self-contained volume or volumes of the Technical Proposal and shall be segregated from the other materials in so far as the nature of the responses will be subject to higher NATO security classification.</p>	<p>Paragraph 4.4.9. Section 3: Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.b. PIP Section 2: System Engineering and Design</p> <p>4.4.9.b xiii The section related to security shall be submitted as a self-contained volume or volumes of the Technical Proposal (TP) and shall be segregated from the other materials insofar as the nature of the responses will be subject to security classification.</p>	
<p>Paragraph 3.4.8 – Section 3: Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.b. PIP Section 2: System Engineering and Design</p> <p>3.4.8.b.xiv The Bidder shall demonstrate and confirm that any hardware to be procured in accordance with this IFB meets the hardware specifications as defined in SOW Annex A.</p>	<p>Paragraph 4.4.9. Section 3: Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.b. PIP Section 2: System Engineering and Design</p> <p>4.4.9.b xiv The Bidder shall demonstrate and confirm that the hardware to be procured in accordance with this IFB meets the hardware specifications as defined in SOW Annex A.</p>	

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<p>Paragraph 3.4.8 – Section 3: Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.b. PIP Section 2: System Engineering and Design</p> <p>3.4.8.b.xv The Bidder shall describe the Bidder’s Risk Assessment (RA) including proposing any appropriate change requests against the functional baseline.</p>	<p>Paragraph 4.4.9. Section 3: Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.b. PIP Section 2: System Engineering and Design</p> <p>4.4.9.b xv The Bidder shall describe the Bidder’s Risk Assessment (RA) including proposing any appropriate change requests against the Functional Baseline.</p>	

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<p>Paragraph 3.4.8 – Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.b. PIP Section 2: System Engineering and Design</p> <p>3.4.8.b.xvi The Bidder shall provide a detailed plan for the antenna farms of the 2 (two) Radio Sites containing the location and physical arrangement of, but not limited to, antenna locations, ground planes (where applicable), and transmission cable layouts represented at a suitable scale on a site layout plan.</p>	<p>Paragraph 4.4.9. Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.b. PIP Section 2: System Engineering and Design</p> <p>4.4.9.b xvi The Bidder shall provide a detailed plan for the antenna farms of the 2 (two) Radio Sites containing the location and physical arrangement of, but not limited to, antenna locations, ground planes (where applicable), and transmission cable layouts represented at a suitable scale on a site layout plan.</p>	

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<p>Paragraph 3.4.8 – Section 3: Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.b. PIP Section 2: System Engineering and Design</p> <p>3.4.8.b. xvii The Bidder shall provide a matrix with a justified calculation of expected worst-case antenna isolation values between all antenna port pairs, when measured at the antenna matrix output.</p>	<p>Paragraph 4.4.9. Section 3: Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.b. PIP Section 2: System Engineering and Design</p> <p>4.4.9.b xvii The Bidder shall provide a matrix with a justified calculation of expected worst-case antenna isolation values between all antenna port pairs, when measured at the antenna matrix output.</p>	

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<p>Paragraph 3.4.8 – Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.c. PIP Section 3: Quality Assurance (QA)</p> <p>3.4.8.c.i The Bidder shall be required to provide sufficient information to demonstrate that the Quality Assurance and Quality Control (QA/QC) Programme meets the requirements of the prospective Contract. The Bidder shall provide certification confirming that the quality programme meets the equivalent national and/or international standards.</p>	<p>Paragraph 4.4.9. Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.c. PIP Section 3: Quality Assurance (QA)</p> <p>4.4.9.c.i The Bidder shall submit a preliminary version of the Quality Assurance/Quality Control (QA/QC) Plan in accordance with SOW Section 6 of the prospective Contract. Within this plan, the Bidder shall have addressed all the requirements of the Contract concerning QA and QC as set out in Article 24 of the Contract Special Provisions and SOW Section 6 of the prospective Contract. The Bidder shall have also identified the QA/QC systems (NATO, National, company) that it intended to apply to the performance of this Contract and shall demonstrate that its choice complies with the applicable requirements.</p>	

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<p>Paragraph 3.4.8 – Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.c. PIP Section 3: Quality Assurance (QA)</p> <p>3.4.8.c.ii The Bidder shall also describe its company QA/QC organisation and the position it occupies within the management structure of the company. This shall include the proposed overall QA Manager as well as detailing how the software, hardware and documentation aspects of QA Management shall be exercised.</p>	<p>Paragraph 4.4.9 Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.c. PIP Section 3: Quality Assurance (QA)</p> <p>4.4.9.c.ii The Bidder shall provide sufficient evidence that the QA/QC organization in its company has enough competence with demonstrable capability in managing the quality programme of a project of this magnitude. The QA/QC organisation and the QA Manager shall have sufficient inherent authority and visibility in the overall Corporate Structure to properly execute the software, hardware and documentation aspects of QA management of a project of this size and complexity.</p>	

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<p>Paragraph 3.4.8 – Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.c. PIP Section 3: Quality Assurance (QA)</p> <p>3.4.8.c.iii The proposed QA/QC Plan shall show how procedures are developed, implemented and maintained to adequately control the design, integration, production, purchasing, installation, inspection, testing, configuration management and customer support of all services and all products (both management products and specialist products), in accordance with the requirements of this Contract.</p>	<p>Paragraph 4.4.9 Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.c. PIP Section 3: Quality Assurance (QA)</p> <p>4.4.9.c.iii The proposed QA/QC plan shall demonstrate how procedures are developed, implemented and maintained to adequately control the design, integration, production, purchasing, installation, inspection, testing, configuration management and customer support of all services and all products (both management products and specialist products), in accordance with the requirements of this Contract.</p>	

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<p>Paragraph 3.4.8 – Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.c. PIP Section 3: Quality Assurance (QA)</p> <p>3.4.8.c.iv The proposed QA/QC Plan shall describe the quality criteria that will be applied to each of the deliverables under this Contract (i.e. the documentation as well as the system and all of its components).</p>	<p>Paragraph 4.4.9 Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.c. PIP Section 3: Quality Assurance (QA)</p> <p>4.4.9.c.iv The proposed QA/QC Plan shall describe the quality criteria that will be applied to each of the deliverables under this Contract (i.e. the documentation as well as the system and all of its components).</p>	
<p>Paragraph 3.4.8 – Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.c. PIP Section 3: Quality Assurance (QA)</p> <p>3.4.8.c.v The proposed QA/QC Plan shall describe the Bidder's internal process for the quality review of the deliverables before their release to the Purchaser.</p>	<p>Paragraph 4.4.9 Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.c. PIP Section 3: Quality Assurance (QA)</p> <p>4.4.9.c.v The proposed QA/QC Plan shall describe the Bidder's internal process for the quality review of the deliverables before their release to the Purchaser.</p>	

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<p>Paragraph 3.4.8 – Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.c. PIP Section 3: Quality Assurance (QA)</p> <p>3.4.8.c.vi The proposed QA/QC Plan shall be required to describe how all necessary assistance is planned to be provided to the Quality Assurance Representative (QAR) or its delegated National QAR, as well as how quality records for the prime and any sub-contractors or consortium members shall be planned to be made available for evaluation.</p>	<p>Paragraph 4.4.9 Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.c. PIP Section 3: Quality Assurance (QA)</p> <p>4.4.9.c.vi The proposed Quality Plan (QP) shall describe how all necessary assistance shall be provided to the Quality Assurance Representative (QAR) or its delegated National QAR, and show how quality records for the prime and any sub-contractors or consortium members will be made available for evaluation.</p>	

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<p>Paragraph 3.4.8 – Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.c. PIP Section 3: Quality Assurance (QA)</p> <p>3.4.8.c.vii The Bidder shall clearly indicate the quality related activities, responsibilities, and controls for the prime and any sub-contractors and shall state how it intends to ensure compliance of its prospective sub-contractors, as well as that of prospective suppliers of Commercial-Off-The-Shelf (COTS) equipment taking into account the QA/QC requirements of the SOW of the prospective Contract.</p>	<p>Paragraph 4.4.9. Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.c. PIP Section 3: Quality Assurance (QA)</p> <p>4.4.9.c.vii The Bidder shall provide information similar to that set out in sub-paragraphs of 4.4.9.c above in order to demonstrate the conformance to the QA/QC Contract requirements by the major sub-contractors and suppliers. It shall also state how it intends to ensure compliance of its prospective sub-contractors and, where applicable, those of the prospective suppliers of Commercial-Off-The-Shelf (COTS) equipment with QA/QC requirements of the SOW of the prospective Contract.</p>	

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<p>Paragraph 3.4.8 – Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.d. PIP Section 4: Configuration Management</p> <p>3.4.8.d.i The Bidder shall provide a preliminary version of the Bidder’s Configuration Management (CM) Plan in accordance with SOW Section 7 of the prospective Contract that shall be required to detail the processes, methods and procedures that would be used to implement the requirements as set out in the SOW of the prospective Contract.</p>	<p>Paragraph 4.4.9. Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.d. PIP Section 4: Configuration Management</p> <p>4.4.9.d.i The Bidder shall submit a preliminary Configuration Management Plan (CMP) that conforms to the requirements of SOW Section 7 of the prospective Contract. The Bidder shall demonstrate that its proposed configuration management procedures meet the requirements of SOW Section 7 of the prospective Contract. The Bidder shall further provide details of its existing CM organisation.</p>	

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<p>Paragraph 3.4.8 – Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.d. PIP Section 4: Configuration Management</p> <p>3.4.8.d.ii The Bidder shall outline how it adopts Configuration Management (CM) processes and deliverables in line with the scope of this Contract as required in the SOW Section 7.</p>	<p>Paragraph 4.4.9. Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.d. PIP Section 4: Configuration Management</p> <p>4.4.9.d.ii The Bidder shall outline how it adopts the configuration management processes and deliverables within the scope of this Contract as requested in the SOW Section 7.</p>	

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<p>Paragraph 3.4.8 – Section 3: Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.d. PIP Section 4: Configuration Management</p> <p>3.4.8.d.iii The Bidder shall demonstrate that the various baselines referred to under SOW Section 7 will be established using automated tools.</p>	<p>Paragraph 4.4.9. Section 3: Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.d. PIP Section 4: Configuration Management</p> <p>4.4.9.d.iii The Bidder shall demonstrate how the various baselines referred under SOW Section 7 will be established using automated tools.</p>	
<p>Paragraph 3.4.8 – Section 3: Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.d. PIP Section 4: Configuration Management</p> <p>3.4.8.d.iv In addition, the Bidder shall demonstrate that a Configuration Status Accounting (CSA) database will be maintained using software tools during the Contract.</p>	<p>Paragraph 4.4.9. Section 3: Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.d. PIP Section 4: Configuration Management</p> <p>4.4.9.d.iv In addition, the Bidder shall demonstrate that a Configuration Status Accounting (CSA) database will be maintained using software tools during the Contract.</p>	

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<p>Paragraph 3.4.8 – Section 3: Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.d. PIP Section 4: Configuration Management</p> <p>3.4.8.d.v The Bidder shall describe the Bidder’s approach to conduct the Physical Configuration Audit (PCA) for each site, including the verification of delivered configuration items against the product baseline.</p>	<p>Paragraph 4.4.9. Section 3: Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.d. PIP Section 4: Configuration Management</p> <p>4.4.9.d.v The Bidder shall describe the Bidders approach to conducting the physical Configuration Audit (CA) for each site, including the verification of delivered configuration items against the product baseline.</p>	

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<p>Paragraph 3.4.8 – Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.d. PIP Section 4: Configuration Management</p> <p>3.4.8.d.vi The Bidder shall provide, as part of the CM Plan a project specific configuration control process description, an initial set of project specific configuration item selection criteria for the capabilities, and an initial set of project specific Configuration Items (CI) including their attributes and relationships/dependencies to other associated capabilities.</p>	<p>Paragraph 4.4.9. Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.d. PIP Section 4: Configuration Management</p> <p>4.4.9.d.vi The Bidder shall provide, as part of the CM Plan, a project specific configuration control process description, an initial set of project specific Configuration Item (CI) selection criteria for the capabilities, an initial set of project specific CIs including their attributes and relationships among each other for the capabilities.</p>	

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<p>Paragraph 3.4.8 – Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.e. PIP Section 5: Integrated Logistics Support</p> <p>3.4.8.e.i The Bidder shall provide a high level description of the proposed Integrated Logistics Support Plan (ILSP). This plan shall cover the requirements of the prospective Contract as set out in Section 8 of the SOW.</p>	<p>Paragraph 4.4.9. Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.e. PIP Section 5: Integrated Logistics Support</p> <p>4.4.9.e.i The Bidder shall provide a high level description of the proposed ILS Plan. This plan shall have covered the requirements of the prospective Contract as set out in Section 8 of the SOW.</p>	

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<p>Paragraph 3.4.8 – Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.e. PIP Section 5: Integrated Logistics Support</p> <p>3.4.8.e.ii The Bidder shall describe its approach to the SSSB-POL system maintenance and supply support for both hardware and software and shall be required to describe how he will meet the requirements in accordance with SOW Section 8 of the prospective Contract. The Bidder shall be required to describe the proposed spares provisioning methodology.</p>	<p>Paragraph 4.4.9. Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.e. PIP Section 5: Integrated Logistics Support</p> <p>4.4.9.e.ii The Bidder shall describe its approach and how he will meet the requirements for the SSSB-POL system maintenance and Supply Support for both hardware and software in accordance with SOW Section 8 of the Prospective contract. The Bidder shall describe the proposed spares provisioning methodology.</p>	

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<p>Paragraph 3.4.8 – Section 3: Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.e. PIP Section 5: Integrated Logistics Support</p> <p>3.4.8.e.iii The Bidder shall prepare a draft customer support concept and outline how it plans to adapt the support processes and deliverables within the scope of this Contract.</p>	<p>Paragraph 4.4.9. Section 3: Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.e. PIP Section 5: Integrated Logistics Support</p> <p>The Bidder shall prepare a draft Customer Support Concept and outline how it adopts the support processes and deliverables within the scope of this Contract. The Bidder shall provide as part of the draft support concept:</p> <p>A project specific, problem management process description including all Bidder resources (number and labour categories of staff, nature and quantities of any other required resources) that it will use to provide 2nd Level Support;</p> <p>A Problem Analysis Report Template;</p> <p>Draft Maintenance Concept. The Bidder shall outline how it adapts the maintenance processes and deliverables to the scope of this Contract;</p> <p>Draft Transportation Plan. The Bidder shall outline how it adopts its transport/manifest processes and deliverables within the scope of this Contract.</p>	
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<p>Paragraph 3.4.8 – Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.e. PIP Section 5: Integrated Logistics Support</p> <p>3.4.8.e.iv The Bidder shall also provide detail on how it will fulfil its roles and responsibilities in relation to each of the elements of the Contractor Logistics Support (CLS) concept during Contract implementation and warranty detailed within SOW Section 8 of the Prospective Contract. In addition, the Bidder shall provide a preliminary CLS Plan as set out in SOW Section 8 of the prospective Contract.</p>	<p>Paragraph 4.4.9. Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.e. PIP Section 5: Integrated Logistics Support</p> <p>4.4.9.e.iv The Bidder shall provide information on how it fulfils its roles and responsibilities in accordance with the Contractor Logistics Support (CLS) concept during Contract implementation and warranty detailed at SOW Section 8 of the prospective Contract. In addition, the Bidder shall also provide a preliminary CLS Plan as set out in SOW Section 8 of the prospective Contract, describing the services Contractor shall perform during the Post Warranty period. The Bidder shall have stated if he is capable of providing full CLS after warranty period, as specified in the SOW of the prospective Contract.</p>	

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<p>Paragraph 3.4.8 – Section 3: Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.f. PIP Section 6: Test and Evaluation</p> <p>3.4.8.f.i The Bidder shall describe in detail its approach to the development of test and evaluation documentation.</p>	<p>Paragraph 4.4.9. Section 3: Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.f. PIP Section 6: Test and Evaluation</p> <p>4.4.9.f.i The Bidder shall describe in detail its approach to developing test and evaluation documentation.</p>	
<p>Paragraph 3.4.8 – Section 3: Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.f. PIP Section 6: Test and Evaluation</p> <p>3.4.8.f.ii The Bidder shall identify its proposed test organisation and provide preliminary test and evaluation plan by WBS for the allocation of personnel and the time line for the Test activities set out as requirements in SOW Section 10 of the prospective Contract.</p>	<p>Paragraph 4.4.9. Section 3: Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.f. PIP Section 6: Test and Evaluation</p> <p>4.4.9.f.ii The Bidder shall submit a preliminary version of the Test and Evaluation Plan (TEP) for FAT, RSAT and SAT for the allocation of personnel and the time line for the test activities that meets the overall requirements and objectives of SOW Section 10 of the prospective Contract.</p>	

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<p>Paragraph 3.4.8 – Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.f. PIP Section 6: Test and Evaluation</p> <p>3.4.8.f.iii This plan shall also include a preliminary Security Test and Evaluation Plan (STEP) that meets the requirements set out in SOW Section 5 of the prospective Contract.</p>	<p>Paragraph 4.4.9. Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.f. PIP Section 6: Test and Evaluation</p> <p>4.4.9.f.iii If applicable, the Bidder shall submit as an integral part of the testing activities provide a preliminary Security Test and Evaluation Plan (STEP) that meets the requirements set out as in SOW Section 5 of the prospective Contract.</p>	

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<p>Paragraph 3.4.8 – Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.f. PIP Section 6: Test and Evaluation</p> <p>3.4.8.f.iv The Bidder shall describe the major components, sub-assemblies and assemblies that are proposed to be submitted for acceptance on the basis of prior testing and qualification and that are expected to undergo partial testing and/or extensive testing and evaluation.</p>	<p>Paragraph 4.4.9. Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.f. PIP Section 6: Test and Evaluation</p> <p>4.4.9.f.iv The Bidder shall provide comprehensive information about the major components, sub-assemblies and assemblies that are expected to undergo partial testing and extensive testing and evaluation prior to FAT, RSAT and SAT.</p>	

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<p>Paragraph 3.4.8 – Section 3: Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.f. PIP Section 6: Test and Evaluation</p> <p>3.4.8.f.v If there are elements of the system that are proposed to be submitted on the basis of a Certificate of Conformity (CoC) or based on prior test and qualification then the Bidder shall provide a summary of those particulars, especially with regards to dates of prior tests and for whom the testing was executed.</p>	<p>Paragraph 4.4.9. Section 3: Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.f. PIP Section 6: Test and Evaluation</p> <p>4.4.9.f.v If there are elements of the system that are proposed to be submitted on the basis of a Certificate of Conformity (CoC) and based on prior test and qualification, the Bidder shall also provide a summary of the particulars, especially the dates of the prior tests and for whom the testing were executed.</p>	
<p>Paragraph 3.4.8 – Section 3: Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.f. PIP Section 6: Test and Evaluation</p> <p>3.4.8.f.vi The Bidder shall describe how the proposed CoC or request for exemption of testing based on prior qualification will be processed from the QA and CM aspects.</p>	<p>Paragraph 4.4.9. Section 3: Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.f. PIP Section 6: Test and Evaluation</p> <p>4.4.9.f.vi The Bidder shall describe how the proposed CoC will be processed from QA and CM aspects.</p>	

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<p>Paragraph 3.4.8 – Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.f. PIP Section 6: Test and Evaluation</p> <p>3.4.8.f.vii The Bidder shall describe the preliminary version of procedures and controls to be employed for testing of components, sub-assemblies and assemblies that are sub-contracted and tested at sub-contractor's facilities.</p>	<p>Paragraph 4.4.9. Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.f. PIP Section 6: Test and Evaluation</p> <p>4.4.9.f.vii The Bidder shall have adequately described its proposed methods to ensure the testing in compliance with Contract requirements of components, sub-assemblies and assemblies that are sub-contracted and tested at sub-contractor facilities.</p>	

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<p>Paragraph 3.4.8 – Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.g. PIP Section 7: Documentation</p> <p>3.4.8.g.i In this section, the Bidder shall provide a preliminary documentation plan by WBS to detail the resources allocated and the schedule of work to deliver the documentation required in SOW Section 13 of the prospective Contract.</p>	<p>Paragraph 4.4.9. Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.g. PIP Section 7: Documentation</p> <p>4.4.9.g i In tits Section, the Bidder shall provide a preliminary Documentation Plan by WBS to detail the resources allocated and the schedule of work to deliver the documentation required in SOW Section 13 of the Prospective contract.</p>	

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<p>Paragraph 3.4.8 – Section 3: Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.g. PIP Section 7: Documentation</p> <p>3.4.8.g.ii In this plan the Bidder shall describe how it proposes to comply with each of the documentation requirements detailed in SOW Section 13 of the prospective Contract.</p>	<p>Paragraph 4.4.9. Section 3: Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.g. PIP Section 7: Documentation</p> <p>4.4.9.g ii In this plan, the Bidder shall describe how it proposes to comply with each of the documentation requirements detailed in SOW Section 13 of the prospective Contract.</p>	
<p>Paragraph 3.4.8 – Section 3: Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.g. PIP Section 7: Documentation</p> <p>3.4.8.g.iii The Bidder shall also be required to identify the documentation team and the individuals responsible within its organisation for ensuring documentation is delivered on schedule and to the Contract requirements.</p>	<p>Paragraph 4.4.9. Section 3: Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.g. PIP Section 7: Documentation</p> <p>4.4.9.g iii The Bidder shall also identify the documentation team and the individual responsible within its organisation for ensuring such documentation is delivered on schedule and to the Contract requirements.</p>	

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<p>Paragraph 3.4.8 – Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.h. PIP Section 8: System Acceptance</p> <p>3.4.8.h.i The Bidder shall provide a preliminary System Acceptance Plan (SAP), by WBS, for the allocation of personnel and the time schedule to accomplish all the activities required and ensure the timely delivery of all documentation and other deliverables required for successful Final Systems Acceptance (FSA).</p>	<p>Paragraph 4.4.9. Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.h. PIP Section 8: System Acceptance</p> <p>4.4.9.h. i The Bidder shall provide a preliminary System Acceptance Plan (PSAP) by WBS for the allocation of personnel as well as the time schedule to accomplish all the activities required. It shall ensure the timely delivery of all documentation and other deliverables required for successful Provisional System Acceptance (PSA) and Final System Acceptance (FSA), in order to meet the requirements as set out in SOW Section 11 of the prospective Contract.</p>	

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<p>Paragraph 3.4.8 – Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.i. PIP Section 9: Training</p> <p>3.4.8.i.i The Bidder shall provide a Preliminary Training Plan (PTP) in accordance with SOW Section 14 of the prospective Contract, detailing the training methodology for training of test personnel, operators and maintainers, schedules for the initial training of personnel, the proposed training materials and the proposed delivery schedule of those materials as separate sub-sections.</p>	<p>Paragraph 4.4.9. Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.i. PIP Section 9: Training</p> <p>4.4.9.i.i The Bidder shall submit a preliminary training plan that demonstrates that he fully understands the training requirements set out in SOW Section 14 of the prospective Contract, detailing the training methodology for training of test personnel, operators and maintainers, schedules for the initial training of personnel, the proposed training materials and the proposed delivery schedule of those materials and thoroughly addresses the salient features of such requirements, such as schedule, material, media and content.</p>	

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<p>Paragraph 3.4.8 – Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.i. PIP Section 9: Training</p> <p>3.4.8.i.ii The Bidder shall be required to describe its training organisation and demonstrate that adequate staffing in its organisation will be available to train the student population and meet the schedule without impacting on other activities.</p>	<p>Paragraph 4.4.9. Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.i. PIP Section 9: Training</p> <p>4.4.9.i.ii The Bidder shall describe its training organisation and demonstrate that adequate staffing in its organisation will be available to train the student population and meet the schedule without impacting on other activities. The Bidder shall describe the medium/media to be used in its proposed training method.</p>	

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<p>Paragraph 3.4.8 – Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.i. PIP Section 9: Training</p> <p>3.4.8.i.iii The Bidder shall describe its approach regarding how support staff designated by the site POC will provide training on all tasks required to operate the system, perform daily maintenance and administration, disaster recovery, troubleshooting and failure/fault rectification. The Bidder shall also describe the Bidder’s approach regarding how this training shall be structured according to the first, second, and third level support concept.</p>	<p>Paragraph 4.4.9. Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.i. PIP Section 9: Training</p> <p>4.4.9.i.iii The Bidder shall describe its approach regarding how support staff designated by the site POC will be provided training on all tasks required to operate the system, perform daily maintenance and administration, disaster recovery, and problem isolation. The Bid shall describe the Bidder’s approach regarding how this training shall be structured according to the first, second, and third-level support concept.</p>	

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<p>Paragraph 3.4.8 – Section 3: Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.j. PIP Section 10: Reliability, Availability, Maintainability and Testability</p> <p>3.4.8.j.i The Bidder shall provide a preliminary Reliability, Availability, Maintainability and Testability (RAMT) plan compliant with the requirements stated in SOW Section 9 of the Prospective Contract.</p>	<p>Paragraph 4.4.9. Section 3: Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.j. PIP Section 10: Reliability, Availability, Maintainability and Testability</p> <p>4.4.9.j i The Bidder shall provide a preliminary Reliability, Availability, Maintainability and Testability (RAMT) Plan compliant with the requirements stated in SOW Section 9 of the prospective Contract.</p>	

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<p>Paragraph 3.4.8 – Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.j. PIP Section 10: Reliability, Availability, Maintainability and Testability</p> <p>3.4.8.j.ii The Bidder shall provide calculations that demonstrate that the system meets the RAMT requirements set out in SOW Section 9 of the prospective Contract. The Bidder shall use calculations based on actual data derived from operational experience of fielded systems, its components and extrapolations. The Bidder shall also provide a full description of the source data used, providing equipment numbers, owners, location and inclusive dates.</p>	<p>Paragraph 4.4.9. Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.j. PIP Section 10: Reliability, Availability, Maintainability and Testability</p> <p>4.4.9.j ii The Bidder shall provide calculations that convincingly demonstrate that the proposed SSSB-POL systems design will meet the RAMT requirements set out in Section 9 of the SOW of the prospective Contract. The Bidders shall provide these calculations based, as much as possible, on actual data derived from operational experience of fielded systems and components and extrapolations therefrom, and shall provide a full description of the source data used, providing equipment numbers, owners, location and inclusive dates.</p>	

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<p>Paragraph 3.4.8 – Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.j. PIP Section 10: Reliability, Availability, Maintainability and Testability</p> <p>3.4.8.j.iii The Bidder shall be required to predict the MTBF (Main Time between Failures) of the system it proposed and justify what the total availability of the system is within the requested values as specified at the SOW.</p>	<p>Paragraph 4.4.9. Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.j. PIP Section 10: Reliability, Availability, Maintainability and Testability</p> <p>4.4.9.j.iii The Bidder shall have predicted the Mean Time between Failures (MTBF) of the system he proposed and justify that the total availability of the system is within the requested values as specified at SOW. The Bidder shall provide calculations that demonstrate that the SSSB-POL System meets the RAMT requirements of the IFB.</p>	

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<p>Paragraph 3.4.8 – Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.k. PIP Section 11: Contractor Logistics Support</p> <p>3.4.8.k.i In this section, the Bidder shall provide a preliminary Contractor Logistic Support (CLS) Plan for the maximum support period of the installed systems describing the roles and responsibilities of the Contractor to meet the requirements for CLS concept, as described in Book II of the prospective Contract.</p>	<p>Paragraph 4.4.9. Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.k. PIP Section 11: Contractor Logistics Support</p> <p>4.4.9.k.i The Bidder shall provide a preliminary Contractor Logistic Support (CLS) Plan for the maximum support period of the installed system, describing the roles and responsibilities of the Contractor to meet the requirements for CLS concept, as described in SOW Section 8 of the prospective Contract, covering all the aspects as set out in SOW Section 8 of the prospective Contract, describing the services the Contractor shall perform during the warranty period and during all Contracted CLS periods if exercised.</p>	

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<p>Paragraph 3.4.8 – Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.k. PIP Section 11: Contractor Logistics Support</p> <p>3.4.8.k.ii The Bidder shall demonstrate that it is capable of providing CLS after the warranty period as specified in the SOW of the prospective Contract. The Bidder shall also be required to provide firm fixed pricing for all CLS, ensuring that system reliability, availability, and maintainability requirements specified in the SOW continue to be met throughout the CLS period.</p>	<p>Paragraph 4.4.9. Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.k. PIP Section 11: Contractor Logistics Support</p> <p>4.4.9.k.ii The prospective CLS agreement will be executed by the NCIA on behalf of HN POL not later than the end of the warranty period, should the option for CLS be exercised. If exercised, the prospective CLS agreement shall provide for up to a duration as stipulated in the SSS of the prospective Contract. Bidders shall note that the post-warranty CLS agreement is an optional requirement of the prospective Contract for the manufacture and installation of the SSSB-POL System. The Bidder shall demonstrate that he is capable of providing CLS after the warranty period as specified in the SOW of the prospective Contract. The Bidder shall provide firm fixed pricing for all CLS option CLINs ensuring that system reliability, availability, and maintainability requirements specified in the SOW continue to be met during CLS period.</p>	

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<p>Paragraph 3.4.8 – Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.k. PIP Section 11: Contractor Logistics Support</p> <p>3.4.8.k.iii The Bidder shall identify those items (assemblies and sub-assemblies) that are to be sub-contracted for repair, refurbishment, and/or modification as well as other services to be performed through a sub-contractor. The Bidder shall also be required to identify its proposed major sub-contractors for the CLS Contract.</p>	<p>Paragraph 4.4.9. Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.k. PIP Section 11: Contractor Logistics Support</p> <p>4.4.9.k.iii Sub-Contractors. The Bidder shall identify those items (assemblies and subassemblies) that are to be sub-contracted for repair, refurbishment, and/or modification, or other services to be performed through a sub-contractor. The Bidder shall also identify its major proposed sub-contractors for the CLS Contract. The Bidder shall demonstrate that firm commitments have been made with sub-contractors. The Bidder shall identify the firm, the nation of origin, the major items (assemblies, sub-assemblies) or services that the proposed sub-contractor will be required to furnish, repair, modify and perform.</p>	

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<p>Paragraph 3.4.8 – Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.k. PIP Section 11: Contractor Logistics Support</p> <p>3.4.8.k.iv The Bidder shall include a letter of intent from the proposed sub-contractor that details its willingness to enter into a sub-contract with the Bidder should the CLS Contract be awarded to the Bidder.</p>	<p>Paragraph 4.4.9. Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.k. PIP Section 11: Contractor Logistics Support</p> <p>4.4.9.k.iv The Bidder shall include a letter of intent from the proposed sub-contractor that details its willingness to enter into a sub-contract with the Bidder should the CLS Contract would be awarded to the Bidder.</p>	

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<p>Paragraph 3.4.8 – Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.k. PIP Section 11: Contractor Logistics Support</p> <p>3.4.8.k.v The Bidder shall be required to demonstrate that the proposed corporate organisation (defined as the Prime Contractor and any sub-contractors) that is proposed for the CLS effort, shall have, in the aggregate, substantial experience in the maintenance and support of similarly sized RF systems over the last five (5) years. The description shall include the number of systems supported, the purchaser of the support and point of contact with the purchaser for reference. The description shall also need to identify any similarities between CLS Contracts previously delivered and the requirements under this IFB.</p>	<p>Paragraph 4.4.9. Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.k. PIP Section 11: Contractor Logistics Support</p> <p>4.4.9.k.v The Bidder shall demonstrate that the elements of the Bidders proposed organisation that are planned to carry out the CLS effort have adequate experience in the maintenance and support of major RF defence systems. The experience described shall expand on the corporate experience descriptions required by paragraph 3.5.8 above to specifically highlight the prime Contractor's and sub Contractors' Contracted maintenance and supply efforts for a similar size RF defence system over the last five (5) years. The description shall include the number of systems supported, the purchaser of the support, and point of contact with the purchaser for reference. The description shall identify any similarities between CLS Contracts previously delivered and the requirements under this IFB.</p>	

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<p>Paragraph 3.4.8 – Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.k. PIP Section 11: Contractor Logistics Support</p> <p>3.4.8.k.vi The Bidder shall provide a description of how its proposed Configuration Management (CM) procedures will continue to be implemented on the hardware and software/firmware during the CLS periods.</p>	<p>Paragraph 4.4.9 Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.k. PIP Section 11: Contractor Logistics Support</p> <p>4.4.9.k.vi The Bidder shall convincingly demonstrate that the proposed CM procedures will effectively ensure configuration control during the CLS Periods.</p>	

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<p>Paragraph 3.4.8 – Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.I. PIP Section 12: Security Accreditation</p> <p>3.4.8.I.i In this Section the Bidder shall provide a preliminary Security Accreditation Plan (SAP) by WBS detailing the resources allocated and the schedule of work to obtain the Security Accreditation, in addition to meeting the security requirements set out in SOW Section 5 of the prospective Contract.</p>	<p>Paragraph 4.4.9. Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.I. PIP Section 12: Security Accreditation</p> <p>4.4.9.I i The Bidder shall submit a preliminary Security Accreditation Plan (PSAP) and shall have convincingly demonstrated that the proposed plan will meet the security requirements set out in SOW Section 5 of the prospective Contract.</p>	

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<p>Paragraph 3.4.8 – Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.I. PIP Section 12: Security Accreditation</p> <p>3.4.8.I.ii The Bidder shall confirm that he understands and accepts security accreditation documentation review and approval procedures, as defined in the IFB Contract Special Terms and Conditions, Article 11.</p>	<p>Paragraph 3.4.8 – Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.I. PIP Section 12: Security Accreditation</p> <p>3.4.8.I.ii The Bidder shall have confirmed that he understands and accepts security accreditation documentation review and approval procedures as defined in the IFB Contract Special Terms and Conditions, Article 11.</p>	

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<p>Paragraph 3.4.8 – Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.m. PIP Section 13: Risk Assessment and Management</p> <p>3.4.8.m.i In order to demonstrate overall comprehension of the requirements set out in the prospective Contract, the Bidder shall provide a preliminary Risk Assessment and Management Plan (RAMP) defining its strategy for risk management to meet the requirements as set out in SOW Section 2 of the prospective Contract.</p>	<p>Paragraph 4.4.9. Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.m. PIP Section 13: Risk Assessment and Management</p> <p>4.4.9.m i The Bidder shall provide a preliminary Risk Assessment and Management Plan (RAMP) defining its strategy for risk management to meet the requirements as set out in SOW Section 2 of the prospective Contract. The Bidder shall demonstrate adequacy of monitoring and control activities to ensure early detection of problem areas and to schedule risk. The Bidder shall identify the possible risks involved in the performance of the Contract and shall have convincingly demonstrated that its approach offers adequate, logical and pragmatic means for risk/issue identification, assessment, mitigation, monitoring, and reporting of risks/issues, as well as methods for overcoming setbacks to the project throughout the Contract duration.</p>	

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<p>Paragraph 3.4.8 – Section 3: Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.n. PIP Section 14: Site Installation and Civil Works</p> <p>3.4.8.n.i In this section the Bidder shall provide a preliminary plan that thoroughly describes the civil works, power and site preparation requirements that must be accomplished to properly install and operate the proposed SSSB-POL system as set out in SOW Section 12 and SOW Annexes A and B of the prospective Contract.</p>	<p>Paragraph 4.4.9. Section 3: Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.n. PIP Section 14: Site Installation and Civil Works</p> <p>4.4.9.n.i The Bidder shall provide specific and comprehensive information regarding civil works, power and site preparation requirements that must be accomplished to correctly install and operate the proposed SSSB-POL system as set out in SOW Section 12 and SOW Annexes A and B of the prospective Contract. The Bidder shall demonstrate its concept and technical solutions including sufficient degrees of detail. The Bidder shall also provide specific and comprehensive information concerning the civil works, power and site preparation requirements necessary to have been completed prior to the installation of the delivered SSSB-POL System.</p>	

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<p>Paragraph 3.4.8 – Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.n. PIP Section 14: Site Installation and Civil Works</p> <p>3.4.8.n.ii The Bidder shall provide adequate information regarding the requirements to quantify the magnitude of total civil works that must be accomplished on site prior to arrival of the equipment for installation.</p>	<p>Paragraph 4.4.9. Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.n. PIP Section 14: Site Installation and Civil Works</p> <p>4.4.9.n.ii Requirements such as, but not limited to load bearing capacity of concrete, special structural supports, pilings, platforms, reinforcements, power supply requirements etc., shall have been indicated in order to verify the infrastructure capabilities provided by HN on the two (2) radio sites prior to arrival of the equipment for installation. This information shall also be required to indicate and quantify the magnitude of total civil works that must be accomplished.</p>	

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<p>3.4.8.n.iii The Bidder shall identify those HN stakeholders that have a requirement to be involved in any approvals of national, local or HN MoD related permit authorisation associated with site installation and civil works. It shall also provide details of time schedules, processes and procedures required in order to obtain any such permits, approvals or authorisations and thus ensure that site installation and civil works are in line with agreed schedules.</p>	<p>4.4.9.n.iii The Bidder shall provide specific details of those HN stakeholders that have a requirement to be involved in approvals of national, local or HN MoD related permit and authorisation associated with site installation and civil works. The bidder shall also provide detailed time schedules, processes and procedures required in order to obtain any such permits, approvals or authorisations and thus ensure that site installation and civil works are in line with agreed schedules.</p>	

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<p>Paragraph 3.4.8 – Section 3: Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.n. PIP Section 14: Site Installation and Civil Works</p> <p>3.4.8.n.iv The Bidder shall specify any characteristics of the systems that constrain the type of civil works that are to be performed to prepare the sites.</p>	<p>Paragraph 4.4.9. Section 3: Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.n. PIP Section 14: Site Installation and Civil Works</p> <p>4.4.9.n.iv The Bidder shall adequately specify any characteristics of the SSSB-POL System that may constrain the type of civil works needed to be performed in site preparation. The type of constraints may be of the nature of working and implementation, environmental, special material requirements or prohibited materials, location of power supplies, location of conduits for cabling, or operating characteristics that require the maintenance of a specialised or customised environment (e.g., minimum distance from high tension lines, specific climate conditions etc). It shall also identify and procure all associated permits and approvals required to complete civil works and ensure associated procurement timelines for these have been included in planning schedules. In its proposal, the Bidder shall demonstrate an appropriate understanding of the user involvement and of required coordination with the user during the development of the implementation. The Bidder shall explain its Concept of Analysis (CoA) and how this</p>	
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	analysis and associated conclusions relate to identified civil work constraints.	

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<p>Paragraph 3.4.8 – Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.n. PIP Section 14: Site Installation and Civil Works</p> <p>3.4.8.n.v In addition, in case of a potential disruption of national communications services due to the Contractor activities, the Bidder shall also be required to deliver a preliminary System Installation Transition Plan (SITP) to ensure there is minimum disruption of provision of national communications services between site preparation and RSAT for the purpose of reducing the risks of Contract cost overrun, as well as reducing risks of lengthy disruption to mission-critical HN national communications services. Generally, the plan shall provide the possibility to close down services gradually. This transition plan will be subject to the approval of HN Poland, through the Purchaser.</p>	<p>Paragraph 4.4.9. Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>4.4.9.n. PIP Section 14: Site Installation and Civil Works</p> <p>4.4.9.n.v The Bidder shall deliver a preliminary System Installation Transition Plan (SITP) to ensure minimum disruption of provision of national communications services between site preparation and RSAT. It shall enable NCI Agency to assess the Bidder’s understanding of the installation requirements in the HN to reduce the risk of Contract cost overrun, and to reduce the risk of lengthy disruption to mission-critical HN communications services. Preliminary SITP shall include but not be limited to, a work schedule and task list, as well as analysis provided as to how it intends to plan, organise and execute works for system installation that maximises the amount of on-air time and minimized off-air time for HN communications services, until the HN communications services could be supported as part of the SSSB-POL system.</p>	

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BIDDING INSTRUCTION	ASSOCIATED BID EVALUATION CRITERIA in BOOK I	BID REFERENCE
<p>Paragraph 3.4.8 – Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>3.4.8.n. PIP Section 14: Site Installation and Civil Works</p> <p>3.4.8.n.vi The Bidder shall be required to provide a plan for the management and disposal of any associated spoil, rubble or waste resulting from site installation and civil works;</p>	<p>Paragraph 4.4.8. Section 3:</p> <p>Preliminary Project Implementation Plan (PIP)</p> <p>4.4.8.n. PIP Section 14: Site Installation and Civil Works</p> <p>4.4.8.n.vi The Bidder shall have provided a plan for the management and disposal of any associated spoil, rubble or waste resulting from site installation and civil works.</p>	
<p>3.4.8.n.vii The Bidder shall confirm its understanding and acceptance of the site access requirements as defined in the IFB.</p>	<p>4.4.8.n.vii The Bidder shall have confirmed its understanding and acceptance of the site access requirements as defined in the IFB.</p>	

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IFB-CO-14604-SSSB-POL



NATO Communications and Information Agency
Agence OTAN d'information et de communication

BOOK I

ANNEX D

CLARIFICATION REQUEST FORM

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IFB-CO-14604-SSSB-POL
N A T O U N C L A S S I F I E D

ADMINISTRATIVE CLARIFICATION REQUESTS				
Serial NR	IFB REF	BIDDERS QUESTION	NCI AGENCY ANSWER	STATUS*
A.1.				
A.2.				
A.3.				
A.4.				
A.5.				
A.6.				

* Specify 'YES' if the Amendment to IFB will be required as a direct result of the Clarification Request

IFB-CO-14604-SSSB-POL
N A T O U N C L A S S I F I E D

PRICE CLARIFICATION REQUESTS				
Serial NR	IFB REF	BIDDERS QUESTION	NCI AGENCY ANSWER	STATUS*
P.1				
P.2				
P.3				
P.4				
P.5				
P.6				

* Specify 'YES' if the Amendment to IFB will be required as a direct result of the Clarification Request

IFB-CO-14604-SSSB-POL
N A T O U N C L A S S I F I E D

TECHNICAL CLARIFICATION REQUESTS				
Serial NR	IFB REF	BIDDERS QUESTION	NCI AGENCY ANSWER	STATUS*
T.1				
T.2				
T.3				
T.4				
T.5				
T.6				

* Specify 'YES' if the Amendment to IFB will be required as a direct result of the Clarification Request

IFB-CO-14604-SSSB-POL



NATO Communications and Information Agency
Agence OTAN d'information et de communication

BOOK I

ANNEX E

STANDBY LETTER OF CREDIT

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BID GUARANTEE - STANDBY LETTER OF CREDIT

Standby Letter of Credit Number: _____

Issue Date: _____

Account Party's name:

Account Party's address:

*Beneficiary: NCI Agency, Financial Management Office
Boulevard Leopold III, B-1110, Brussels
Belgium*

Expiry Date: _____

For Contract No: IFB-CO-14604 SSSB Poland Project

(1) We, (issuing bank) hereby establish in your favour our irrevocable standby letter of credit number {number} by order and for the account of (NAME AND ADDRESS OF BIDDER) in the original amount of €85,000 Euro). We are advised this Guarantee fulfils a requirement under Invitation for Bid IFB-CO-14604-SSSB-POL dated (DATE OF IFB COVER LETTER).

(2) *Funds under this standby letter of credit are available to you upon first demand and without question or delay against presentation of a certificate from the NCI Agency Contracting Officer that:*

(NAME OF BIDDER) has submitted a Bid and, after Bid Closing Date (including extensions thereto) and prior to the selection of the lowest priced, technically compliant Bid, has withdrawn its Bid, or stated that he does not consider its Bid valid or agree to be bound by its Bid, or

(NAME OF BIDDER) has submitted a Bid determined by the NCI Agency to be the lowest priced, technically compliant Bid, but (NAME OF BIDDER) has declined to execute the Contract offered by the NCI Agency, such Contract being consistent with the terms of the Invitation for Bid, or

The NCI Agency has offered (NAME OF BIDDER) the Contract for execution but (NAME OF BIDDER) has been unable to

demonstrate compliance with the security requirements of the Contract within a reasonable time, or

The NCI Agency has entered into the Contract with (NAME OF BIDDER) but (NAME OF BIDDER) has been unable or unwilling to provide the Performance Guarantee required under the terms of the Contract within the time frame required.

- (3) *This Letter of Credit is effective the date hereof and shall expire at our office located at (Bank Address) on _____. All demands for payment must be made prior to the expiry date.*
- (4) *It is a condition of this letter of credit that the expiry date will be automatically extended without amendment for a period of sixty (60) calendar days from the current or any successive expiry date unless at least thirty (30) calendar days prior to the then current expiry date the NCI Agency Contracting Officer notifies us that the Letter of Credit is not required to be extended or is required to be extended for a shorter duration.*
- (5) *We may terminate this letter of credit at any time upon sixty (60) calendar days' notice furnished to both (NAME OF BIDDER) and the NCI Agency by registered mail.*
- (6) *In the event we (the issuing bank) notify you that we elect not to extend the expiry date in accordance with paragraph 4 above, or, at any time, to terminate the letter of credit, funds under this credit will be available to you without question or delay against presentation of a certificate signed by the NCI Agency Contracting Officer that states:*

“The NCI Agency has been notified by {issuing bank} of its election not to automatically extend the expiry date of letter of credit number {number} dated {date} pursuant to the automatic renewal clause (or to terminate the letter of credit). As of the date of this certificate, no suitable replacement letter of credit, or equivalent financial guarantee has been received by the NCI Agency from, or on behalf of (NAME OF BIDDER), and the NCI Agency, as beneficiary, hereby draws on the standby letter of credit number _____ in the amount of 85,000 € (Amount up to the maximum available under the LOC), such funds to be transferred to the account of the Beneficiary number _____ (to be identified when certificate is presented).”

- (7) *Such certificate shall be accompanied by the original of this letter of credit and a copy of the letter from the issuing bank that it elects not to*

automatically extend the standby letter of credit, or terminating the letter of credit.

- (8) *The Beneficiary may not present the certificate described in paragraph 6 (six) above until 20 (twenty) calendar days prior to*
1. *the date of expiration of the letter of credit should {issuing bank} elect not to automatically extend the expiration date of the letter of credit,*
 2. *the date of termination of the letter of credit if {issuing bank} notifies the Beneficiary that the letter of credit is to be terminated in accordance with paragraph 6 above.*
- (9) *Multiple partial drawings are allowed to the maximum value of this letter of credit.*
- (10) *Drafts drawn hereunder must be marked, 'Drawn under {issuing bank} Letter of Credit No. {Number}' and indicate the date hereof.*
- (11) *This letter of credit sets out in full the terms of our undertaking, and this undertaking shall not in any way be modified, amended, or amplified by reference to any document, instrument, or agreement referred to herein (except the International Standby Practices 98 (ISP98) hereinafter defined) or in which this letter of credit is referred to or to which this letter of credit relates, and any such reference shall not be deemed to incorporate herein by reference any document, instrument, or agreement.*
- (12) *We hereby engage with you that drafts drawn under and in compliance with the terms of this letter of credit will be duly honoured upon presentation of documents to us on or before the expiration date of this letter of credit.*
- (13) *This Letter of Credit is subject to The International Standby Practices-ISP98 (1998 Publication) International Chamber of Commerce Publication No.590.*

INVITATION FOR BID

**Ship Shore Ship Buffer (SSSB)
System for Poland**

IFB-CO-14604-SSSB-POL



NATO Communications and Information Agency
Agence OTAN d'information et de communication

**BOOK II
PROSPECTIVE CONTRACT**

Original No. ____ of ____

NCI Agency Contract CO-14604-SSSB-POL

between

NATO Communications and Information (NCI) Agency
- represented by the General Manager, NCI AGENCY –

Boulevard Léopold III,
B-1110 Brussels,
Belgium

and

[Name of Contractor]

TABLE OF CONTENTS

THE PROSPECTIVE CONTRACT – BOOK II

Contract Signature Sheet

Part I	Contract Schedules
	Section 1: Schedule of Supplies and Services
	Section 2: Schedule of Major Performance Milestones and related Payment Milestones
Part II	Contract Special Provisions
Part III	NCI Agency Contract General Provisions
Part IV	Statement of Work
	Annex A System Requirements Specifications
	Annex B Site Information Data Package (NATO RESTRICTED)
	Annex C Security Aspect Letter & Project Security Instructions
	Annex D Support to Security Accreditation

Contract Signature Sheet	
1. Original Number: of 3	2. Purchase Order Number:
3. Contract Number: CO-14604-SSSB-POL	4. Effective date of Contract (EDC): See block 17
5. Contractor: TBD	6. Purchaser: NCIO represented by: General Manager NCI Agency Boulevard Leopold III 1110 Brussels Belgium Tel:+32 2 707 8321
7. CONTRACT SCOPE: This is a Firm-Fixed-Price Contract for the provision procurement, implementation and installation of radio communication equipment for a Ship-Shore-Ship-Buffer (SSSB) system in Poland.	
8. TOTAL VALUE OF CONTRACT: Firm Fixed Price (CLINs 1 through 15): [currency] [amount]	
9. PERIOD OF PERFORMANCE See Contract Part I – Schedule of Supplies and Services, and Part IV – Statement of Work; Terms of Delivery: Delivered Duty Paid (DDP, Incoterms 2010) to final destination; Purchaser is exempt from VAT and Customs Duties.	10. DELIVERY SITE AND SCHEDULE: See Contract Part I – Schedule of Supplies and Services, and Part IV – Statement of Work
11. CONTRACT AGREEMENT: The Contractor agrees to furnish all items and perform all the services set forth or otherwise identified in the scope above and on any continuation sheets for the consideration stated herein. This agreement supercedes all previous communications, representations or understandings, either written or oral, and shall constitute the sole and only agreement between the Contractor and the Contracting Authority with respect to the subject matter hereof. The rights and obligations of the parties to this Contract shall be subject to and governed by Contract Special Provisions and Contract General Provisions herein attached to this Contract.	
12. Signature of Contractor	13. Signature of Purchaser
14. Name and Title of Signer	15. Name and Title of Signer
16. Date signed by the Contractor	17. Date signed by the Purchaser

COUNTERSIGNATURE OF NATO HOST NATION

The Parties to this Contract agree that the validity of this Contract is dependent on the countersignature of the NATO Host Nation, The Republic of Poland. The effective date of this Contract will be the date of this countersignature. Unless the Contract is countersigned by the Host Nation, the Parties agree that it shall be void at no cost and without further liability to either Party.

<p>FOR</p> <p>The Republic of Poland:</p> <p>.....</p> <p>Signature</p> <p>.....</p> <p>Printed Name</p> <p>.....</p> <p>Title</p> <p>.....</p> <p>Date</p>
--

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(NATO UNCLASSIFIED when separated from SOW Annex B)

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BOOK II

PART I – CONTRACT SCHEDULES

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BOOK II PART I CONTRACT SCHEDULES

NATO RESTRICTED
(NATO UNCLASSIFIED when separated from SOW Annex B)

IFB-CO-14604-SSSB-POL

**BOOK II PART I SECTION 1
SCHEDULE OF SUPPLIES AND SERVICES**

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(NATO UNCLASSIFIED when separated from SOW Annex B)

BOOK II PART I CONTRACT SCHEDULES

IFB-CO-14604-SSSB-POL CLIN Summary

BASIC CONTRACT

CLIN	Description	SOW Reference	Required Completion Date	Delivery Destination	Unit of measure	Quantity	Unit Price	Total Firm Fixed Price	Investment or O&M
Currency									
1.0	Project Management & Reporting								Investment
1.1	Project Checkpoint Reports (PCR), multiple	SOW 2.4	Every 2 months	Purchaser's premises	LOT			Not Separately Priced	Investment
1.2	Project Progress Reports (PPR), multiple	SOW 2.5	1 week prior to PPM	Purchaser's premises	LOT			Not Separately Priced	Investment
1.3	Kick Off Meeting / PPM #1	SOW 2.6	EDC + 3 weeks	Purchaser's or HN's premises	1				Investment
1.4	Project Progress Meetings (PPM #6 onwards), multiple	SOW 2.6	Every 4 months	Purchaser's or HN's or Contractor's premises	LOT				Investment
2.0	Site Surveys								
Rozewie Site									
2.1	Conducting Site Survey	SOW 3.6	EDC + 4 weeks	Rozewie		1			Investment
2.2	Site Survey Report (SSR) draft, and final	SOW 3.6	Draft: 2 weeks after Survey Final: 1 week after Purchaser comments	Purchaser's premises		LOT			Investment
Rzucewo Site									
2.3	Conducting Site Survey	SOW 3.6	EDC + 4 weeks	Rzucewo		1			Investment
2.4	Site Survey Report (SSR) draft, and final	SOW 3.6	Draft: 2 weeks after Survey Final: 1 week after Purchaser comments	Purchaser's premises		LOT			Investment
3.0	Project Implementation Plan (PIP)								
3.1	Draft PIP	SOW 2.3.1	EDC + 6 weeks	Purchaser's premises		LOT		Not Separately Priced	Investment
3.2	PIP Review Meeting / PPM#2	SOW 2.3.1	EDC + 8 weeks	Purchaser's or HN's or Contractor's premises		1			Investment
3.3	Final PIP	SOW 2.3.1	EDC + 10 weeks	Purchaser's premises		LOT			Investment
4.0	Technical Reviews (SRR, PDR, CDR)								
System Requirements Review (SRR)									
4.1	SRR Meeting	SOW 4.7.2	EDC + 14 weeks	Purchaser's or HN's or Contractor's premises		1			Investment
4.2	SRR Documentation, incl. Requirements Analysis Report (RAR)	SOW 4.7.2	EDC + 16 weeks	Purchaser's premises		LOT			Investment
Preliminary Design Review (PDR)									
4.3	PDR Draft documentation, incl. Detailed Design Specifications (DDS) draft	SOW 4.7.3 and SOW 4.7.4	EDC + 13 weeks	Purchaser's premises		LOT		Not Separately Priced	Investment
4.4	PDR Meeting / PPM #3	SOW 4.7.3	EDC + 16 weeks	Purchaser's or HN's or Contractor's premises		1			Investment
Critical Design Review (CDR)									
4.5	CDR Draft documentation, incl. Interface Control document and Detailed Design Specifications (DDS) Final Draft	SOW 4.7.3 and SOW 4.7.4	EDC + 21 weeks	Purchaser's premises		LOT			Investment
4.6	Configuration Item (CI) specifications	SOW 4.7.3	EDC + 29 weeks	Purchaser's premises		LOT			Investment
4.7	CDR Meeting / PPM #4	SOW 4.7.3	EDC + 24 weeks	Purchaser's or HN's or Contractor's premises		1			Investment
4.8	Final DDS	SOW 4.7.4	EDC + 26 weeks	Purchaser's premises		LOT			Investment
5.0	Factory Acceptance Testing (FAT)								
5.1	FAT Test Procedures	SOW 10.4	EDC + 27 weeks	Purchaser's premises		LOT			Investment
5.2	Test Readiness Review Meeting (FAT-TRR)	SOW 10.4	EDC + 28 weeks	Contractor's premises		1			Investment
5.3	Factory Acceptance Testing Meeting / PPM #5	SOW 10.7	EDC + 29 weeks	Contractor's premises		1			Investment
5.4	Functional Configuration Audit (FAT-FCA)	SOW 7.14	EDC + 29 weeks	Contractor's premises		1			Investment
5.5	Physical Configuration Audit (FAT-PCA)	SOW 7.14	EDC + 29 weeks	Contractor's premises		1			Investment
5.6	FAT Test Reports	SOW 10.10	EDC + 31 weeks	Purchaser's premises		LOT			Investment
6.0	Delivery, Installation and integration of Hardware on Site								
Radio Site Rozewie									
6.1	HF Transmitter - Solid State	SOW Annex A	EDC + 39 weeks	Rozewie		LOT			Investment
6.2	HF TX Broadband Monocone Antenna	SOW Annex A	EDC + 39 weeks	Rozewie		LOT			Investment
6.3	HF Antenna Switch Matrix	SOW Annex A	EDC + 39 weeks	Rozewie		LOT			Investment
6.4	Audio Switching Matrix	SOW Annex A	EDC + 39 weeks	Rozewie		LOT			Investment
6.5	UHF Transceiver (100W)	SOW Annex A	EDC + 39 weeks	Rozewie		LOT			Investment
6.6	UHF Collinear Antenna (2ch) including support structure	SOW Annex A	EDC + 39 weeks	Rozewie		LOT			Investment
6.7	Multiplexer	SOW Annex A	EDC + 39 weeks	Rozewie		LOT			Investment
6.8	DLOS Microwave bridge to Rx Site	SOW Annex A	EDC + 39 weeks	Rozewie		LOT			Investment
6.9	Spare Parts	SOW Annex A	EDC + 39 weeks	Rozewie		LOT			Investment
6.10	Installation and integration of all Contractor-provided equipment and PFE	SOW Various	EDC + 39 weeks	Rozewie		LOT			Investment
6.11	Tools and Special Test Equipment	SOW 8.4	EDC + 39 weeks	Rozewie		LOT			Investment
6.12	Codification of Items	SOW 8.8	EDC + 39 weeks	Purchaser's premises		LOT			Investment
Radio Site Rzucewo									
6.13	HF Receiver	SOW Annex A	EDC + 39 weeks	Rzucewo		LOT			Investment
6.14	HF RX Broadband Monocone Antenna	SOW Annex A	EDC + 39 weeks	Rzucewo		LOT			Investment
6.15	RX Multicoupler	SOW Annex A	EDC + 39 weeks	Rzucewo		LOT			Investment
6.16	Audio Switching Matrix	SOW Annex A	EDC + 39 weeks	Rzucewo		LOT			Investment
6.17	Multiplexer	SOW Annex A	EDC + 39 weeks	Rzucewo		LOT			Investment
6.18	DLOS Microwave bridge to Tx Site	SOW Annex A	EDC + 39 weeks	Rzucewo		LOT			Investment
6.19	Spare Parts	SOW Annex A	EDC + 39 weeks	Rzucewo		LOT			Investment
6.20	Installation and integration of all Contractor-provided equipment and PFE	SOW Various	EDC + 39 weeks	Rzucewo		LOT			Investment
6.21	Tools and Special Test Equipment	SOW 8.4	EDC + 39 weeks	Rozewie		LOT			Investment
6.22	Codification of Items	SOW 8.8	EDC + 39 weeks	Purchaser's premises		LOT			Investment
7.0	Site Verification Inspection & Documentation								
Radio Site Rozewie									
7.1	Dismantling and disposal of any identified existing surplus/obsolete equipment	SOW 12.8	EDC + 35 weeks	Rozewie		1			Investment
7.2	Engineering Data	SOW 4.7.7	EDC + 35 Weeks	Rozewie		LOT			Investment
7.3	Site Preparation Data Package (SPDP) draft, and final	SOW 12.6	Draft: EDC + 16 weeks Final: EDC + 35 weeks	Purchaser's premises		LOT			Investment
7.4	Site Installation Specification (SIS) draft, final draft, and final	SOW 3.7	Draft: EDC + 28 weeks Final Draft: EDC + 34 weeks Final: EDC + 40 weeks	Purchaser's premises		LOT			Investment
7.5	Provision of antenna support structures, foundations, trenching and necessary adaptations to associated buildings	SOW 12	EDC + 35 weeks	Rozewie		1			Investment
7.6	Provision of DLOS/UHF antenna support structure, foundations, trenching and necessary adaptations to associated buildings	SOW 12	EDC + 35 weeks	Rozewie		1			Investment
7.7	If required: Augmentation to existing UPS appliances	SOW 12	EDC + 35 weeks	Rozewie		LOT			Investment
Radio Site Rzucewo									
7.8	Dismantling and disposal of any identified existing surplus/obsolete equipment		EDC + 35 weeks	Rzucewo		1			Investment
7.9	Engineering Data	SOW 4.7.7	EDC + 35 Weeks	Rzucewo		LOT			Investment
7.10	Site Preparation Data Package (SPDP) draft, and final	SOW 12.8	Draft: EDC + 16 weeks Final: EDC + 35 weeks	Purchaser's premises		LOT			Investment
7.11	Site Installation Specification (SIS) draft, final draft, and final	SOW 12.6	Draft: EDC + 28 weeks Final Draft: EDC + 34 weeks Final: EDC + 40 weeks	Purchaser's premises		LOT			Investment
7.12	Provision of antenna support structures, foundations, trenching and necessary adaptations to associated buildings	SOW 12	EDC + 35 weeks	Rzucewo		1			Investment
7.13	Provision of DLOS/UHF antenna support structure, foundations, trenching and necessary adaptations to associated buildings	SOW 12	EDC + 35 weeks	Rzucewo		1			Investment
7.14	If required: Augmentation to existing UPS appliances	SOW 12	EDC + 35 weeks	Rzucewo		LOT			Investment
8.0	Site Compliance Inspection and Audit								
Radio Site Rozewie									
8.1	Completion of entire system integration and installation works at site	SOW 12	EDC + 41 weeks	Rozewie		LOT			Investment
8.2	Installation Checkout Meeting	SOW 10.5	EDC + 41 weeks	Rozewie		1			Investment
8.3	Installation Checkout Reports	SOW 10.5	EDC + 41 weeks	Purchaser's premises		LOT			Investment
Radio Site Rzucewo									

8.4	Completion of entire system integration and installation works at site	SOW 12	EDC + 41 weeks	Rzucewo		LOT			Investment
8.5	Installation Checkout Meeting	SOW 10.5	EDC + 41 weeks	Rzucewo		1			Investment
8.6	Installation Checkout Reports	SOW 10.5	EDC + 41 weeks	Purchaser's premises		LOT			Investment
9.0	Logistic Design								
9.1	Integrated Logistic Support Plan (ILSP)	SOW 8.2	Draft: EDC + 6 weeks Updates as required Final: CDR end + 4 weeks	Purchaser's premises		LOT			Investment
9.2	Reliability Availability Maintainability Testability (RAMT) Case Report	SOW 9.2	Draft: SRR start - 4 weeks Final Draft: PDR start - 4 weeks Final: CDR start - 4 weeks	Purchaser's premises		LOT			Investment
9.3	Failure Mode Effects and Criticality Analysis (FMECA)	SOW 9.3	Draft: SRR start - 4 weeks Final Draft: PDR start - 4 weeks Final: CDR start - 4 weeks	Purchaser's premises		LOT			Investment
9.4	Maintenance Task Analysis (MTA)	SOW 8.7SOW 8.18	Draft: PDR start - 4 weeks Final Draft: CDR start - 4 weeks Final: FAT end + 4 weeks	Purchaser's premises		LOT			Investment
9.5	Level Of Repair Analysis (LORA)	SOW 8.7	Draft: CDR start - 4 weeks Final: FAT end + 4 weeks	Purchaser's premises		LOT			Investment
9.6	Packaging, Handling, Storage and Transportation (PHST)	SOW 8.18	Draft: CDR start - 4 weeks Final: FAT end + 4 weeks	Purchaser's premises		LOT			Investment
9.7	Recommended Spare Parts List (RSPL) + Recommended Consumable Item List (RCL) + Recommended Tools and Test equipment List (RTTL)	SOW 8.11SOW 8.12	Draft: CDR end + 4 weeks Final: FAT end + 4 weeks	Purchaser's premises		LOT			Investment
9.8	Provisioning Conference	SOW 8.14	Final: FAT end + 8 weeks	Purchaser's or HN's or Contractor's premises		1			Investment
9.9	DMS Report	SOW 8.17	Draft: CDR start - 4 weeks Final: FAT end + 4 weeks	Purchaser's premises		LOT			Investment
9.10	Repair Price List	SOW 8.23	Final: FAT end + 8 weeks	Purchaser's premises		LOT			Investment
9.11	CLS Plan	SOW 8.22	PSA - 2 weeks	Purchaser's premises		LOT			Investment
10.0	Technical Manual								
10.1	Technical Publication Development Plan (TPDP) [incl. Writing Style Guide (WSG)]	SOW 8.19	Draft: EDC + 16 weeks Final: EDC + 36 weeks	Purchaser's premises		LOT			Investment
10.2	User Manuals	SOW 8.20SOW 8.21	Draft: CDR - 4 weeks Final: FAT + 4 weeks	Purchaser's premises		LOT			Investment
10.3	Maintenance Manuals	SOW 8.20SOW 8.21	Draft: CDR - 4 weeks Final: FAT + 4 weeks	Purchaser's premises		LOT			Investment
11.0	Training								
11.1	Training Plan (TP) [incl. Training Requirements Analysis (TRA)]	SOW 14.2SOW 14.3	Draft: EDC + 12 weeks Final Draft: EDC + 24 weeks Final: Training start - 4 weeks	Purchaser's premises		LOT			Investment
11.2	Training documentation	SOW 14.10	Draft: Training start - 20 weeks Final: Training start - 4 weeks	Purchaser's premises		LOT			Investment
11.3	Training execution of Testing Personnel	SOW 14.4	Immediately before tests	HN's premises		LOT			Investment
11.4	Training execution of Operators (including reports)	SOW 14.4	EDC + 46 weeks Reports: Training end + 4 weeks	HN's premises		LOT			Investment
11.5	Training execution of Maintainers (including reports)	SOW 14.4	EDC + 46 weeks Reports: Training end + 4 weeks	HN's premises		LOT			Investment
11.6	Instructor Training execution (including reports)	SOW 14.5	EDC + 46 weeks Reports: Training end + 4 weeks	HN's premises		LOT			Investment
12.0	Radio Site & System Acceptance Testing (RSAT & SAT) & Reporting								
	Radio Site Rozewie								
12.1	RSAT Test Procedures	SOW 10.4.2	Draft: 3 months prior to RSAT Final: 1 week prior to RSAT	Purchaser's premises		LOT			Investment
12.2	Test Readiness Review Meeting (RSAT-TRR)	SOW 10.4	1 week prior to RSAT	Rozewie		1			Investment
12.3	Radio Site Acceptance Test (RSAT), incl. clearing deficiencies	SOW 10	EDC + 46 Weeks (NLT)	Rozewie		1			Investment
12.4	Provision of RSAT Report	SOW 10.10	2 weeks after RSAT	Purchaser's premises		LOT			Investment
12.5	Functional Configuration Audit (RSAT-FCA)	SOW 7.14	EDC + 46 Weeks (NLT)	Rozewie		1			Investment
12.6	Physical Configuration Audit (RSAT-PCA)	SOW 7.14	EDC + 46 Weeks (NLT)	Rozewie		1			Investment
	Radio Site Rzucewo								
12.7	RSAT Test Procedures	SOW 10.4.2	Draft: 3 months prior to RSAT Final: 1 week prior to RSAT	Purchaser's premises		LOT			Investment
12.8	Test Readiness Review Meeting (RSAT-TRR)	SOW 10.4	1 week prior to RSAT	Rzucewo		1			Investment
12.9	Radio Site Acceptance Test (RSAT), incl. clearing deficiencies	SOW 10	EDC + 46 Weeks (NLT)	Rzucewo		1			Investment
12.10	Provision of RSAT Report	SOW 10.10	2 weeks after RSAT	Purchaser's premises		LOT			Investment
12.11	Functional Configuration Audit (RSAT-FCA)	SOW 7.14	EDC + 46 Weeks (NLT)	Rzucewo		1			Investment
12.12	Physical Configuration Audit (RSAT-PCA)	SOW 7.14	EDC + 46 Weeks (NLT)	Rzucewo		1			Investment
	System Acceptance Test (SAT) & Manuals								
12.13	Completion of System Acceptance Test (SAT), incl. clearing deficiencies	SOW 10	EDC + 48 Weeks (NLT)	HN's premises		1			Investment
12.14	User Manuals	SOW 13.1	EDC + 48 Weeks (NLT)	Purchaser's premises		LOT			Investment
12.15	Maintenance Manuals	SOW 13.1	EDC + 48 Weeks (NLT)	Purchaser's premises		LOT			Investment
12.16	Site Maintenance Plan	SOW 13.1	EDC + 48 Weeks (NLT)	Purchaser's premises		LOT			Investment
13.0	Provisional System Acceptance (PSA) & Reporting								
13.1	Draft As-Built Drawings	SOW 13	EDC + 44 weeks	Purchaser's or HN's premises		LOT		Not Separately Priced	Investment
13.2	Final As-Built Drawings	SOW 13	EDC + 44 weeks	Purchaser's or HN's premises		LOT			Investment
13.3	Deficiency summary sheets and clearance reports	SOW 11	EDC + 48 weeks	Purchaser's or HN's premises		LOT		Not Separately Priced	Investment
13.4	PSA Report (PSAR), incl. all PSA associated documentation	SOW 11.5	EDC + 48 weeks	Purchaser's or HN's premises		LOT			Investment
13.5	Provisional System Acceptance Meeting	SOW 11.6	EDC + 48 weeks	Purchaser's or HN's premises		1			Investment
13.6	Spare parts, Consumable, Tools and Test equipment	SOW 8.11	EDC + 48 weeks	HN's premises		LOT			Investment
13.7	User Manuals	SOW 8.20SOW 8.21	EDC + 48 weeks	Purchaser's or HN's premises		LOT			Investment
13.8	Maintenance Manuals	SOW 8.20SOW 8.21	EDC + 48 weeks	Purchaser's or HN's premises		LOT			Investment
14.0	Final System Acceptance (FSA) & Reporting								
14.1	FSA Report (FSAR), incl. all FSA associated documentation and documentation updates	SOW 11.9	EDC + 74 weeks	Purchaser's premises		LOT			Investment
14.2	Deficiency summary sheets and clearance reports (update)	SOW 11.9	EDC + 74 weeks	Purchaser's or HN's premises		LOT		Not Separately Priced	Investment
14.3	Final System Acceptance Meeting	SOW 11.10	EDC + 74 weeks	Purchaser's or HN's premises		1			Investment
15.0	System Warranty (12 months)								
15.1	Warranty support, incl. repair, provisioning of spare parts and all other CLS supporting activities	SOW 8.24	FSA + 12 Months	Radio Sites		LOT			Investment
15.2	Logistic data set update (incl LSA, IETM)	SOW 8.24	FSA + 12 Months	Purchaser's premises		LOT			Investment
Insert rows above this row if needed									
Total Firm Fixed Price- Base Contract (Evaluated)									
-									

OPTIONAL CLINs - Unevaluated									
CLIN	Description	SOW Reference	Required Completion Date	Delivery Destination	Unit of measure	Quantity	Unit Price	Total Firm Fixed Price	Investment or O&M
16.0	Contractor Logistic Support (CLS) Options								
	Option 1 - Standard Post Warranty Services (PWS): Repair on Need, start after End of Warranty (CLIN 15), for periods of 1 Year, renewable after each period, up to a total of 9 Years								
16.1	Helpdesk Facility/Service Charges on an hourly basis if/as required during normal working hours supporting the Radio sites.	SOW 8.25	Each period: Option Start + 1 Year	Radio Sites		LOT			O&M
16.2	On-site intervention. Charges on a daily basis during normal working hours for the Radio sites, excluding transportation.	SOW 8.25	Each period: Option Start + 1 Year	Radio Sites		LOT			O&M

	Option 2 - Performance Based CLS Services after Warranty, start after End of Warranty (CLIN 15), for periods of 3 Years, renewable after each period, up to a total of 12 Years								
16.3	Performance Based Services: for 3rd and 4th line maintenance (including documentation required, Helpdesk facilities and on-site interventions, as and when required, for a period of three (3) Years after Warranty. To be Priced on a per-year basis.	SOW 8.26	Each period: Option Start + 3 Years	Radio Sites		LOT			O&M
Insert rows above this row if needed									O&M
Total Firm Fixed Price - Unevaluated Options									-

IFB-CO-14604-SSSB-POL

**BOOK II PART I SECTION 2
SCHEDULE OF MAJOR PERFORMANCE MILESTONES AND RELATED
PAYMENT MILESTONES**

Payment Milestone	SSSB-POL Payment Performance Milestones	SSS Ref. (CLIN)	% Value of the Contract	Acceptance NLT (EDC +)
1	Acceptance of Site Survey Reports (incl. Final SSR) & Acceptance of Project Implementation Plan (incl. Final PIP)	2 - 3	5 %	13 weeks
2	Acceptance of System Requirements Documentation (SRR) and Preliminary Design Documentation (PDR)	4.1 - 4.4	8 %	18 weeks
3	Acceptance of Critical Design Documentation	4.5 – 4.8	10 %	26 weeks
4	Acceptance of Factory Acceptance Testing (incl. FAT Report)	5	5 %	33 weeks
5	Delivery and Installation of Hardware on Site (DHS) / Completion of Site Verification Inspection (incl. Final SPDP and Final SIS) / Completion of System Installation (incl. Site Compliance Inspection including reports)	6 – 7 - 8	24%	41 weeks
6	Logistic Design (incl. ILSP, RAMT, FMECA, MTA, LORA, PHST, RSPL, RCIL, RTTL, Provisioning Conf., DMS Report, Repair Price List, and CLS Plan)	9	8 %	48 weeks
7	Technical Manual (incl. User Manuals and Maintenance Manuals) / Training (including reports)	10 - 11	10 %	48 weeks

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Payment Milestone	SSSB-POL Payment Performance Milestones	SSS Ref. (CLIN)	% Value of the Contract	Acceptance NLT (EDC +)
8	Acceptance of Radio Site Acceptance Test Report and System Acceptance Test Report and Documentation	12	10 %	48 weeks
9	Provisional System Acceptance (PSA) including reports and documentation	13	10 %	48 weeks
10	Final System Acceptance (FSA) including reports and documentation	14	5 %	74 weeks
11	End of System Warranty	15	5 %	12 months after FSA

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NATO Communications and Information Agency
Agence OTAN d'information et de communication

BOOK II

PART II - CONTRACT SPECIAL PROVISIONS

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PROSPECTIVE CONTRACT SPECIAL PROVISIONS

**ARTICLE 1. ALTERATIONS, MODIFICATIONS AND DELETIONS OF THE
NCI AGENCY CONTRACT GENERAL PROVISIONS**

- 1.1. The definition of "Purchaser" for the purposes of this Contract is therefore modified from the definition of Contract General Provisions Clause 2 "Definitions of Terms and Acronyms" to "NATO C&I Organisation, as represented by the General Manager, NCI Agency, acting on behalf of the Host Nation Poland. The Purchaser is the legal entity who awards and administers the Contract and stands as one of the Contracting Parties. The definition of Purchaser encompasses any legal successor to the NATO C&I Organisation and its designated representative, as may be agreed by the NATO member Nations."
- 1.2. CLAUSE 9 – PARTICIPATING COUNTRIES IS MODIFIED BY BY ARTICLE 3 PARTIPATING COUNTRIES
- 1.3. CLAUSE 21 - INSPECTION AND ACCEPTANCE OF DELIVERABLES AND SERVICES is supplemented by ARTICLE 7- INSPECTION OF SERVICES
- 1.4. CLAUSE 19 – PRICING OF CHANGES, AMENDMENTS AND CLAIMS is supplemented by ARTICLE 9 PRICING OF CHANGES, AMENDMENTS AND CLAIMS
- 1.5. CLAUSE 11- SECURITY is supplemented by ARTICLE 11 – SECURITY AND CONTRACT SECURITY CLASSIFICATION.
- 1.6. CLAUSE 10 SUB-CONTRACTS IS MODIFIED BY ARTICLE 15 SUB CONTRACTS
- 1.7. CLAUSE 22 - INSPECTION AND ACCEPTANCE OF DOCUMENTATION is supplemented by ARTICLE 15 - ACCEPTANCE OF DESIGN DOCUMENTATION
- 1.8. CLAUSE 13 – PURCHASER FURNISHED PROPERTY is supplemented by ARTICLE 18 – PURCHASER FURNISHED PROPERTY/EQUIPMENT.
- 1.9. CLAUSE 27 - WARRANTY OF WORK is supplemented by ARTICLE 19 – SSSB- SYSTEM WARRANTY.
- 1.10. CLAUSE 25 – INVOICES AND PAYMENTS is supplemented by ARTICLE 22 - PAYMENTS
- 1.11. CLAUSE 38 - LIQUIDATED DAMAGES is modified by ARTICLE 25 - LIQUIDATED DAMAGES

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- 1.12. CLAUSE 30 – INTELLECTUAL PROPERTY is supplemented by ARTICLE 26 – PURCHASER RIGHTS IN TECHNICAL DATA AND COMPUTER SOFTWARE.
- 1.13. CLAUSE 23 – PLACE AND TERMS OF DELIVERY is supplemented by ARTICLE 34 – PLACE AND TERMS OF DELIVERY

ARTICLE 2. SCOPE OF WORK

- 2.1 The Republic of Poland is the Host Nation (HN POL) for this project and has the overall financial authority. The NATO Communication and Information Agency (NCI Agency) has been authorised to act as the Technical and Procurement Agent on behalf of the HN and is vested with the acquisition authority.
- 2.2 The Site readiness declaration responsibility lies with the HN Poland. However, the Purchaser is responsible to officially inform the Contractor that the sites are ready.
- 2.3 The scope of this Contract is to procure and install the radio communication equipment for HN Poland Ship Shore Ship Buffer (SSSB) system.
- 2.4 This Contract encompasses procurement, design, manufacturing, delivery of equipment, installation, integration, testing, acceptance and ILS support as defined in the Statement of Work (SOW) of the Prospective Contract and Annexes.
- 2.5 The Contractor shall provide the supplies and services indicated in the Schedule of Supplies and Services (SSS) and further described in the SOW and Annexes, and perform the work described in the SOW and Annexes for the implementation of the above stated project.

ARTICLE 3. PARTICIPATING COUNTRIES

- 3.1 This Article supplements Clause 9 of the Contract General Provisions.
- 3.2 The following NATO member nations have agreed to fund this acquisition effort: (in alphabetical order): BELGIUM, BULGARIA, CANADA, CZECH REPUBLIC, DENMARK, ESTONIA, FRANCE, GERMANY, GREECE, HUNGARY, ICELAND, ITALY, LATVIA, LITHUANIA, LUXEMBOURG, NETHERLANDS, NORWAY, POLAND, PORTUGAL, ROMANIA, SLOVENIA, SLOVAKIA, SPAIN, TURKEY, THE UNITED KINGDOM and THE UNITED STATES.

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- 3.3 The Contractor may issue sub-contracts to firms and purchase from qualified vendors in any participating NATO Nation. None of the work, including project design, labour and services, shall be performed other than by firms from and within participating countries, as per NATO policy.
- 3.4 The Contractor shall notify in writing to the Purchaser immediately upon being informed of any change in the nationality of its Subcontractor(s) which would prevent the Contractor from further complying with Clause 5.3 in the General Provisions. Upon receipt of this information from the Contractor, the Purchaser may, within three months from this notification, require the Contractor to find an alternate subcontractor, complying with the requirements set out in Clause 5.3 above.
- 3.5 Unless authorized by NATO Policy, no material or items of equipment down to and including identifiable sub-assemblies delivered under this Contract shall be manufactured or assembled by a firm other than from and within a participating country.
- 3.6 The Intellectual Property Rights to all designed documentation and system operating software shall reside in participating NATO member countries, and no license fee, or royalty charges shall be paid by the Contractor to firms, individuals or governments other than within the NATO member community.

ARTICLE 4. COMPREHENSION OF CONTRACT AND SPECIFICATIONS

- 4.1 The Contractor warrants that he has read, understood and agreed to each and all terms, clauses, articles, specifications and conditions specified in the Contract and that this signature of the Contract is an acceptance, without reservations, of the said Contract terms within their normal and common meaning.
- 4.2 The specifications set forth the performance requirements for the Contractor's proposed work as called for under this Contract. Accordingly, notwithstanding any conflict or inconsistency that hereafter may be found between achievement of the aforesaid performance requirements and adherence to the Contractor's proposed design for the work, the Contractor hereby warrants that the work to be delivered will meet or exceed the performance requirements of the said specifications.
- 4.3 The Contractor hereby acknowledges that he has no right to assert against the Purchaser, its officers, agents or employees, any claims or demands with respect to the aforesaid specifications as are in effect on the date of award of this Contract.

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- 4.3.1 Based upon impossibility of performance, defective, inaccurate, impracticable, insufficient or invalid specifications, implied warranties of suitability of such specifications; or,
- a. Otherwise derived from the aforesaid specifications, and hereby waives any claims or demands so based or derived as might otherwise arise.
 - b. Notwithstanding the "Changes" clause or any other clause or article of the Contract, the Contractor hereby agrees that no changes to the aforesaid specifications that may be necessary to permit achievement of the performance requirements specified herein for the Contractor's proposed work shall entitle the Contractor either to any increase in the firm fixed price as set forth in this Contract or to any extension of the delivery times for the work beyond the period of performance in the SSS.

ARTICLE 5. TECHNICAL DIRECTION

- 5.1 The Contract will be administered by the NCI Agency, on behalf of the HN Poland in accordance with the ARTICLE 13 of these Contract Special Provisions entitled "Contract Administration".
- 5.2 At each site of efforts, the Purchaser may assign Technical Representatives who will monitor work in progress and provide Contractor personnel with guidance (within the general scope of work) in performance of their duties and working schedule. The Technical Representatives do not have the authority to change the terms of the Contract or to increase the overall cost, duration or level of effort of the Contract. The Technical Representatives do have the authority to interpret the Statement of Work and provide direction to the Contractor personnel in performance of their duties.
- 5.3 In case the Contractor believes that any technical direction received from the Technical Representative constitutes a change to the terms, conditions and/or specifications of the Contract, he shall immediately inform in writing the NCI Agency Contracting Authority, who will either confirm or revoke such direction within two weeks after notification by the Contractor. If such direction is confirmed as a change, this change will be formalised by written amendment to the Contract pursuant to Clause 16, "Changes", of the NCI Agency Contract General Provisions.
- 5.4 Failure of the Contractor to notify the NCI Agency Contracting Authority of direction constituting change of the Contract, within the timelines specified in Clause 16.9 of the NCI Agency Contract General Provisions, will result in a waiver of any claims pursuant to such change.

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ARTICLE 6. DIFFERING SITE CONDITIONS

- 6.1 Having had the opportunity to verify the drawings and data provided, and having had the opportunity to visit the sites, the Contractor shall have no recourse to claims of additional work and cost in connection with activities performed under this Contract, except in such cases as additional effort and cost is occasioned by circumstances that could not have reasonably been foreseen (e.g., buried obstacles that are not shown on any drawings furnished).
- 6.2 If the Contractor encounters a situation that, consistent with this Article, would be the cause of unforeseen additional effort and cost, he shall report this immediately to the Purchaser, and inform in writing the NCI Agency Contracting Authority, who will then make a determination as to the resolution of the difficulty.
- 6.3 The Contractor shall note that instructions or requests to perform additional tasks other than what is set forth in the SOW shall not be honoured except as such instructions are issued by the Purchaser's Contracting Authority.

ARTICLE 7. CARE AND DILIGENCE FOR PROPERTY

- 7.1 The Contractor shall use reasonable care to avoid damaging buildings, infrastructure, equipment and vegetation (such as trees, shrubs and grass) on the work site. If the Contractor damages any such buildings, equipment, infrastructure or vegetation (such as trees, shrubs and grass) on the work site, he shall replace the damage as directed by the Purchaser or the HN Poland and at no expense to the Purchaser. If he fails or refuses to make such repair or replacement, the Contractor shall be liable for the cost thereof, which may be deducted from the Contract price. The Parties will conduct pre and post inspections before and after the Delivery of HW on site and installation activities
- 7.2 The Purchaser and the HN Poland will exercise due care and diligence for the Contractor's furnished equipment and materials on site. The Purchaser and the HN Poland will, however, not assume any liability except for gross negligence and wilful misconduct on the part of the Purchaser's and/ or HN Poland personnel or agents.
- 7.3 The Contractor shall, at all times, keep the site area, including storage areas used by the Contractor, free from accumulations of waste, material or rubbish, remove any rubbish from the premises. It shall also also remove tools, scaffolding equipment and materials not the property of the Purchaser and / or HN Poland when not in use and leave the site area and its surroundings in a clean and neat condition.

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ARTICLE 8. INSPECTION OF SERVICES

- 8.1 Clause 21 "Inspection and Acceptance of Work" of the NCI Agency Contract General Provisions is supplemented as follows:
- 8.1.1 Repeated instances of work performed that fails to meet the standards and practices may result in termination of the Contract for Default.

ARTICLE 9. CONTRACTOR'S COTS RESPONSIBILITY

- 9.1 The Contractor shall monitor changes and/or upgrades to Commercial Off The Shelf (COTS) software to be delivered or used under subject Contract.
- 9.2 The Contractor shall report and notify the Purchaser of any proposed changes in the COTS software to be delivered or utilised. Such notification shall provide an assessment of the changes and the impact to any other items to be delivered under this Contract.
- 9.3 When software version numbers are specified in the Schedule of Supplies and Services, the Purchaser must approve in writing any change in the versions that will be delivered or utilised under subject Contract.
- 9.4 When hardware references (part number or brand reference, model) are specified in the Statement of Work (SOW) or Contractor's proposal, the Purchaser must approve in writing any change that will be delivered or utilised under subject Contract.
- 9.5 As changes in technology occur, the Contractor will propose substitution of new products/items for inclusion in this Contract. The proposed items shall provide at least equivalent performance with lower prices and/or life-cycle support costs, or enhanced performance without a price or cost increase.
- 9.6 The Contractor will provide price and performance data to support an improvement in performance and/or a reduction in price and/or life-cycle support costs. If necessary for evaluation by the Purchaser, the Contractor shall provide a demonstration of the proposed items. Should the Purchaser decide that the proposed item(s) shall be included in the Contract, an equitable price adjustment will be negotiated and the proposed item(s) shall be added to the Contract by bilateral modification under the authority of this article.
- 9.7 The Contractor will provide all the Software Licences required for system operation until the expiry of the warranty period.
- 9.8 The Contractor will provide to the Purchaser all passwords needed to operate and administrate the systems during SAT.

ARTICLE 10. PRICING OF CHANGES, AMENDMENTS AND CLAIMS

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10.1 Clause 19 “Pricing of Changes, Amendments and Claims” of the NCI Agency’s Contract General Provisions is supplemented as follows:

10.1.1 Except as otherwise provided for in this Contract, Contractor’s price quotations for the changes, modifications, etc., shall be provided at no cost to the Purchaser and shall have a minimum validity period of six (6) months from submission.

10.1.2 The pricing information contained in the cost breakdown sheets submitted with the Bidding sheets, as part of the Contractor’s proposal, and especially the forward labour rates provided, will constitute the basis for any future negotiations related to possible future amendments to this Contract. The Contractor shall be bound by the listed rates for the duration of the Contract.

ARTICLE 11. INVOICES

11.1 The eleven (11) Payment milestones are listed under Contract Part I Section 2 ‘Schedule of Major Performance Milestones and related Payment Milestones’.

11.2 The Purchaser shall not bear any cost relating to financial guarantees that the Contractor is required to provide under this Contract. The Purchaser is released from any interest resulting from any reason whatsoever.

11.3 If the Contractor foresees that Delivery of the SSSB-POL Systems may be accelerated, the Contractor shall notify the Purchaser, and the Purchaser may concur with such early delivery/ies. In any case the Contractor shall meet its site readiness and inspection and acceptance obligations. The Purchaser reserves the right to refuse such requests for early delivery and insist the Contract delivery schedule be maintained in an unmodified form.

ARTICLE 12. SECURITY AND CONTRACT SECURITY CLASSIFICATION

12.1 Clause 11 “Security” of the NCI Agency Contract General Provisions is supplemented as follows:

12.1.1 As Annex B to the SOW is NATO RESTRICTED, the overall security classification of this Contract in its entirety is NATO RESTRICTED as long as Annex B is included. When separated from Annex B, the remaining is NATO UNCLASSIFIED.

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- 12.1.2 The Contractor shall furnish the following services in accordance with the agreed terms, conditions and specifications set forth herein after.
- 12.1.3 All Contractor and Sub-Contractor(s) personnel working at NATO and HN Poland facilities shall have a security clearance of "NATO SECRET" confirmed to the Purchaser by the relevant National Security Authority. Failure to obtain or maintain the required level of security for Contractor and Sub-Contractor personnel for the period of performance of this Contract shall not be grounds for any delay in the scheduled performance of this Contract and may be grounds for termination under the Clause of this Contract entitled "Termination for Default".
- 12.1.4 The Team Member(s) shall possess a valid passport or ID card and shall maintain its validity for the duration of the Contract.
- 12.1.5 The Team Member(s) shall sign the Annex to Contract Special Provisions (Non Disclosure Declaration) before beginning any work within this Contract.
- 12.1.6 All NATO CLASSIFIED material entrusted to the Contractor shall be handled and safeguarded in accordance with the applicable security regulations. The Contractor shall be required to possess a Facility clearance of "NATO SECRET" for those sites in which he intends to handle and store NATO classified material in the conduct of work under this Contract
- 12.1.7 At the end of the Contract, during Final System Acceptance, the Contractor shall deliver all the documentation and information collected and generated in support of this Contract to the Purchaser. This includes a certificate that no copies are retained at the Contractor's facilities. Additionally, any equipment that had been connected to a classified network during this Contract shall be returned / handed over to the Purchaser (i.e. laptops, USB keys, hard disks, etc).
- 12.1.8 Contractor and Sub-Contractor personnel working on this Contract, visiting or working at NATO premises or HN Poland installations and sites in connection with this Contract shall possess a NATO SECRET security clearance confirmed to the Purchaser by the relevant National Security Authority. This requirement applies to all sub-Contracts issued by the Contractor for effort under this prime Contract.

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- 12.1.9 It is the responsibility of the Contractor to ensure that his personnel obtain the required security clearances and transmit this information to the sites to be visited in adequate time that the site may perform the appropriate administration. Contractors are advised that the personnel security process may be lengthy. The Purchaser bears no responsibility for the failure of the Contractor to secure the required clearances for its personnel within the necessary time. Failure to obtain or maintain the required level of security for Contractor personnel for the period of performance of this Contract shall not be grounds for any delay in the scheduled performance of this Contract and may be grounds for termination under Clause 39 of this Contract entitled "Termination for Default".
- 12.1.10 Any delay in the project resulting from the Purchaser denying access to NATO and/ or HN Poland sites to Contractor personnel for security reasons shall not be the basis for excusable delay under the terms of the Contract. The Contractor bears full responsibility and liability under the Contract for delays arising from the failure of the Contractor to adhere to the security requirements.
- 12.1.11 In the performance of all works under this Contract it shall be the Contractor's responsibility to ascertain and comply with all applicable NATO and National security regulations as implemented by the HN Poland and by the local Headquarters.
- 12.1.12 The Contractor shall note that there are restrictions regarding the carriage and use of electronic device (e.g. laptops, cell/mobile telephones) in Purchaser and HN Poland secured locations. The Contractor shall be responsible for satisfying and obtaining from the appropriate site authorities the necessary clearance to bring any such equipment into the facility.

ARTICLE 13. CONTRACT ADMINISTRATION

- 13.1 Formal letters and communications shall be personally delivered, sent by mail, registered mail, courier or other delivery services, to the official points of contact cited in this Contract. Telefax may be used to provide an advance copy of a formal letter or notice that shall subsequently be delivered through the formal communications means.
- 13.2 Informal notices and informal communications may be exchanged by any other communications means including telephone and e-mail, where the classification of the information permits such mean of communication. These communications must be confirmed through the formal means set forth above to be considered to be formal communication.

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- 13.3 Any discussion, negotiation with Contractor representatives shall be recorded in Minutes which shall be signed by authorised representatives of both Contractor and Purchaser. All minutes are considered to be a summary record of discussions and specific actions to be undertaken by the parties as a result of meetings. If the contents of these minutes fall within the scope of the Contract or specifications, then no amendment action will be initiated by the Purchaser. If, however, it is considered by either party that certain discussions and decisions have taken place at meetings that fall outside the scope of these documents, then this fact shall be recorded at the time and a formal contractual amendment will be necessary prior to any action proceeding, as per Clause 3 of the NCI Agency Contract General Provisions.
- 13.4 All notices and communications will be effective upon receipt.
- 13.5 Official points of contact are:
- 13.6 CONTRACTOR:
(To be completed at Contract Award)

- 13.7 PURCHASER:

CO: Ms Viktorija Navikaitė

NATO Communications and Information Agency
Boulevard Leopold III, 1110 Brussels, Belgium
Tel: +32 (2) 707 8210
Fax: +32 (2) 707 8770
E-mail: viktorija.navikaite@ncia.nato.int

- 13.8 Copies of all correspondence shall be sent at the same time to the Project Manager at his address below. The Project Manager will be the main point of contact for technical issues related to day-to-day work, which do not imply any contractual impact.

PM: Mr Heico Salfeld

NATO Communications and Information Agency
Oude Waalsdorperweg 61, 2597 AK The Hague, Netherlands
Tel: +31 (70) 374 3515

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Fax: +31 (70) 374 3049
E-mail: Heico.Salfeld@ncia.nato.int

ARTICLE 14. KEY PERSONNEL/STAKEHOLDERS

- 14.1 The individuals listed below are considered to be key to the performance of this Contract and may not be replaced by the Contractor with substitute personnel without the prior written approval of the Purchaser. The Key Personnel with valid NATO SECRET Clearances are as follows:

<i>Name</i>	<i>Function</i>
TBD	Project Manager
TBD	Deputy Project Manager
TBD	Technical Lead
TBD	Test Director
TBD	Quality Assurance Manager
TBD	Configuration Management Manager
TBD	Logistic Support (ILS/Training/Doc) Manager
TBD	Others

- 14.2 In order to meet the Contract schedule it is expected that key personnel will remain fully dedicated to the project during the Contract period. However, if the Contractor deems that some of the key personnel may not be fully required for the complete Contract period; such personnel may be allocated to other work at the risk of the Contractor. It shall be noted that the Purchaser will not consider any such allocations/unavailability as reasons for readjustment of Contract timelines/scope.

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- 14.3 In cases where the Contractor has no control over the individual's non-availability (e.g., resignation, sickness, incapacity, etc.), the Contractor shall notify the Purchaser of a change of key personnel within one month of the date of knowledge of the prospective vacancy and offer a substitute with equivalent qualifications with no additional costs for the Purchaser. The Purchaser has the right to refuse any proposed substitution as not meeting the qualifications and request the Contractor to offer another qualified individual in lieu thereof. The Purchaser will confirm any consent given to a substitution in writing through an Amendment to the Contract stating the effective date of change of personnel and only such written consent shall be deemed as valid evidence of Purchaser consent. Each of the replacement personnel will also be required to sign the Annex to Special Terms and Conditions "NON DISCLOSURE DECLARATION" before beginning of work and above-mentioned amendment signature. The new key personnel shall be of the same level of skills and experience that the one that is replaced. The Contractor shall ensure that the replacement does not impact the performance of any on-going work.
- 14.4 However, the Purchaser may consider any application raised by the Contractor for changes in the key members identified in paragraph 13 above provided that all the following conditions are met:
- 14.4.1 The Contractor shall give a minimum of 1 month notice to the Purchaser,
 - 14.4.2 The Contractor shall guarantee an overlap/handover period of minimum two (2) weeks at no additional cost to the Purchaser,
 - 14.4.3 The replacement personnel meets the conditions related to the skill and experience requirements of the key members identified in 13 above,
 - 14.4.4 The corporate knowledge of the team is preserved after the replacement, that is, proposals for multiple proximate substitutions will not be entertained.
- 14.5 The Purchaser may, for just cause, require the Contractor to remove his employee. Notice for removal will be given to the Contractor by the Purchaser in writing and will state the cause justifying the removal. The notice will either demand substitution for the individual involved and/or contain a notice of default and the remedies to be sought by the Purchaser. The Contractor shall replace the individual(s) with other personnel having the required competences and experience, within the period of a month, at no additional costs.
- 14.6 Delays by the Contractor in replacements exceeding two weeks and causing a lower level of Contractor effort and/or performance will be penalised in accordance with Article 25 below, "Liquidated Damages."

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- 14.7 All key personnel provided under this Contract must meet the minimum qualifications cited in the attached SOW.
- 14.8 If the Contractor is unable to replace the lost personnel within a reasonable time, the Purchaser may conclude that the loss of the Key Personnel endangers progress under the Contract to the extent that the Purchaser may resort to Clause 38 of the NCI Agency Contract General Provisions entitled "Termination for Default", for redress of the situation.

ARTICLE 15. SUB-CONTRACTS

- 15.1 Clause 10 'Sub-Contracts' of the NCI Agency Contract General Provisions is supplemented as follows.
- 15.2 The Contractor shall place and be responsible for the administration and performance of all Sub-contracts including terms and conditions which he deems necessary to meet the requirements of this Contract in full.
- 15.3 Prior to the Sub-contractors being given access to any classified information, the Contractor shall ensure that any Sub-contractor that has a need to access classified information for the performance of any part of this Contract has been granted the appropriate facility and personnel security clearances by the Sub-contractor's national authorities and that such clearances are still in effect at the time the information is disclosed and remains in effect throughout the performance of the work to be carried out under the Sub-contract concerned
- 15.4 The Contractor shall provide copies of all Sub Contracts regardless of value to the Purchaser at the time of the Contract Kick-off Award Meeting. The Contractor shall be obliged to provide copies of any subsequent Subcontracts within 10 calander days of the subcontract award.
- 15.5 In addition the Contractor shall seek the approval in writing of the Purchaser prior to the placing of any Sub-contract if
- 15.4.1 the Sub-contract was not part of the Contractor's original proposal;
and
- 15.4.2 the value of the Sub-contract is known or estimated to exceed 15 per cent of the total Contract value; or
- 15.4.3 the Sub-contract is one of a number of Sub-contracts with a single Sub-contractor for the same or related Work under this Contract that in the aggregate are known or expected to exceed 15 per cent of the total Contract value.

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- 15.4.4 In addition the Contractor shall submit a copy of any such proposed Sub-contract including prices when seeking approval to the Contracting Authority but such approval by the Contracting Authority shall in no way relieve the Contractor of his responsibilities to fully achieve the contractual and technical requirements of this Contract.
- 15.4.5 The Contractor shall inform the Purchaser of any change in Sub-contractors for Sub-contracts.

The Contractor shall, as far as practicable, select Sub-contractors on a competitive basis consistent with the objectives and requirements of the Contract.

ARTICLE 16. ACCEPTANCE OF DESIGN DOCUMENTATION

- 16.1 Clause 22 "Inspection and Acceptance of Documentation" of the NCI Agency General Provisions is supplemented by the following:
- 16.2 The acceptance by the Purchaser of the Contractor's design documentation required by this Contract signifies that the documents delivered appear logical and consistent. The acceptance does not constitute an endorsement or approval of the design by the Purchaser and does not relieve the Contractor of the obligation to meet the performance requirements of this Contract in the event that the design eventually proves to be non-compliant in factory or Site testing.

ARTICLE 17. APPLICABILITY OF STANDARDS

- 17.1 The Contract invokes a variety of Standard NATO Agreements (STANAGS) and Military and former Standards (MIL-STDs). While these are contractually binding reference documents, there are national and international standards that are considered to be equivalent and are cited as such within these documents. Where there exists a national or international standard that is not specifically referenced in the STANAGs or MIL-STDs as being equivalent, the Contractor may propose to utilise such a standard if he can demonstrate to the satisfaction of the Purchaser that such a standard is equivalent to the STANAG or MIL-STD in question. The Purchaser, however, reserves the right to deny such a request and demand performance in accordance with the standard cited in the Contract.

ARTICLE 18. ACCEPTANCE OF THE SSSB-POL SYSTEM

- 18.1 The system will be finally accepted (FSA completion) after the successful completion of the following phases:
 - 18.1.1. Provision and installation of all supplies and services in accordance with SSS (excluding options).
 - 18.1.2. Satisfactory completion of applicable factory (hardware and software) FAT, RSAT and System Acceptance Tests (SAT).

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- 18.1.3. Successful completion of any retrofit activity and/or regression testing resulting from previous testing activities.
- 18.1.4. Successful provision and delivery of consumables, spare parts and documentation.
- 18.1.5. Successful completion of the training and all Contract requirements, except warranty.
- 18.1.6. Successful completion of Provisional System Acceptance (PSA).
- 18.1.7. Successful completion of Final System Acceptance (FSA).

**ARTICLE 19. PURCHASER FURNISHED PROPERTY/EQUIPMENT
(PFP/PFE)**

- 19.1 Clause 13 "Purchaser Furnished Property" of the NCI Agency General Provisions is supplemented by the following:
 - 18.1.1 The term "Purchaser Furnished Property/Equipment" as used in this clause refers to items of equipment, material or property furnished by the Purchaser to the Contractor that shall be subject to overhaul, repair, modification, test, embodiment or other work as specified in the Contract to be performed by the Contractor, as listed in SOW paragraph 3.4.2.
 - 18.1.2 The Contractor will have no right for any claims in reference to a delay in the Purchaser's confirmation of site readiness and PFE availability, as long as the delay does not exceed ninety (90) calendar days from the declared availability dates.

ARTICLE 20. SSSB SYSTEM WARRANTY (Exclusive of Software)

- 20.1 Clause 27 "Warranty of Work" of the NCI Agency General Provisions is supplemented by the following:
- 20.2 The Contractor shall provide a SSSB System Warranty delivered under this Contract, for a period of twelve (12) months following the granting by the Purchaser of the FSA. Until FSA, SSSB System Warranty to be provided under this Contract shall be under the Contractor's responsibility.
- 20.3 During the SSSB System Warranty period, the Contractor shall perform in-depth analysis of failures of equipment and components and parts thereof, and functional performance failures to due sub-system or equipment group malfunctions. Such failures shall not be limited to hardware, but shall include failures due to application or embedded software.

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- 20.4 Critical faults during the SSSB System Warranty period that takes one or more elements of the SSSB Systems sites offline (except for normally scheduled downtime due to maintenance procedures) will have the result of extending the SSSB Warranty for all sites by the period for which the single SSSB site is offline. This period is determined by the entry of the critical failure in the SSSB System Manager's logbook until the time the SSSB System Manager makes the entry into the logbook that the SSSB System has been restored to full operation.
- 20.5 Such extension of the SSSB System Warranty period will not apply in cases where the Contractor can convincingly demonstrate that the critical failure was due to HN Poland negligence or a wilful act on the part of HN Poland personnel.
- 20.6 Corrective action required by the Contractor under the SSSB System Warranty also applies to errors or omissions in any delivered documentation which could not have reasonably been discovered prior to the Final System Acceptance under this Contract. Errors or omissions in delivered documentation may not be considered as a basis for extension of the SSSB System Warranty, as set forth in paragraph 20.4 above, except where evidence can demonstrate that such an error or omission was the cause of a critical system failure that caused a SSSB site to be offline.

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ARTICLE 21. SUPPLEMENTAL AGREEMENT(S), DOCUMENTS AND PERMISSIONS

- 21.1 The Contractor has submitted all relevant draft supplemental agreement(s), documents and permissions prior to Contract award, the execution of which by the Purchaser is/are required by national law or regulation. If any supplemental agreements, documents and permissions are introduced after Contract award, and it is determined that the Contractor failed to disclose the requirement for the execution of such agreement from the Purchaser prior to Contract signature, the Purchaser may terminate this Contract for Default, in accordance with Clause 39 "Termination for Default" of the NCI Agency Contract General Provisions.
- 21.2 Supplemental agreement(s), documents and permissions, the execution of which by the Purchaser is/are required by national law or regulation and that have been identified by the Contractor prior to the signature of this Contract, but have not yet been finalised and issued by the appropriate governmental authority, are subject to review by the Purchaser. If such supplemental agreement(s), documents and permissions are contrary to cardinal conditions of the signed Contract between the Parties, and the Parties and the appropriate governmental authority cannot reach a mutual satisfactory resolution of the contradictions, the Purchaser reserves the right to terminate this Contract and the Parties agree that in such case the Parties mutually release each other from claim for damages and costs of any kind.

ARTICLE 22. RESPONSIBILITY OF THE CONTRACTOR TO INFORM EMPLOYEES OF WORK ENVIRONMENT

- 22.1 The Contractor shall inform his employees under this Contract of the terms of the Contract and the conditions of the working environment.
- 22.2 The Purchaser shall not be responsible for securing work permits, lodging, leases nor tax declarations, driving permits, etc., with national or local authorities. Personnel employed under this Contract are not eligible for any diplomatic privileges or NATO employee benefits.

ARTICLE 23. PAYMENTS

- 23.1 Clause 25 "Invoices and Payments" of the NCI Agency's Contract General Provisions is supplemented as follows:

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- 23.2 The Contractor shall submit to the Contracting Authority an invoice prepared in accordance with Clause 25 of the General Provisions of this Contract entitled "Invoices and Payment" upon full successful achievement of the Payment Milestones listed in paragraph 10 above. The invoice shall be calculated on the basis of the total price of the Basic Contract excluding the exercise of any options. The Contractor shall submit the respective invoice following the written confirmation of the Purchaser that the respective milestone has been achieved.
- 23.3 Payment shall be made in the currency specified following purchaser acceptance of the supplies and services to be furnished. The price to be charged is the total firm fixed price stated in the Contract SSS. The total firm fixed price is an overall price including all expenses. No payment shall be made with respect to undelivered supplies, works not performed and/or services not rendered.
- 23.4 Invoice(s) shall be prepared for each Payment Milestone achieved in accordance with the Milestones Payment Schedule as indicated paragraph 10 above. Therefore an invoice shall correspond to the successful completion of a Payment Milestone, and shall contain the required documented evidence of the successful completion of each Item of that Payment Milestone, including all required testing and receipt of the Purchaser's written acceptance of the associated CLIN(s).
- 23.5 Payment will be made by the Purchaser to the Contractor's financial institution as indicated on the invoice within sixty (60) calendar days of receipt of a properly prepared invoice. Invoices shall be submitted in quadruplicate.
- 23.6 Any invoices that do not meet the above criteria will be rejected by the Purchaser.

ARTICLE 24. OPTIONS

- 24.1 The Purchaser is not obliged to exercise any option. The Contractor will be notified by the Purchaser or HN Poland (after FSA) in writing as to what option will be exercised and in what combination.
- 24.2 In case the CLS option of the Contract is accepted by the Host Nation, the performance guarantee for the Contract that is normally valid until the end of the warranty period will be extended to the end of the CLS period unless a new performance guarantee for the CLS Contract is provided by the Contractor.
- 24.3 The Purchaser shall have the right to unilaterally exercise optional sub-items under CLIN 16, for the provision of CLS services after the 12- months Warranty period, at the prices stated in the Schedule of Supplies and Services of CO-14604-SSSB-POL, and to be notified at any time from Contract award to 30 calendar days before the end of the Warranty.

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- 24.4 The Contractor understands that there is no obligation for the Purchaser to exercise any of the aforementioned optional sub-items and that the Purchaser bears no liability should it decide not to exercise the options (totally or partially). Further, the Purchaser reserves the right to order another Contractor (or the same), to perform the tasks described in the optional line items of the current Contract through a new Contract with other conditions.
- 24.5 The CLS contract may be renewed every three (3) years, and prices are to remain valid for that period. At the expiration of each CLS period and with a six (6) months' notice, the Contractor is authorised to request for price Re-Determination. Price Determinations are to be limited to the amounts reflected for each period in a governmentally approved inflationary index of the Contractors country.

ARTICLE 25. QUALITY ASSURANCE (QA) AND QUALITY CONTROL (QC)

- 25.1 The Contractor shall be responsible for the control of quality of all deliverables and associated Contractual products throughout the life-cycle of the Contract.
- 25.2 The QA Programme shall ensure that procedures are developed, implemented and maintained to adequately control the development, design, production, testing and configuration of all deliverables. The QA Programme shall be described in the QA Plan. The programme is subject to disapproval by the Purchaser, or its delegated representative(s), whenever it does not meet the QA requirements. It shall be subject to review for adequacy, compliance and effectiveness. The overall QA Programme shall adhere to the provisions of AQAP-2110 and be consistent with the project philosophy of integrating Commercial-Off-The-Shelf (COTS) hardware and software as applicable.
- 25.3 When satisfied that the products and/or services provided by the Contractor are in conformance with the terms of this Contract, a Certificate of Conformity (CoC) per Annex B to AQAP-2070 will be countersigned and stamped by the cognisant NATO Quality Assurance Representative(s) (NQAR(s)). The preparation of the CoC(s) shall be the responsibility of the Contractor.
- 25.4 CoC(s) shall be required for all quantities contained in each Contract line item. Two (2) copies of the CoC(s) shall be submitted to the Purchaser.

ARTICLE 26. LIQUIDATED DAMAGES

- 26.1 Clause 38 "Liquidated Damages" of the NCI Agency's Contract General Provisions is modified as follows:

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- 26.2 If the Contractor fails to deliver and obtain acceptance of the Supplies or to acceptably perform the services at the time specified in the Schedule of Supplies and Services (SSS) of this Contract or any extension thereto, the actual damage to the Purchaser for the delay will be difficult or impossible to determine. Therefore, in lieu of actual damages, the Contractor shall pay to the Purchaser fixed and agreed liquidated damages of 0.1% per calendar day of the associated payment set forth in Article ARTICLE 11 above.
- 26.3 Liquidated damages shall be payable to the Purchaser from the first calendar day of delinquency and shall accrue at the rate specified in paragraph 26.2 above to 20% of the value of each milestone and a maximum aggregated sum of 15% of the value of the Total Contract. These liquidated damages shall accrue automatically and without any further notice being required.
- 26.4 The rights and remedies of the Purchaser under this clause are in addition to any other rights and remedies provided by law or under the Contract.

ARTICLE 27. PURCHASER RIGHTS IN TECHNICAL DATA AND COMPUTER SOFTWARE

- 27.1 Clause 30 "Intellectual Property" of the NCI Agency's Contract General Provisions is supplemented as follows:
- 27.2 Subject to the rights of third parties and with due regard to national security regulations, all rights in the results of work undertaken by or on behalf of the Purchaser for the purposes of this Contract, including any technical data specifications, report, drawings, computer software data, computer programmes, computer databases, computer software, documentation including software documentation, design data, specifications, instructions, test procedures, training material produced or acquired in the course of such work and, in particular, all rights, including copyright therein, shall vest in and be the sole and exclusive property of the Purchaser.

ARTICLE 28. CONTRACTOR AND PURCHASER SYSTEM INSTALLATION RESPONSIBILITIES

- 28.1 The Contractor shall be responsible for the installation of the equipment delivered under this Contract that comprises the SSSB-POL System with its supporting systems such as (augmented) UPS, and the CW portion implemented by the Contractor. The Contractor is responsible for the integration of the equipment into a functional SSSB System on site.
- 28.2 The Contractor shall be responsible for connecting, mounting, installing, integrating and cabling of the delivered equipment within the sites and at the interface with the National Digital Network (NDN) and at the interface with Power Supply System. The Contractor shall be responsible for connecting all the SSSB equipment with the requisite utility outlets.

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ARTICLE 29. LIAISON WITH PURCHASER DURING SITE PREPARATION ACTIVITIES

- 29.1 The Contractor acknowledges that it has taken the steps reasonably necessary to ascertain the nature and location of the installation work, and that it has investigated and satisfied itself as to the general and local conditions that can affect the work or its cost, including uncertainties of weather, or similar physical conditions at the site and the character of equipment and facilities needed preliminary to and during work performance.
- 29.2 It is the responsibility of the Contractor to provide its installation requirements to the Purchaser in order that these requirements are considered into the site preparation activities of the Purchaser and or HN Poland. Failure to provide such information in complete and timely manner may lead to site preparation delays for which the Purchaser may hold the Contractor liable.
- 29.3 It is the responsibility of the Contractor to insure that its installation requirements have been incorporated into the final architectural and engineering drawings of each site or to document to the Purchaser where such drawings and plans are deficient.

ARTICLE 30. PROTECTION OF WATER, LAND, EXISTING VEGETATION, STRUCTURES, EQUIPMENT, UTILITIES, AND IMPROVEMENTS

- 30.1 The Contractor shall preserve and protect all structures, equipment, and vegetation (such as trees, shrubs, and grass) on or adjacent to the work site that are not to be removed and that do not unreasonably interfere with the work required under this Contract. The Contractor shall only remove trees when specifically authorized to do so, and shall avoid damaging vegetation that will remain in place. If any limbs or branches of trees are broken during Contract performance, or by the careless operation of equipment, or by workmen, the Contractor shall trim those limbs or branches with a clean cut and paint the cut with a tree-pruning compound as directed by the Contracting Authority.
- 30.2 The Contractor shall protect from damage all existing improvements and utilities
- 31.2.1 at or near the work site, and
- 31.2.2 on adjacent property of a third party, the locations of which are made known to or shall be known by the Contractor.

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- 30.3 The Contractor shall repair any damage to those facilities, including those that are the property of a third party, resulting from failure to comply with the requirements of this Contract or failure to exercise reasonable care in performing the work. If the Contractor fails or refuses to repair the damage promptly, the Contracting Authority may have the necessary work performed and charge the cost to the Contractor.

ARTICLE 31. OPERATIONS AND STORAGE AREAS

- 31.1 The Contractor shall confine all operations (including storage of materials) on HN Poland premises to areas authorized or approved by the Contracting Authority. The Contractor shall hold and save the Purchaser, its officers and agents, free and harmless from liability of any nature occasioned by the Contractor's performance.
- 31.2 Temporary buildings (e.g., storage sheds, shops, offices) and utilities may be erected by the Contractor only with the approval of the Contracting Authority and shall be built with labour and materials furnished by the Contractor without expense to the Purchaser. The temporary buildings and utilities shall remain the property of the Contractor and shall be removed by the Contractor at its expense upon completion of the work. With the written consent of the Contracting Authority, the buildings and utilities may be abandoned and need not be removed.
- 31.3 The Contractor shall, under regulations prescribed by the Contracting Authority, use only established roadways. When materials are transported in prosecuting the work, vehicles shall not be loaded beyond the loading capacity recommended by the manufacturer of the vehicle or prescribed by any national or local law or regulation. When it is necessary to cross curbs or sidewalks, the Contractor shall protect them from damage. The Contractor shall repair or pay for the repair of any damaged curbs, sidewalks, or roads.

ARTICLE 32. SITE CLEAN UP

- 32.1 The Contractor shall at all times keep the work area, including storage areas, free from accumulations of waste materials. Before completing the work, the Contractor shall remove from the work and premises any rubbish, tools, scaffolding, equipment, and materials that are not the property of the Purchaser. Upon completing the work, the Contractor shall leave the work area in a clean, neat, and orderly condition satisfactory to the Purchaser.

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ARTICLE 33. AVAILABILITY AND USE OF UTILITY SERVICES

- 33.1 The Purchaser and the HN Poland will make all reasonably required amounts of utilities available to the Contractor from existing outlets and supplies. Unless otherwise provided in the Contract, the amount of each utility service consumed shall be charged to or paid for by the Contractor at prevailing rates charged to the Host Nation Governments or, where the utility is produced by the Host Nation, at reasonable rates determined by the Host Nation. The Contractor shall carefully conserve any utilities furnished without charge.
- 33.2 The Contractor, at its expense and in a workmanlike manner satisfactory to the Host Nation representatives, shall install and maintain all necessary temporary connections and distribution lines, and all meters required to measure the amount of each utility used for the purpose of determining charges. After Individual Site Acceptance of each site by the Purchaser, the Contractor shall remove all the temporary connections, distribution lines, meters, and associated paraphernalia.
- 33.3 The Contractor shall not be billed for utility usage after FSA.

ARTICLE 34. PLACE AND TERMS OF DELIVERY

- 34.1 This Article replaces Clause 20 of the Contract General Provisions.
- 34.2 All deliverables under this Contract shall be delivered DDP ("Delivered Duty Paid") as defined by the INCOTERMS published by the International Chamber of Commerce (Publication No. 560) to the places and at such times as stipulated in the Schedule of Supplies and Services. The Contractor shall note that the Purchaser is exempt from customs duties and Value Added Tax as per Clause 26 – "Taxes and Duties" of the Contract General Conditions.
- 34.3 Partial deliveries are acceptable as long as all related shipping costs are born by the Contractor and subject to advance notification and agreement from the Purchaser.
- 34.4 The Contractor shall, for the purpose of transportation, package, crate, or otherwise prepare the various supplies in accordance with the best commercial practises for the type of supplies involved, giving due consideration to shipping and other hazards associated with the transportation of consignments overseas.

N A T O R E S T R I C T E D

(N A T O U N C L A S S I F I E D W H E N S E P E R A T E D
F R O M P A R T I V S O W A N N E X B)

- 34.5 The item number of each System in the Schedule is not indicative of the order of installation of the NCI Systems at the sites. The Contractor shall be responsible for achieving PSA at the site of destination in accordance with the Schedule. The Purchaser may change the stated destination up to 30 days prior to scheduled delivery at no change in the Contract price and delivery schedule. If the Purchaser makes a change in destination in less than 30 days prior to scheduled delivery, the Contractor may consider this to be a change in accordance with the clause of this Contract entitled "Changes".
- 34.6 If the Contractor foresees that Delivery of the NCI System(s) may be accelerated, the Contractor may notify the Purchaser and the Purchaser may concur with such early delivery (deliveries) if it can meet its site readiness and inspection and acceptance obligations. The Purchaser reserves the right to refuse such requests for early delivery and insist the Contract delivery schedule be maintained in an unmodified form.
- 34.7 The Contractor shall start work on each site, only after notification by the Purchaser that the site is ready for start of work.
- 34.8 The Contractor will have no right for any claims in reference to a delay in the Purchaser's confirmation of start of work, as long as the delay does not exceed 90 days. This includes the delivery of all Purchaser Furnished Equipment (PFE).

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**ANNEX 1 TO CONTRACT SPECIAL PROVISIONS: NON DISCLOSURE
DECLARATION**

TO BE SIGNED BY THE CONTRACTOR'S TEAM MEMBER WORKING IN THE
NATO'S OR THE HOST NATION'S PREMISES UPON COMMENCEMENT OF THIS
CONTRACT.

I UNDERSTAND:

That I must preserve the security of all Informationⁱ that comes to my knowledge as a result of this Contract with the NCA Agency and that I undertake to comply with all relevant security regulations.

That I must not divulge to any unauthorized person, any Information gained by me as a result of this Contract with NATO, unless prior permission for such disclosure has been granted by the appropriate NATO authority.

That I must not, without the approval of the appropriate NATO authority, publish (in any document, article, book, CD, video, film, play, or other form) any Information that I have acquired in the course of my official duties for NATO.

That, at the end of Contract and after performance of all required tasks, I must surrender any official document or material made or acquired by me in the course of my official duties, save such as I have been duly authorised to retain.

That if I violate prescribed security practices either intentionally or accidentally, my work on NATO or Host Nation premises shall be immediately terminated.

That the provisions of the above declaration apply not only during the period of my Contract with the agency, but also after my work has ceased and that I am liable to prosecution if either by intent or negligence I allow Information to pass into unauthorized hands.

That by accepting the position of Support Contractor for NATO corresponding to the tasks and duties described in the present Contract, I will be considered as a Key personnel as specified in special provision Article 13.

That I commit to fulfil my obligations for the period of performance mentioned in the Schedule of Supplies and Services (including the optional periods) unless major events beyond my reasonable control happen.

ⁱ "Information" includes but is not limited to classified and commercial-in-confidence information.

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That shall I decide for personal interest to leave the position, I will do my best effort to fulfil my obligations until the company that is currently employing me has provided NATO with an acceptable suitable substitute in accordance with Special Provision – Article 12.

That I solemnly undertake to exercise in all loyalty, discretion and conscience the functions entrusted to me and to discharge these functions with the interests of NATO and the Host Nation only in view. I undertake not to seek or accept instructions in regard to the performance of my duties from any government, company or from any authority other than that of NCI Agency or the Host Nation.

That within the next two weeks I shall acquaint myself with NATO and Host Nation security regulations and security operating instructions.

Date

Full name (in block capitals)

Signature

NATO RESTRICTED (NATO
UNCLASSIFIED WHEN SEPERATED FROM
PART IV ANNEX B)

IFB-CO-14604-SSSB-POL



NATO Communications and Information Agency
Agence OTAN d'information et de communication

BOOK II

PART III - CONTRACT GENERAL PROVISIONS

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NATO RESTRICTED
(NATO UNCLASSIFIED WHEN SEPERATED
FROM PART IV SOW ANNEX B)

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F R O M P A R T I V S O W A N N E X B)

NATO UNCLASSIFIED

**NATO COMMUNICATIONS AND INFORMATION
AGENCY**



CONTRACT GENERAL PROVISIONS

V 1.0 dated 16 Oct 2014

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ANNEX 1 TO GENERAL PROVISIONS: PURCHASER'S PRICING PRINCIPLESA1-1

1. ORDER OF PRECEDENCE

In the event of any inconsistency in language, terms or conditions of the various parts of this Contract, precedence will be given in the following order:

- 1.1. The Signature Page;
- 1.2. The Contract Schedules, Part I;
- 1.3. The Contract Contract Special Provisions, Part II;
- 1.4. The Contract General Provisions, Part III;
- 1.5. The Statement of Work, Part IV of the Contract;
- 1.6. The Annexes to the Statement of Work.

2. DEFINITIONS OF TERMS AND ACRONYMS

- 2.1 **Assembly-** An item forming a portion of equipment that can be provisioned and replaced as an entity and which normally incorporates replaceable parts or groups of parts.
- 2.2 **Acceptance-** Acceptance is the act by which the Contracting Authority recognises in writing that the delivered Work meets the Contract requirements..
- 2.3 **Claims-** A written demand or written assertion by one of the Parties seeking, as a matter of right, the payment of money in a sum certain, the adjustment or interpretation of Contract terms, or other relief arising under or in relation to this Contract.
- 2.4 **Clause-** A provision of the Special or General Provisions of this Contract.
- 2.5 **Codification Authority-** The National Codification Bureau (NCB) or authorised agency of the country in which the Work is produced.
- 2.6 **Commercial Off-the-Shelf Items (COTS)-** The term “Commercially Off-the-Shelf Item (COTS)” means any item that:is a commercial item, customarily used by the general public, that has been sold, leased, or licensed to the general public or has been offered for sale, lease or license to the general public;
 - a) is sold in substantial quantities in the commercial marketplace; and
 - b) is offered to the Purchaser, under a contract or subcontract at any tier, without modification, in the same form in which it is sold in the commercial marketplace.
- 2.7 **Component-** A part or combination of parts, having a specific function, which can be installed or replaced only as an entity.

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- 2.8 **Contractor Background IPR-** Any IPR owned by the Contractor and/or any Sub-contractor or licensed by a third party to the Contractor which is not created in relation to or as the result of work undertaken for any purpose contemplated by the Contract and which is needed for the performance of the Contract or for the exploitation of Foreground IPR.
- 2.9 **Correction-** Elimination of a Defect.
- 2.10 **Contract-** The agreement concluded between the Purchaser and Contractor, duly signed by both contracting parties. The Contract includes the documents referred to in Clause 1 (Order of Preference).
- 2.11 **Contracting Authority-** The General Manager of the NCI Agency, the Director of Acquisition, the Chief of Contracts of the NCI Agency or the authorised representatives of the Chief of Contracts of the NCI Agency.
- 2.12 **Contractor-** The person or legal entity from a Participating Country which has signed this Contract and is a Party thereto.
- 2.13 **Day-** A calendar day
- 2.14 **Defect-** Any condition or characteristic in any Work furnished by the Contractor under the Contract that is not in compliance with the requirements of the Contract.
- 2.15 **Deliverable-** Any and all goods (including movable and immovable goods) to be delivered pursuant to the terms of this Contract including, without limitation, building, raw materials, components, intermediate Assemblies, Parts, end products, equipment, documentation, data, software.
- 2.16 **Design Defect-** Defect attributable to incompatibility, unsuitability or erroneous application of theory, drawings or formula.
- 2.17 **Effective Date of Contract (or "EDC")-** The date upon which this Contract is deemed to start. Unless otherwise specified, a Contract enters into force on the date of the last signature of the Contract by the Parties.
- 2.18 **Failed Component-** A part or combination of parts, having a specific function, which can be installed or replaced only as an entity which ceases to perform in a manner consistent with its intended use and specifications of the Contract.
- 2.19 **Foreground IPR -** Any IPR created by the Contractor or any subcontractor of the Contractor in the course of or as the result of work undertaken for any purpose contemplated by the Contract.
- 2.20 **IPR-** Any intellectual property rights of any qualification irrespective of their stage of development or finalisation, including but not limited to patents, trademarks (registered or not), designs and models (registered or not) and applications for the same, copyright (including on computer software), rights in databases, know-how, confidential information and rights in records (whether or not stored on computer) which includes technical and other data and documents.

- 2.21 **Manufacturing Defect-** Defect attributable to improper manufacturing processes, testing or quality control procedures.
- 2.22 **NATO-** The North Atlantic Treaty Organisation. For the purpose of this contract, the term NATO includes NATO bodies, the NATO military command structure, agencies and NATO nations.
- 2.23 **NCI AGENCY-** The NATO Communications and Information Agency. The NCI Agency is part of the NCIO. The General Manager of the Agency is authorised to enter into contracts on behalf of the NATO CI Organisation.
- 2.24 **NATO COMMUNICATIONS AND INFORMATION ORGANISATION (NCIO)-** The NATO Communications and Information Organisation. The NCI Organisation constitutes an integral part of the North Atlantic Treaty Organisation (NATO) The NCI Organisation is the legal personality from whence flows the authority of its agent, the NCI Agency, to enter into contracts.
- 2.25 **NATO Purposes-** Activities conducted by or on behalf of NATO to promote the common defence and common interests of NATO, such as, among others, NATO operations, NATO procurement, NATO training and NATO maintenance.
- 2.26 **Part-** An item of an assembly or sub-assembly, which is not normally further broken down.
- 2.27 **Participating Country-** A NATO member country that participates in financing the effort.
- 2.28 **Parties-** The Contracting Parties to this Contract, i.e., the Purchaser and the Contractor.
- 2.29 **Purchaser-** The NCI Organisation, as represented by the General Manager, NCI Agency. The Purchaser is the legal entity who awards and administers the Contract on behalf of NATO and stands as one of the Contracting Parties.
- 2.30 **Purchaser Background IPR-** Any IPR owned by the Purchaser as of the Effective Date of Contract and which has been developed by, assigned to or licensed to the Purchaser prior to the Effective Date of Contract.
- 2.31 **Purchaser Furnished Property-** Any item of equipment, material, document, technical data, information and Software or any other item of property furnished by the Purchaser to the Contractor required or useful for the performance of the Contract. The Purchaser Furnished Property, if any, shall be detailed in the Contract.
- 2.32 **Software (Computer Software)-** A computer program comprising a series of instructions, rules, routines regardless of the media in which it is recorded, that allows or cause a computer to perform a specific operation or a series of operations.
- 2.33 **Software Defect-** Any condition or characteristic of Software that does not conform with the requirements of the Contract.

The Contract General Provisions

- 2.34 **Sub-Assembly-** A portion of an Assembly consisting of two or more parts that can be provisioned and replaced as an entity. The definition purposely excludes Components and/or Parts.
- 2.35 **Sub-contract-** Any agreement made by the Contractor with any third party in order to fulfil any part of the obligations under this Contract. Sub-contracts may be in any legal binding form, e.g., contract, purchase order, etc.
- 2.36 **Sub-contractor-** Any person or legal entity directly or indirectly under Sub-contract to the Contractor in performance of this Contract.
- 2.37 **Third Party IPR-** Any IPR owned by a third party not being the Purchaser or the Contractor or its Subcontractor, which is needed for the performance of the Contract or for the exploitation of Foreground IPR. This includes, for example, third party software, including open source software.
- 2.38 **Work-** Any deliverable, project design, labour or any service or any other activity to be performed by the Contractor under the terms of this Contract.

3. AUTHORITY

- 3.1. All binding contractual instruments and changes, including amendments, additions or deletions, as well as interpretation of and instructions issued pursuant to this Contract shall be valid only when issued in writing by the Purchaser and signed by the Contracting Authority only.
- 3.2. No direction which may be received from any person employed by the Purchaser or a third party shall be considered as grounds for deviation from any of the terms, conditions, specifications or requirements of this Contract except as such direction may be contained in an authorised amendment to this Contract or instruction duly issued and executed by the Contracting Authority. Constructive change may not be invoked by the Contractor as a basis for Claims under this Contract.
- 3.3. The entire agreement between the Parties is contained in this Contract and is not affected by any oral understanding or representation, whether made previously to or subsequently to this Contract.
- 3.4. Personal notes, signed minutes of meetings, comments to delivered documentation and letters, e-mails and informal messages from project or other Purchaser staff which may indicate the intent and willingness to make changes to the Contract, do not implement the change to the Contract and shall not be used as a basis for claiming change to the Contract by the Contractor.

4. APPROVAL AND ACCEPTANCE OF CONTRACT TERMS

- 4.1. By his signature of the Contract, the Contractor certifies that he has read and unreservedly accepts and approves of all terms and conditions, specifications, plans, drawings and other documents which form part of and/or are relevant to the Contract. The Contractor further agrees that the terms of the Contract take precedence over any proposals or prior commitments made by the Contractor in order to secure the Contract. Contractor also hereby waives any and all rights to invoke any of the Contractor's general and special terms and conditions of sales and/or supply.

5. LANGUAGE

- 5.1. All written correspondence, reports, documentation and text of drawings delivered to the Purchaser by the Contractor shall be in the English language.

6. AUTHORISATION TO PERFORM/CONFORMANCE TO NATIONAL LAWS AND REGULATIONS

- 6.1. The Contractor warrants that he and his Sub-contractors are duly authorised to operate and do business in the country or countries in which this Contract is to be performed and that he and his Sub-contractors have obtained or will obtain all necessary licences and permits required in connection with the Contract. No claim for additional monies with respect to any costs or delay to obtain the authorisations to perform shall be made by the Contractor.
- 6.2. The Contractor acknowledges that he and his Sub-contractors are responsible during the performance of this Contract for ascertaining and complying with all applicable laws and regulations, including without limitation: labour standards, environmental laws, health and safety regulations and export controls laws and regulations in effect at the time of Contract signature or scheduled to go into effect during Contract performance. Failure to fully ascertain and comply with such laws, regulations or standards shall not be the basis for claims for change to the specifications, terms, conditions or monetary value of this Contract.

7. FIRM FIXED PRICE CONTRACT

- 7.1 This is a Firm Fixed Price Contract. The Firm Fixed Price of this Contract is as stated on the signature page of the Contract or any amendments thereto. The Purchaser assumes no liability for costs incurred by the Contractor in excess of the stated Firm Fixed Price except as may be authorised under certain provisions of this Contract.

8. PERFORMANCE GUARANTEE

- 8.1. As a guarantee of performance under the Contract, the Contractor shall deposit with the Purchaser within thirty (30) calendar days from the Effective Date of Contract a bank guarantee (the "Performance Guarantee") denominated in the currency of the Contract, to the value of ten per cent (10%) of the total Contract price.
- 8.2. The Performance Guarantee, the negotiability of which shall not elapse before the expiration of the warranty period, or such other period as may be specified in the Contract, shall be made payable to the Purchaser and shall be in the form of certified cheques or a Standby Letter of Credit subject to the agreement of the Purchaser. In the case of a Standby Letter of Credit, payment shall be made to the Purchaser without question and upon first demand by the Purchaser against a certificate from the Purchaser's Contracting Authority that the Contractor has not fulfilled its obligations under the Contract. The Contractor shall have no right to enjoin or delay such payment.
- 8.3. Certified Cheques issued to fulfil the requirements of the Performance Guarantee will be cashed by the Purchaser upon receipt and held in the Purchaser's account until the term of the Performance Guarantee has expired.
- 8.4. The standby letter of credit shall be subject to Belgian Law and shall be issued by (i) a Belgian bank, (ii) the Belgian subsidiary of a foreign bank licensed to provide financial services in Belgium; or (iii) an insurance company licensed to do business in Belgium and belonging to a Belgian banking institution provided the banking institution guarantees explicitly the demand for payment, unless otherwise specified by the Purchaser.
- 8.5. The Contractor shall request in writing relief from the Performance Guarantee upon expiration of the warranty period or such other period as may be specified in the Contract and such relief may be granted by the Purchaser.
- 8.6. The Contractor shall be responsible, as a result of duly authorised adjustments in the total contract price and/or period of performance by the Purchaser, for obtaining a commensurate extension and increase in the Performance Guarantee, the value of which shall not be less than ten per cent (10%) of the total contract price (including all amendments), and for depositing such guarantee with the Purchaser, within thirty (30) calendar days from the effective date of aforesaid duly authorised adjustment.
- 8.7. The failure of the Contractor to deposit and maintain such Performance Guarantee with the Purchaser within the specified time frame, or any extension thereto granted by the Purchaser's Contracting Authority, is a material breach of the Contract terms and conditions subject to the

The Contract General Provisions

provisions of the Contract regarding Termination for Default.

- 8.8. The rights and remedies provided to the Purchaser under the present Clause are in addition to any other rights and remedies provided by law or under this Contract. The certificate described in Clause 8.2 above shall not be regarded as a Termination for Default and this Clause is in addition to and separate from the Clause of the Contract detailing termination for default.
- 8.9. If the Contractor elects to post the Performance Guarantee by Standby Letter of Credit, the form of the document shall be substantially as follows:

PERFORMANCE GUARANTEE STANDBY LETTER OF CREDIT

Standby Letter of Credit Number: _____

Issue Date: _____

Initial Expiry Date: _____

Final Expiry Date: _____

Beneficiary: NCI Agency, Finance, Accounting & Operations
Boulevard Leopold III, B-1110, Brussels
Belgium

- 1. We hereby establish in your favour our irrevocable standby letter of credit number {number} by order and for the account of (NAME AND ADDRESS OF CONTRACTOR) in the amount of _____ We are advised this undertaking represents fulfilment by (NAME OF CONTRACTOR) of certain performance requirements under Contract No. _____ dated _____ between the NCI Agency ("NCIA and (NAME OF CONTRACTOR)).
- 2. We hereby engage with you that drafts drawn under and in compliance with the terms of this letter of credit will be duly honoured upon presentation of documents to us on or before the expiration date of this letter of credit.
- 3. Funds under this letter of credit are available to you without question or delay against presentation of a certificate signed by the NCI Agency Contracting Officer which states:

"(NAME OF CONTRACTOR) has not fulfilled its obligations under Contract No. _____ dated _____ between NCI Agency and (NAME OF CONTRACTOR) (herein called the "Contract"), and the NCI Agency, as beneficiary, hereby draws on the standby letter of credit number _____ in the amount denominated in the currency of the Contract, Amount up to the maximum available under the LOC, such funds to be transferred to the account of the Beneficiary

The Contract General Provisions

number _____(to be identified when certificate is presented).”

Such certificate shall be accompanied by the original of this letter of credit.

4. This Letter of Credit is effective the date hereof and shall expire at our office located at _____(Bank Address)_____ on _____. All demands for payment must be made prior to the expiry date.
5. It is a condition of this letter of credit that the expiry date will be automatically extended without amendment for a period of one (1) year from the current or any successive expiry date unless at least 90 (ninety) calendar days prior to the then current expiry date we notify you by registered mail and notify (NAME OF CONTRACTOR) that we elect not to extend this letter of credit for such additional period. However, under no circumstances will the expiry date extend beyond _____ (“Final Expiry Date”) without amendment.
6. We may terminate this letter of credit at any time upon 90 (ninety) calendar days notice furnished to both (NAME OF CONTRACTOR) and the NCI Agency by registered mail.
7. In the event we (the issuing bank) notify you that we elect not to extend the expiry date in accordance with paragraph 6 above, or, at any time, to terminate the letter of credit, funds under this credit will be available to you without question or delay against presentation of a certificate signed by the NCI Agency Contracting Officer which states:

“The NCI Agency has been notified by {issuing bank} of its election not to automatically extend the expiry date of letter of credit number {number} dated {date} pursuant to the automatic renewal clause (or to terminate the letter of credit). As of the date of this certificate, no suitable replacement letter of credit, or equivalent financial guarantee has been received by the NCI Agency from, or on behalf of (NAME OF CONTRACTOR). (NAME OF CONTRACTOR) has, therefore, not fulfilled its obligations under Contract No. _____ dated _____ between NCI Agency and (NAME OF CONTRACTOR), and the NCI Agency, as beneficiary, hereby draws on the standby letter of credit number _____ in the amount of (Amount up to the maximum available under the LOC), such funds to be transferred to the account of the Beneficiary number _____ (to be identified when certificate is presented).”

Such certificate shall be accompanied by the original of this letter of credit and a copy of the letter from the issuing bank that it elects not to automatically extend the standby letter of credit, or terminating the letter of credit.

8. The Beneficiary may not present the certificate described in paragraph 7 above

The Contract General Provisions

until 20 (twenty) calendar days prior to a) the date of expiration of the letter of credit should {issuing bank} elect not to automatically extend the expiration date of the letter of credit, b) the date of termination of the letter of credit if {issuing bank} notifies the Beneficiary that the letter of credit is to be terminated in accordance with paragraph 6 above.

9. Multiple partial drawings are allowed to the maximum value of the standby letter of credit.
10. This letter of credit sets forth in full the terms of our undertaking, and this undertaking shall not in any way be modified, amended, or amplified by reference to any document, instrument, or agreement referred to herein (except the International Standby Practices (ISP 98) hereinafter defined) or in which this letter of credit is referred to or to which this letter of credit relates, and any such reference shall not be deemed to incorporate herein by reference any document, instrument, or agreement.
11. This Letter of Credit is subject to The International Standby Practices-ISP98 (1998 Publication) International Chamber of Commerce Publication No.590.

9. PARTICIPATING COUNTRIES

- 9.1 Unless prior written authorisation of the Purchaser has been obtained, none of the Work, shall be performed other than by firms from and within NATO Participating Countries. Unless otherwise specified in the Contract Special Provisions, the Participating Countries are the twenty-eight (28) Member Nations of the North Atlantic Treaty Organisation.
- 9.2 Unless prior written authorisation of the Purchaser has been obtained, no material or items of equipment down to and including identifiable Sub-Assemblies shall be manufactured or assembled by a firm other than from and within a NATO Participating Country.
- 9.3 The Contractor shall not place any Sub-contracts outside the NATO Participating Countries without the prior written authorisation of the Purchaser.
- 9.4 Unless prior written authorisation of the Purchaser has been obtained, the intellectual property rights for all software and documentation incorporated by the Contractor and/or its Sub-contractors into the Work shall vest with persons or legal entities from and within NATO participating nations and no royalties or licence fees for such software and documentation shall be paid by the Contractor to any source that does not reside within a NATO participating nation.
- 9.5 Any modification in the nationality, ownership and/or change of control of the Contractor and/or its Sub-contractor(s) shall be immediately notified in writing to the Purchaser with all necessary details to allow the Purchaser to determine whether or not the Contractor and/or its Sub-contractors continue

The Contract General Provisions

to comply with the Clauses above. Non-compliance with the Clauses above, by the Contractor and/or its Subcontractor may constitute ground for termination of this Contract under Clause 39 (Termination for Default).

10. SUB-CONTRACTS

- 10.1 The Contractor shall place and be responsible for the administration and performance of all Sub-contracts including terms and conditions which he deems necessary to meet the requirements of this Contract in full.
- 10.2 Prior to the Sub-contractors being given access to any classified information, the Contractor shall ensure that any Sub-contractor that has a need to access classified information for the performance of any part of this Contract has been granted the appropriate facility and personnel security clearances by the Sub-contractor's national authorities and that such clearances are still in effect at the time the information is disclosed and remains in effect throughout the performance of the work to be carried out under the Sub-contract concerned.
- 10.3 The Contractor shall seek the approval in writing of the Purchaser prior to the placing of any Sub-contract if:
- 10.3.1 the Sub-contract was not part of the Contractor's original proposal;
 - and
 - 10.3.2 the value of the Sub-contract is known or estimated to exceed 15 per cent of the total Contract value; or
 - 10.3.3 the Sub-contract is one of a number of Sub-contracts with a single Sub-contractor for the same or related Work under this Contract that in the aggregate are known or expected to exceed 15 per cent of the total Contract value.
- 10.4 The Contractor shall inform the Purchaser of any change in Sub-contractors for Sub-contracts of a value known or estimated to exceed 15 per cent of the total Contract value.
- 10.5 The Contractor shall submit a copy of any such proposed Sub-contract including prices when seeking approval to the Contracting Authority but such approval by the Contracting Authority shall in no way relieve the Contractor of his responsibilities to fully achieve the contractual and technical requirements of this Contract.
- 10.6 The Contractor shall, as far as practicable, select Sub-contractors on a competitive basis consistent with the objectives and requirements of the Contract.

11. SECURITY

- 11.1 The Contractor shall comply with all security measures as are prescribed by the Purchaser and the national security authority or designated security agency of each of the NATO countries in which the Contract is being performed. The Contractor shall be responsible for the safeguarding of classified information, documentation, material and equipment entrusted to him or generated by him in connection with the performance of the Contract.
- 11.2 In particular the Contractor undertakes to:
- 11.2.1 appoint an official responsible for supervising and directing security measures in relation to the Contract and communicating details of such measures to the Purchaser on request;
 - 11.2.2 maintain, preferably through the official responsible for security measures, a continuing relationship with the national security authority or designated security agency charged with ensuring that all NATO classified information involved in the Contract is properly safeguarded;
 - 11.2.3 abstain from copying by any means, without the authorisation of the Purchaser, the national security authority or designated security agency, any classified documents, plans, photographs or other classified material entrusted to him;
 - 11.2.4 furnish, on request, information to the national security authority or designated security agency pertaining to all persons who will be required to have access to NATO classified information;
 - 11.2.5 maintain at the work site a current record of his employees at the site who have been cleared for access to NATO classified information. The record should show the date of issue, the date of expiration and the level of clearance;
 - 11.2.6 deny access to NATO classified information to any person other than those persons authorised to have such access by the national security authority or designated security agency;
 - 11.2.7 limit the dissemination of NATO classified information to the smallest number of persons ("need to know basis") as is consistent with the proper execution of the Contract;
 - 11.2.8 comply with any request from the national security authority or designated security agency that persons entrusted with NATO classified information sign a statement undertaking to safeguard that information and signifying their understanding both of their obligations under national legislation affecting the safeguarding of classified information, and of their comparable obligations

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under the laws of the other NATO nations in which they may have access to classified information;

- 11.2.9 report to the national security authority or designated security agency any breaches, suspected breaches of security, suspected sabotage, or other matters of security significance which would include any changes that may occur in the ownership, control or management of the facility or any changes that affect the security arrangements and security status of the facility and to make such other reports as may be required by the national security authority or designated security agency, e.g. reports on the holdings of NATO classified material;
- 11.2.10 apply to the Purchaser for approval before Sub-contracting any part of the work, if the Sub-contract would involve that the Sub-contractor would have access to NATO classified information, and to place the Sub-contractor under appropriate security obligations no less stringent than those applied to his own contract;
- 11.2.11 undertake not to utilise, other than for the specific purpose of the Contract, without the prior written permission of the Purchaser or his authorised representative, any NATO classified information furnished to him, including all reproductions thereof in connection with the Contract, and to return all NATO classified information referred to above as well as that developed in connection with the Contract, unless such information has been destroyed, or its retention has been duly authorised with the approval of the Purchaser. Such NATO classified information will be returned at such time as the Purchaser or his authorised representative may direct;
- 11.2.12 classify any produced document with the highest classification of the NATO classified information disclosed in that document.

12. RELEASE OF INFORMATION

- 12.1 Except as otherwise specified elsewhere in the Contract and to the extent that it is demonstratively unavoidable and without prejudice to the Clause 11 (Security), the Contractor and/or his employees shall not, without prior authorisation from the Purchaser, release to third parties any information pertaining to this Contract, its subject matter, performance there under or any other aspect thereof.
- 12.2 The Contractor shall seek the prior written approval of the Purchaser before publishing any press release or disclosing any other information, orally or in writing, in relation to the Contract. The approval of the Purchaser shall be required for both the opportunity and the content of the information.

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12.3 This provision shall remain in effect after the termination of the Contract and shall cease to apply to any particular piece of information once that information becomes public knowledge other than through an act, default or omission of the Contractor or its Sub-contractors.

13. **PURCHASER FURNISHED PROPERTY**

13.1 The Purchaser shall deliver to the Contractor, for use only in connection with this Contract, the Purchaser Furnished Property at the times and locations stated in the Contract. In the event that Purchaser Furnished Property is not delivered by such time or times stated in the Schedule, or if not so stated, in sufficient time to enable the Contractor to meet such delivery or performance dates the Purchaser shall, upon timely written request made by the Contractor, and if the facts warrant such action, equitably adjust any affected provision of this Contract pursuant to Clause 16 (Changes).

13.2 In the event that Purchaser Furnished Property is received by the Contractor in a condition not suitable for its intended use, the Contractor shall immediately notify the Purchaser. The Purchaser shall within a reasonable time of receipt of such notice replace, re-issue, authorise repair or otherwise issue instructions for the disposal of Purchaser Furnished Property agreed to be unsuitable. The Purchaser shall, upon timely written request of the Contractor, equitably adjust any affected provision of this Contract pursuant to Clause 16 (Changes).

13.3 Title to Purchaser Furnished Property will remain in the Purchaser. The Contractor shall maintain adequate property control records of Purchaser Furnished Property in accordance with sound industrial practice and security regulations.

13.4 Unless otherwise provided in this Contract, the Contractor, upon delivery to him of any Purchaser Furnished Property, assumes the risk of, and shall be responsible for, any loss thereof or damage thereof except for reasonable wear and tear, and except to the extent that Purchaser Furnished Property is consumed in the performance of this Contract.

13.5 Upon completion of this Contract, or at such earlier dates as may be specified by the Purchaser, the Contractor shall submit, in a form acceptable to the Purchaser, inventory schedules covering all items of Purchaser Furnished Property.

13.6 The inventory shall note whether:

13.6.1 The property was consumed or incorporated in fabrication of final deliverable(s);

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- 13.6.2 The property was otherwise destroyed;
- 13.6.3 The property remains in possession of the Contractor;
- 13.6.4 The property was previously returned
- 13.7 The Contractor shall prepare for shipment, deliver DDP at a destination agreed with the Purchaser, or otherwise dispose of Purchaser Furnished Property as may be directed or authorised by the Purchaser. The net proceeds of any such disposal shall be credited to the Contract price or paid to the Purchaser in such other manner as the Purchaser may direct.
- 13.8 The Contractor shall not modify any Purchaser Furnished Property unless specifically authorised by the Purchaser or directed by the terms of the Contract.
- 13.9 The Contractor shall indemnify and hold the Purchaser harmless against claims for injury to persons or damages to property of the Contractor or others arising from the Contractor's possession or use of the Purchaser Furnished Property. The Contractor shall indemnify the Purchaser for damages caused by the Contractor to the Purchaser, its property and staff and arising out of the Contractor's use of the Purchaser Furnished Property.

14. **CONTRACTOR'S PERSONNEL WORKING AT PURCHASER'S FACILITIES**

- 14.1 The term "Purchaser Facilities" as used in this Clause shall be deemed to include sites, property, utilities, ships or vessels and the term "Facility Representative" shall be deemed to refer to the authority designated by the Purchaser responsible for the site, property, utility, ship or vessel.
- 14.2 The Facility Representative shall provide such available administrative and technical facilities for Contractor's personnel working at Purchaser's Facilities for the purpose of the Contract as in the opinion of the Facility Representative may be necessary for the effective and economical discharge of Work. The Facility Representative shall also determine whether these facilities will be provided free of charge to the Contractor or determine what charges are payable. The Contractor shall have no claim against the Purchaser for any such additional cost or delay or any additional cost or delay occasioned by the closure for holidays of said facilities, or other reasons, where this is generally published or made known to the Contractor by the Purchaser or his authorised representatives.
- 14.3 The Contractor shall, except as otherwise provided for in the Contract, make good or, at the option of the Purchaser, pay compensation for all damage occurring to any Purchaser's Facilities occasioned by the Contractor, his servants, agents or Sub-contractors, arising from his or their presence and activities in, and use of, the Purchaser's Facilities; provided that this

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Condition shall not apply to the extent that the Contractor is able to show that any such damage was not caused or contributed to, by his neglect, or default or the neglect or default of his servants, agents or Sub-contractors, or by any circumstances within his or their control.

- 14.4 All property of the Contractor while at a Purchaser Facility shall be at the risk of the Contractor, and the Purchaser shall accept no liability for any loss or damage, except to the extent that any loss or damage is the result of a wilful act or gross negligence on the part of the Purchaser's employees or agents.

15. HEALTH, SAFETY AND ACCIDENT PREVENTION

- 15.1 If the Purchaser notifies the Contractor in writing of any non-compliance in the performance of this Contract with safety and health rules and requirements prescribed on the date of this Contract by applicable national or local laws, ordinances and codes, and the Contractor fails to take immediate corrective action, the Purchaser may order the Contractor to stop all or part of the Work until satisfactory corrective action has been taken. Such an order shall not entitle the Contractor to an adjustment of the Contract price or other reimbursement for resulting increased costs, or to an adjustment of the delivery or performance schedule.

16. CHANGES

- 16.1 The Purchaser may at any time, by written order of the Contracting Authority designated or indicated to be a change order ("Change Order") make changes within the general scope of this Contract, including, without limitation, in any one or more of the following:

- 16.1.1 Specifications (including drawings and designs);
- 16.1.2 Method and manner of performance of the work, including engineering standards, quality assurance and configuration management procedures;
- 16.1.3 Marking and method of shipment and packing;
- 16.1.4 Place of delivery;
- 16.1.5 Amount, availability and condition of Purchaser Furnished Property.

- 16.2 The Purchaser shall submit a proposal for Contract amendment describing the change to the Contract.

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- 16.3 If any such Change Order causes an increase in the Contractor's cost of, or the time required for, the performance of any part of the Work under this Contract, whether or not changed by any such order, the Contractor shall submit a written proposal for adjustment to the Purchaser describing the general nature and amount of the proposal for adjustment. The Contractor shall submit this proposal for adjustment within thirty (30) days after receipt of a written Change Order under (a) above unless this period is extended by the Purchaser.
- 16.4 If any such Change Order causes a decrease in the Contractor's cost of, or the time required for, the performance of any part of the Work under this Contract, whether or not changed by any such order, the Purchaser shall submit a proposal for adjustment within thirty (30) days from the issuance of the Change Order by submitting to the Contractor a written statement describing the general nature and amount of the proposal for adjustment.
- 16.5 Where the cost of property made obsolete or in excess as a result of a change is included in the Contractor's claim for adjustment, the Purchaser shall have the right to prescribe the manner of disposition of such property.
- 16.6 The Purchaser reserves the right to reject the introduction of the change, after the evaluation of the change proposal, even if the Purchaser initiated such change.
- 16.7 Failure to agree to any requested adjustment shall be a dispute within the meaning of the Clause 41 (Disputes). However, nothing in this Clause shall excuse the Contractor from proceeding with the Contract as changed.
- 16.8 No proposal for adjustment by the Contractor for an equitable adjustment shall be allowed if asserted after final payment and acceptance under this Contract.
- 16.9 Any other written or oral order (which, as used in this paragraph includes direction, instruction, interpretation, or determination) from the Purchaser that causes a change shall be treated as a Change Order under this Clause, provided, that the Contractor gives the Purchaser a written notice within thirty (30) Days after receipt of such order stating (i) the date, circumstances, and source of the order; (ii) that the Contractor regards the order as a Change Order; and (iii) a detailed cost and time analysis of the impact of the change, and that the Order is accepted in writing by the Purchaser as a Change Order. The timely written notice requirement, as detailed above, remains in force in all cases, even where, for example, the Purchaser has positive knowledge of the relevant facts.
- 16.10 All tasks and activities carried out by the Contractor in relation to the processing of the Change Order or in relation to this Clause shall form part of the Contractor's routine work and cannot be charged as additional work.

17. STOP WORK ORDER

- 17.1 The Purchaser may, at any time, by written order to the Contractor, require the Contractor to stop all, or any part, of the Work called for by this Contract for a period of ninety (90) days after the order is delivered to the Contractor, and for any further period to which the Parties may agree.
- 17.2 Any such stop work order shall be specifically identified as a stop work order issued pursuant to this Clause (the "Stop Work Order"). The Stop Work Order may include a description of the Work to be suspended, instructions concerning the Contractor's issuance of further orders for material or services, guidance to the Contractor on actions to be taken on any Sub-contracts and any suggestion to the Contractor for minimizing costs.
- 17.3 Upon receipt of such a Stop Work Order, the Contractor shall forthwith comply with its terms and take all reasonable steps to minimise costs incurred allocable to the Work covered by the Stop Work Order during the period of work stoppage. Within a period of ninety (90) days after a Stop Work Order is delivered to the Contractor, or within any extension of that period to which the Parties shall have agreed, the Purchaser shall either:
- 17.3.1 cancel the Stop Work Order; or
 - 17.3.2 terminate the Work covered by such Stop Work Order as provided in Clause 40 (Termination for Convenience of the Purchaser).
- 17.4 If a Stop Work Order issued under this Clause is cancelled or the period of the Stop Work Order or any extension thereof expires, the Contractor shall resume work.
- 17.5 An equitable adjustment shall be made in the delivery schedule or Contract price, or both, and the Contract shall be modified in writing accordingly, if:
- 17.5.1 the Stop Work Order results in an increase in the time required for, or in the Contractor's cost properly allocable to, the performance of any part of this Contract, and;
 - 17.5.2 the Contractor asserts a Claim for such adjustment within thirty (30) days after the end of the period of work stoppage; provided that, if the Purchaser decides the facts justify such action, he may receive and act upon any such claim asserted at a later date but prior to final payment under this Contract.
- 17.6 If a Stop Work Order is not cancelled and the Work covered by such Stop Work Order is terminated for the convenience of the Purchaser the reasonable costs resulting from the Stop Work Order shall be allowed in

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arriving at the termination settlement.

18. CLAIMS

18.1 The Contractor shall specifically identify the Contract Clause(s) under which the Claim(s) is/are based.

18.2 Claims shall be specifically identified as such and submitted:

18.2.1 within the time specified in the Clause under which the Contractor alleges to have a Claim. If no time is specified in the Clause under which the Contractor intends to base his Claim, the time limit shall be sixty (60) days from the date the Contractor has knowledge or should have had knowledge of the facts on which he bases his Claim; and

18.2.2 before final payment, pursuant to and with the exceptions specified in Clause 33 entitled "Release of Claims".

18.2.3 Section 18.2.2 above shall only apply to those Claims for which the Contractor could not have had earlier knowledge and were not foreseeable.

18.3 The Contractor shall be foreclosed from his Claim unless he presents complete documentary evidence, justification and costs for each of his Claims within ninety (90) calendar days from the assertion date of such Claims. Claims shall be supported by specifically identified evidence (including applicable historical and planned cost and production data from the Contractor's books and records). Opinions, conclusions or judgmental assertions not supported by such evidence will be rejected by the Purchaser.

18.4 An individual breakdown of cost is required for each element of Contractor's Claims at the time of claim submission or for any material revision of the Claim.

18.5 The Contractor shall present, at the time of submission of a Claim, an attestation as follows:

Ithe responsible senior company official authorised to commit the with respect to its claims dated being duly sworn, do hereby depose and say that: (i) the facts described in the claim are current, complete and accurate; and (ii) the conclusions in the claim accurately reflect the material damages or contract adjustments for which the Purchaser is allegedly liable.

.....

.....
SIGNATURE

Date

- 18.6 Failure to comply with any of the above requirements shall result in automatic foreclosure of the Claim. This foreclosure takes effect in all cases and also where, for example, the Claim is based on additional orders, where the facts are known to the Purchaser, where the Claim is based on defective specifications of the Purchaser or an alleged negligence in the pre-contractual stage.
- 18.7 Claims submitted by the Contractor will be reviewed by the Contracting Authority. The Contracting Authority will respond within sixty (60) days with a preliminary decision, based on an assessment and evaluation of the facts presented by the Parties, as to whether the Contracting Authority considers the Claim to have merit for consideration. If the preliminary decision of the Contracting Authority is that the Claim, as submitted is without merit, the Contractor shall have fourteen (14) days to present a rebuttal to the Contracting Authority and request reconsideration of the Contracting Authority's decision. Within thirty (30) days receipt of the Contractor's request for reconsideration, the Contracting Authority will issue a decision. The time requirements stated herein may be extended by the Contracting Authority in order to accommodate additional preparation efforts and fact finding discussions but the Contracting Authority may not unreasonable extend such a period. A decision that the submitted claim is without merit will be identified as such, will be issued in writing by the Contracting Authority and will be conclusive. A decision may only be challenged by the Contractor through the Disputes provisions described herein.
- 18.8 A decision by the Purchaser that the claim has merit will result in a Contracting Authority request to enter into negotiations with the Contractor to arrive at a mutually agreed fair and equitable settlement. The Contracting Authority's decision will contain a target date for the commencement and conclusion of such operations. If the Parties are unable to arrive at an agreement on a fair and reasonable settlement by the target date for conclusion, or any extension thereto made by the Contracting Authority, the latter may declare that negotiations are at an impasse and issue a preliminary decision as to the fair and reasonable settlement and the reasons supporting this decision. The Contractor shall have a period of thirty (30) days to present a rebuttal to the Contracting Authority and request reconsideration of the Contracting Authority's decision. Within sixty (60) days of receipt of the Contractor's request for reconsideration, the Contracting Authority will issue its decision on the request for reconsideration. This timeframe will be respected unless an authorisation is needed from a NATO or other authority , the schedule for which is beyond the Contracting Authority's control. A

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decision of the Contracting Authority on the reconsideration of the matter will be identified as such, will be issued in writing by the Contracting Authority and will be conclusive. A decision on the reconsideration may only be challenged by the Contractor through the Disputes provisions described herein.

- 18.9 No Claim arising under this Contract may be assigned by the Contractor without prior approval of the Purchaser.
- 18.10 The Contractor shall proceed diligently with performance of this Contract, pending final resolution of any request for relief, claim appeal, or action arising under the Contract, and comply with any decision of the Contracting Authority.

19. PRICING OF CHANGES, AMENDMENTS AND CLAIMS

- 19.1 Contractor's pricing proposals for Changes, amendments and Claims shall be priced in accordance with the Purchaser's Pricing Principles (Annex 1 hereto and the sample spreadsheet and its " Instructions to Complete" at Appendix 1) or the national government pricing rules and regulations for the Contractor's own country, where in force. The Contractor shall provide cost information accompanied by appropriate substantiation as required by the Purchaser in accordance with Purchaser's Pricing Principles, or such other format as may be agreed between the Contractor and the Purchaser.
- 19.2 With respect to Clause 19.1 above, when the price or price adjustment is based on adequate price competition, established catalogue or market price of commercial items sold in substantial quantities to the general public, or prices set by law or regulation, the Contractor shall be responsible for substantiation of such cases to the satisfaction of the Purchaser.
- 19.3 For the purposes of verifying that the cost or pricing data submitted in conjunction with Clause 19.1 above are accurate, complete and current, the Purchaser or any Purchaser authorised representative shall have the right of access to the Contractor's facilities to examine, until the expiration of three (3) years from the date of final payment of all sums due under the Contract:
 - 19.3.1 those books, records, documents and other supporting data which will permit adequate evaluation and verification of the cost or pricing data submitted; and/or
 - 19.3.2 the computations and projections which were available to the Contractor as of the date of the Contractor price proposal.
- 19.4 The Contractor, subject to the provisions of this Clause, shall require Sub-contractors to provide to the Purchaser, either directly or indirectly:
 - 19.4.1 cost or pricing data;
 - 19.4.2 access to Sub-contractor's facilities and records for the purposes of verification of such cost or pricing data; and
 - 19.4.3 a Certificate of Current Cost or Pricing Data, when required.

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- 19.5 If any price, including profit, negotiated in connection with this Contract was proposed, taking any of the following into account:
- 19.5.1 the Contractor furnished cost or pricing data which was not complete, accurate and current as certified in the Contractor's Certificate of Current Cost or Pricing Data provided in accordance with Clause 19.6 below;
 - 19.5.2 a Sub-contractor, pursuant to Clause 19.4 above or any Sub-contract clause therein required, furnished cost or pricing data which was not complete, accurate and current as certified in the Sub-contractor's Certificate of Current Cost or Pricing Data;
 - 19.5.3 a Sub-contractor or prospective Sub-contractor furnished cost or pricing data which was required to be complete, accurate and current and to be submitted to support a Sub-contract cost estimate furnished by the Contractor but which was not complete, accurate and current as of the date certified in the Contractor's Certificate of Current Cost or Pricing Data; or
 - 19.5.4 the Contractor or a Sub-contractor or prospective Sub-contractor furnished any data, not within 19.5.1 through 19.5.3 above, which, as submitted, was not complete, accurate and current;
 - 19.5.5 then the price and/or cost shall be adjusted accordingly and the Contract shall be modified in writing as may be necessary to reflect such.
- 19.6 At the time of negotiating any price, including profit, which is based upon the submission of cost or pricing data by the Contractor, the Contractor shall be required to submit a certificate of current cost or pricing data ("Certificate").
- 19.6.1 Such Certificates will certify that, to the best of the Contractor's knowledge and belief, cost or pricing data submitted to the Purchaser in support of any proposal for a price, price adjustment or claim, are accurate, complete and current, as per the completion of the negotiations or, in the case of a claim, as per the submission date of the claim.
 - 19.6.2 All such Certificates shall be in the format shown below and shall be dated and signed by a responsible officer of the company:

CERTIFICATE OF CURRENT COST OR PRICING DATA

This is to certify that cost or pricing data as submitted, either actually or by specific identification in writing to the Purchaser or his representative in support of.....(*Claim, Amendment, ECP#, etc.*) are accurate, complete and current as of(*Date*).

By submitting the price proposal, the Contractor/sub-Contractor or prospective sub-Contractor grant the Purchaser or his authorized representative(s) the right to examine those records, data and supporting information, used as a basis for the pricing submitted.

Name of Company

Signature

Printed Name of Signatory

Title of Signatory

Date of Signature

19.6.3 The Contractor shall insert the substance of this Clause 19.7 in each Sub-contract.

19.7 For all additional or follow-up agreements which are made for Work which are furnished to the Purchaser without competition, the Contractor shall offer prices on a "Preferred Customer" basis, that is offer prices which are as favourable as those extended to any Government, Agency, Company, Organisation or individual purchasing or handling like quantities of

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equipment and/or Parts covered by the Contract under similar conditions. In the event that prior to completing delivery under this Contract the Contractor offers any of such items in substantially similar quantities to any customer at prices lower than those set forth herein, the Contractor shall so notify the Purchaser and the prices of such items shall be correspondingly reduced by a supplement to this Contract. Price in this sense means "Base Price" prior to applying any bonus, export tax reduction, turn-over tax exemptions and other reductions based on National Policies.

20. NOTICE OF SHIPMENT AND DELIVERY

- 20.1 Except as may be specified in the Contract Special Provisions, delivery of all items under this Contract shall be made by the Contractor on the basis of "Delivery Duty Paid" (DDP) as defined by the INCOTERMS 2000 (International Chamber of Commerce Publication No. 560). It shall be noted, however, that because the Purchaser is exempted from direct taxes and duty as set forth in Clause 26 (Taxes and Duties), there is no duty to be paid by the Contractor.
- 20.2 "Delivery" of required Work by the Contractor does not constitute "Acceptance" by the Purchaser for purposes of meeting the requirements of the Contract Schedule where Purchaser acceptance is the stated payment or schedule milestone.
- 20.3 Thirty (30) Days, or such other period as specified in the Contract, prior to the delivery of any shipment of Work, the Contractor shall give prepaid notice of shipment to the Purchaser. The Notice of Shipment shall contain, as appropriate, the request for customs form 302, or equivalent document, which shall enable any carrier to conduct duty free import/export clearance through customs for the Purchaser on behalf of NATO.
- 20.4 The customs form 302 is an official customs clearance declaration issued in advance of shipment by the Purchaser to provide certified information as to the duty free import, export, or transit of NATO consignments between NATO countries.
- 20.5 The Notice of Shipment and request for Form 302 or equivalent document shall contain the following information:
 - 20.5.1 Purchaser's Contract number;
 - 20.5.2 Contract item number, designation and quantities;
 - 20.5.3 destination;
 - 20.5.4 number and description of the packages (gross and net weight);
 - 20.5.5 description of the goods and their value (for custom purpose only, not commercial value)

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- 20.5.6 consignor's name and address;
 - 20.5.7 consignee's name and address;
 - 20.5.8 method of shipment (i.e. road, rail, sea, air, etc.);
 - 20.5.9 name and address of freight forwarder.
- 20.6 Forwarding Agents, Carriers or other responsible organisations shall be informed by the Contractor of the availability of Form 302 or equivalent document and how the form shall be utilised to avoid the payment of custom duties. Form 302 or equivalent document shall be incorporated in all shipping documents provided to the carrier.
- 20.7 Upon receipt of the Notice of Shipment from the Contractor, the Purchaser may require the Contractor to send copies of the Notice of Shipment to the receiving parties and the Contractor shall comply with this requirement.

21. INSPECTION AND ACCEPTANCE OF WORK

- 21.1 For the purposes of this Clause, Work does not include documentation which is addressed in Clause 22 (Inspection and Acceptance of Documentation) hereafter.
- 21.2 Unless otherwise specifically provided for in the Contract, all Work and all Parts and equipment incorporated in the Work are to be new and of the most suitable grade of their respective kinds for the purpose, notwithstanding the requirements for testing, inspection and performance as required under this Contract. All workmanship shall be as specified under the Contract or, if no workmanship standards are specified, best commercial or "state of the art" complying with relevant (National and International) standards.
- 21.3 All Work may be subject to inspection and test by the Purchaser or his authorised representative(s) to the extent practicable at all times and places prior to Acceptance, including the period of manufacture, or after delivery or as otherwise specified in the Contract. For the purposes of inspection and testing the Purchaser may delegate as his representative the authorised National Quality Assurance Representative (NQAR) in accordance with STANAG 4107.
- 21.4 No representative or NQAR appointed by the Purchaser for the purpose of determining the Contractor's compliance with the technical requirements of the Contract shall have the authority to change any of the specifications. Such changes may only be made by the Contracting Authority in writing in accordance with Clause 16 (Changes).
- 21.5 The presence or absence of an NQAR or other Purchaser representative shall not relieve the Contractor from conforming to the requirements of this Contract.
- 21.6 Acceptance or rejection of the Work shall be made as promptly as practicable after delivery, except as otherwise provided in the Contract. Failure to timely

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accept or reject the Work shall neither relieve the Contractor from responsibility for such Work nor impose liability on the Purchaser.

- 21.7 In the event that any Work, or lots thereof, or services are defective in design, material, workmanship or manufacturing quality, or as a result of undue wear and tear or otherwise not in conformity with the requirements of this Contract, including any characteristic or condition which is or becomes at variance to the performance specifications, to the intended function of the Work or the function to which it could reasonably be expected that the Work would perform, the Purchaser shall have the right either to reject them (with or without instructions as to their disposition) or to require their correction or replacement. Work which has been rejected or required to be corrected or replaced shall, at the expense of the Contractor, be removed, or, if permitted or required by the Contracting Authority, corrected in place by the Contractor promptly after notice, and shall not thereafter be tendered for acceptance by the Contractor unless the former rejection or requirement of correction or replacement is withdrawn. If the Contractor fails promptly to remove, replace or correct such Work the Purchaser may either:
- 21.7.1 by contract or otherwise return, replace or correct such Work or services and charge to the Contractor the cost incurred by the Purchaser; and/or
 - 21.7.2 terminate this Contract for default as provided in Clause 39 (Termination for Default).
- 21.8 When NQAR is not applicable based on the scale of the project, the Purchaser reserves the right to perform inspections through his own staff in accordance with the latest ISO standard at the time of inspection.
- 21.9 Unless the Contractor corrects or replaces such Work within the delivery schedule, the Purchaser may require the delivery of such Work at a reduction in price which is equitable under the circumstances. Failure to agree to such reduction of price shall be a dispute within the meaning of Clause 41 (Disputes).
- 21.10 If any inspection or test is made by the Purchaser's representatives on the premises of the Contractor or Sub-contractor, the Contractor, without additional charge, shall provide all reasonable facilities and assistance for the safety and convenience of the Purchaser's representatives in the performance of their duties. The NQAR or other Purchaser representatives shall have the right of access to any area of the Contractor's or his Sub-contractor's premises where any part of the contractual work is being performed.
- 21.11 If Purchaser inspection or test is made at a point other than the premises of the Contractor or Sub-contractor, it shall be at the expense of the Purchaser except as otherwise provided in this Contract; provided, that in case of rejection the Purchaser shall not be liable for any reduction in value of samples used in connection with such inspection or test.
- 21.12 All inspections and tests by the Purchaser shall be performed in such a

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manner as not to unduly delay the Work.

- 21.13 The Purchaser reserves the right to charge to the Contractor any additional cost of Purchaser inspection and test when Work is not ready at the time such inspection and test is requested by the Contractor or when re-inspection or retest is necessitated by prior rejection.
- 21.14 Acceptance or rejection of the Work shall be made as promptly as practicable after delivery, except as otherwise provided in this Contract, but failure to inspect and accept or reject Work shall neither relieve the Contractor from responsibility for such Work as are not in accordance with the Contract requirements nor impose liability on the Purchaser thereof.
- 21.15 The inspection and test by the Purchaser of any Work or lots thereof, or services, does not relieve the Contractor from any responsibility regarding defects or other failures to meet the Contract requirements which may be discovered prior to acceptance.
- 21.16 Acceptance of Work shall take place when the Contracting Authority confirms acceptance in writing of the Work in accordance with the procedure specified in the Contract, or if none is so specified then the Contracting Authority shall be deemed to have accepted the Work without prejudice to any other remedies, when and as soon as any of the following events have occurred:
- 21.16.1 the Purchaser has taken the Work into use, except as specifically provided by Clause 23 (Use and Possession Prior to Acceptance);
 - 21.16.2 the Purchaser has not exercised its right of rejection of the Work within any period specified for that purpose in the Contract;
 - 21.16.3 there being no period for exercising the right of rejection specified in the Contract, a reasonable time, all the circumstances having been taken into account, has elapsed since inspection of the Work was effected in accordance with the Contract.
- 21.17 Except as otherwise provided in this Contract, acceptance shall be conclusive except as regards latent defects, fraud, or such gross mistakes as amount to fraud.
- 21.18 Unless otherwise specified in this Contract, the Contractor shall have or establish, implement and maintain an effective and economical quality control system necessary to satisfy the Contract requirement. The system shall provide for the early and prompt detection of deficiencies, trends and conditions which could result in unsatisfactory quality and for timely and effective corrective action. Objective evidence that the system is effective shall be readily available to the Purchaser and its authorised representatives. Records of all inspection and testing work by the Contractor shall be kept complete and available to the Purchaser's representatives during the performance of this Contract and for such longer periods as may be specified elsewhere in this Contract.

22. **INSPECTION AND ACCEPTANCE OF DOCUMENTATION**

- 22.1 The Contractor shall provide to the Purchaser a draft version of the required documentation as provided by the Contract Schedule and the Statement of Work. Review of draft documentation under this Contract will be made by the Purchaser upon the delivery of these items by the Contractor. The review will be conducted by the Purchaser through duly authorised representatives.
- 22.2 Upon delivery of the draft documentation, the Purchaser will have a period of review as provided by the Statement of Work. At the end of the review period or before if deemed practical by the Purchaser, the Purchaser's comments will be presented to the Contractor in writing. The substance of such comments will pertain to items of error, non-conformity, omission and guidance in relation to the requirements of the Statement of Work.
- 22.3 Purchaser Review of the delivered items will emphasise the conformity with the requirements of the Statement of Work, thoroughness of analysis, logical bases of conclusions and models and coherence and completeness of presentation. The review process will also examine editorial and grammatical correctness and the suitability and accuracy of graphics supporting the text.
- 22.4 The Contractor shall, after receipt of Purchaser comments, incorporate changes, revisions and corrections required by the Purchaser and present the revised documentation in final form to the Purchaser for inspection in accordance with the delivery date specified in the Schedule.
- 22.5 During the review process the Contractor is not required to halt efforts on further tasks as identified in the Statement of Work. The Purchaser, however, shall not be held liable for any work carried out by the Contractor which is based on draft documentation yet to be reviewed.
- 22.6 Upon receipt of the items in final form, the Purchaser will inspect the items for a period not exceeding two weeks (or as otherwise stated in the Statement of Work). At the end of the inspection, the Purchaser will notify the Contractor that:
- 22.6.1 the items have been accepted;
 - 22.6.2 the acceptance of the items is deferred pending further revision;
- or
- 22.6.3 The items are rejected and significantly fail to meet Contract requirements.
- 22.7 In the case of Clause 22.6.2 above, the Contractor shall only be responsible for those revisions and corrections requested by the Purchaser and the

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Purchaser may not request additional revisions during inspection after required revisions have been made. However, if the Purchaser determines that a directed revision has not been made or if such directed revision was cause for revision of other portions of content which were not made by the Contractor, the Purchaser may withhold acceptance until such revisions are made by the Contractor.

- 22.8 The Contractor shall provide to the Purchaser on request supporting technical data, computer software, databases and background analyses in order to validate findings contained in the delivered items.
- 22.9 Purchaser acceptance shall be made in writing by the Contracting Authority.

23. USE AND POSSESSION PRIOR TO ACCEPTANCE

- 23.1 Except as otherwise provided in the Contract Special Provisions, the Purchaser shall have the right to take possession of, or use, any completed or partially completed Work under the Contract at any time, when notified by the Contracting Authority, however such possession or use shall not constitute Acceptance by the Purchaser, as defined in the Contract.
- 23.2 While the Purchaser has such use or is in such possession, the Contractor shall be relieved of the responsibility for loss or damage to the Work concerned other than that resulting from the Contractor's fault, negligence or defect to the Work.
- 23.3 If such prior possession or use by the Purchaser delays the progress of the Work or causes additional expense to the Contractor, an equitable adjustment in the Contract price or the time of delivery will be made, in accordance with the Clause 16 (Changes), and the Contract shall be modified in writing accordingly.

24. OWNERSHIP AND TITLE

- 24.1 Except as may be otherwise stated in the Contract Special Provisions and Clause 23 (Use and Possession prior to Acceptance), ownership and title to all Work will pass to the Purchaser only upon Acceptance by the Contracting Authority in writing. Where the Contract provides for Provisional Acceptance and Final Acceptance, ownership and title will pass to the Purchaser upon written notification of Final Acceptance.

25. INVOICES AND PAYMENT

- 25.1 Unless otherwise specified in the Contract Special Provisions, invoices shall only be submitted after delivery and Acceptance of the Work and for the total prices and currency(ies) as set out under the Schedule of Work.
- 25.2 Invoices in respect of any Work or services shall be prepared and submitted

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to the Purchaser and shall contain all of the elements listed below:

- 25.2.1 Contract number;
 - 25.2.2 Purchaser's Purchase Order number ;
 - 25.2.3 accounting codes (as specified in this Contract);
 - 25.2.4 item number (as defined in the Contract);
 - 25.2.5 Contract description of Work or services, sizes, quantities, unit prices, and extended totals (exclusive of taxes and duties for which relief is available); and
 - 25.2.6 extended totals. Details of Bills of Lading or Freight Warrant numbers and weight of shipment shall be identified on each invoice as appropriate.
- 25.3 In addition, documentary evidence of Acceptance including copies of certificates of conformity shall be submitted together with each invoice. Invoices shall not be submitted to the Purchaser without Acceptance having been previously made by the Purchaser.
- 25.4 Each copy of the invoice shall contain the following certificate which shall be signed by a duly authorised company official on the designated original invoice:

"I certify that the above invoice is true and correct, that the delivery of the above described items has been duly carried out and the payment thereof has not been received.

*Order placed for official use. Exemption from VAT Article 42, §3&3*of VAT Code for Belgium or Article 151, §1b of the Council Directive 2006/112/EC dd. 28 November 2006 on intra-community purchases and/or services."*

- 25.5 All invoices shall be addressed to the NCI Agency - Financial Management

Either at the following addresses:

NCI Agency * If used for NCI Agency Brussels

NATO Communications and Information Agency
Finance, Accounting & Operations
Batiment Z
Av du Bourget 140
B-1140 Belgium

OR

shall be addressed to Financial Management at the following electronic address:

["NCIA-CAPDEV-FMU-BEL_E-INVOICES@NCIA.NATO.INT"](mailto:NCIA-CAPDEV-FMU-BEL_E-INVOICES@NCIA.NATO.INT) (note there is an underscore between BEL and E-INVOICES)

Note: When used for NCI Agency The Hague or Mons the addresses shall be dictated in the Contract Special Provisions

Once the manner of forwarding the invoice is chosen, the contractor shall keep this manner throughout the contract.

- 25.6 All invoices submitted shall include the address of the bank to which payment shall be made, together with **either** pertinent information concerning the International Bank Account Number (IBAN) and BIC/SWIFT address **or** pertinent information concerning transit number/sort code, account number and SWIFT address. The Purchaser makes payment only by wire transfer and therefore wire transfer particulars shall be included on the invoice.
- 25.7 Invoices will be settled by the Purchaser within sixty (60) days of receipt of a properly prepared and submitted invoice.
- 25.8 The Contractor shall mention on the invoice the payment conditions in line with the Contract.

26. **TAXES AND DUTIES**

- 26.1 The Purchaser, by virtue of his status under the terms of Article IX and X of the Ottawa Agreement, is exempt from all direct taxes (incl. VAT) and all customs duties on merchandise imported or exported. The Contractor, therefore, certifies that the prices stipulated in this Contract do not include amounts to cover such direct taxes or customs duties.
- 26.2 The Contractor shall be responsible for ensuring that his respective Sub-contractors are aware that the Purchaser is exempt from taxes and customs duties. The Contractor (and his respective Sub-contractors) shall be responsible for complying with all applicable national and local legal and administrative procedures to ensure that authorities do not attempt to assess taxes and customs duties on goods and property imported or exported through NATO member nation frontiers under this Contract nor assess direct taxation (VAT) on goods sold to the NCI Agency under this Contract.
- 26.3 The Purchaser shall give reasonable assistance in providing evidence/documents which might be required by the Contractor to ensure that NCI Agency receives tax exemption by virtue of its status under the Ottawa Agreement.
- 26.4 If, after complying with all national and local legal and administrative

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procedures, the authorities persist in attempting to impose taxes or duties on goods provided under this Contract, the Contractor shall inform the Contracting Authority providing the particulars of the situation, the procedures which have been followed and the point of contact at the national authority which is attempting to impose taxation or duty. The Contracting Authority will examine the situation and attempt to clarify the legal and administrative basis of the difficulty. If the Contracting Authority so directs, the Contractor shall pay the required taxes and duties and file for reimbursement or rebate from the national authorities in accordance with national legislative and administrative procedures.

- 26.5 In the event that the petition for reimbursement or rebate is denied by the national authorities concerned and providing that the Contractor and/or his Sub-contractor have complied with the national legislative and administrative procedures, the Purchaser shall reimburse the full amount of the payment(s) upon receipt of the Contractor's invoice indicating such tax or duty as a separate item of cost and fully identified by reference to any governmental law, regulation and/or instruction pursuant to which such tax or duty is enforced. The Contractor shall offer assistance and execute any such document that may be useful or required to ensure that Purchaser obtains the reimbursement of any tax or duty retained by a national authority.
- 26.6 In the event of the Contractor and/or Sub-contractor not complying with national legislative or administrative procedures, taxes and duties paid by the Contractor and/or Sub-contractors shall not be reimbursed by the Purchaser.
- 26.7 Following payment by the Purchaser of the taxes and/or duties pursuant to Clause 26.4 above, should the Contractor subsequently receive a rebate of any amount paid by the Purchaser, the Contractor shall immediately notify the Purchaser and the amount of such rebate shall be credited or reimbursed to the Purchaser, as directed. The Contractor shall be responsible for taking any and all action that could reasonably be required in order to obtain such rebate.
- 26.8 The Contractor shall be liable for all other taxes, assessments, fees, licences, administrative charges or other Government assessments or charges which are applicable to the performance of this Contract. It is the Contractor's responsibility to inform himself of his liability in each country where such liability may arise.

27. WARRANTY OF WORK (Exclusive of Software)

27.1 For the purpose of this Clause:

27.1.1 "Acceptance" shall mean the act of an authorised representative of the Purchaser by which the Purchaser

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assumes title and ownership of delivered Work rendered as partial or complete performance of the Contract. "Acceptance" in this regard, unless specifically provided otherwise in the Contract Contract Special Provisions, means final Acceptance where the Contract provides for Provisional or Partial Acceptance;

- 27.1.2 "Correction" shall mean the elimination of a defect;
- 27.1.3 "Work" shall not include software.
- 27.2 The Contractor shall not be responsible under this Clause for the Correction of Defects in Purchaser Furnished Property, except for Defects in Contractor performed installation, unless the Contractor performs, or is obligated to perform, any modifications or other work on Purchaser Furnished Property. In that event, the Contractor shall be responsible for Correction of Defects that result from the modifications or other Work.
- 27.3 Unless another period of time is indicated in the Contract Contract Special Provisions, the duration of the warranty provided by the Contractor and its Subcontractors shall be twelve (12) months from the date of Acceptance under this Contract as notified in writing by the Contracting Authority.
- 27.4 Any Work or parts thereof corrected or furnished in replacement and any services re-performed shall also be subject to the conditions of this Clause 27 to the same extent as Work initially accepted. The warranty, with respect to these Work, or parts thereof shall be equal in duration to that set forth in Clause 27.3, and shall run from the date of delivery of the corrected or replaced Work.
- 27.5 If the Contractor becomes aware at any time before Acceptance by the Purchaser (whether before or after tender to the Purchaser) or at a later time, that a Defect exists in any Work, the Contractor shall either promptly correct the Defect or promptly notify the Purchaser, in writing, of the Defect, using the same procedures prescribed in Clause 27.8.
- 27.6 The Purchaser will notify in writing the Contractor of the existence of a Failed Component and return to the Contractor the Failed Component within thirty (30) Days of the discovery of such failure. The transport of the Failed Component shall be at the expense of the Purchaser. The notification of the failure will include as much information as practicable about the circumstances and operating environment at the time of the failure. Upon receipt of such notification by the Purchaser (which may precede receipt of the Failed Component), the Contractor shall ship to the location of the Failed Component an identical component for installation by Purchaser personnel. The Contractor shall ship such replacement component(s) Delivery Duty Paid. Such transportation and replenishment charges are included in the cost of line item of the Contract identified as the warranty.
- 27.7 In such rare cases where the Failed Component is either too large to be

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easily transported or the Failed Component cannot be readily identified and isolated within the larger entity, the Contractor shall be notified by the Purchaser of the failure immediately by telephone, fax or e-mail. The Contractor shall provide technical support to the Purchaser personnel in identifying the Failed Component so as to afford the Purchaser the opportunity to return the Failed Component. In such a case where the Failed Component cannot be identified or is not cost effective or practical to ship to the Contractor's facility, the Contractor may elect to send field service personnel to the site of the failure and repair such equipment on location. In this event, such field service personnel shall be dispatched to the site of the failure within forty-eight (48) hours of initial notification. The expense of the technical support and field service shall be borne by the Contractor.

- 27.8 The Contractor shall conduct analysis of all Failed Components which are returned to him by the Purchaser or repaired in the field by Contractor field service personnel to determine the cause of the failure. The Contractor shall issue a report to the Purchaser within thirty (30) days of receipt of a returned item or field repair which contains the results of the analysis. The report shall contain the conclusion of the Contractor as to whether the cause of the failure was due to a Manufacturing Defect or a Design Defect and declare what course of remedial action the Contractor shall implement to prevent further failures of a similar nature. Repetitive failures of the same component may be grounds for a de facto determination by the Purchaser that a Design Defect exists.
- 27.9 If the Purchaser determines that a Design Defect exists in any of the Work accepted by the Purchaser under this Contract, the Purchaser shall promptly notify the Contractor of the Defect, in writing, within ninety (90) days after discovery of the Defect. Upon timely notification of the existence of a Defect, or if the Contractor independently discovers a Design Defect or Manufacturing Defect in accepted Work, the Contractor shall submit to the Purchaser, in writing within thirty (30) days, a recommendation for corrective actions, together with supporting information in sufficient detail for the Purchaser to determine what corrective action, if any, shall be undertaken.
- 27.10 The Contractor shall also prepare and furnish to the Purchaser data and reports applicable to any Correction required under this Clause (including revision and updating of all other affected data and already accepted documentation called for under this Contract) at no increase in the Contract price.
- 27.11 In the event of timely notice of a decision not to correct or only to partially correct, the Contractor shall submit a technical and cost proposal within forty-five (45) days to amend the Contract to permit Acceptance of the affected Work in accordance with the revised requirement, and an equitable reduction in the Contract price shall promptly be negotiated by the Parties and be reflected in a supplemental agreement to this Contract.
- 27.12 Within thirty (30) days after receipt of the Contractor's recommendations for corrective action and adequate supporting information in accordance with

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Clause 27.9, the Purchaser using sole discretion, shall give the Contractor written notice not to correct any Defect, or to correct or partially correct any Defect within a reasonable time.

- 27.13 The Contractor shall promptly comply with any timely written direction from the Purchaser to correct or partially correct a manufacturing or Design Defect, at no increase in the Contract price.
- 27.14 The Purchaser shall give the Contractor a written notice specifying any failure or refusal of the Contractor to:
- 27.14.1 conduct analyses of Failed components and implement a course of remedial action as required by Clauses 27.7 and 27.8;
 - 27.14.2 provide replacement components, technical support or on-location field repair service in accordance with Clauses 27.6 and 27.7; or
 - 27.14.3 prepare and furnish data and reports as required by Clause 27.10.
- 27.15 The notice referred to in Clause 27.14 shall specify a period of time following receipt of the notice by the Contractor in which the Contractor must remedy the failure or refusal specified in the notice.
- 27.16 If the Contractor does not comply with the Purchaser's written notice in Clause 27.14, the Purchaser may by Contract or otherwise:
- 27.16.1 Obtain detailed recommendations for corrective action from its own resources or third parties and either:
 - 27.16.2 correct the Work;
 - 27.16.3 replace the Work, and if the Contractor fails to furnish timely disposition instructions, the Purchaser may dispose of the non-confirming Work for the Purchaser's account in a reasonable manner, in which case the Purchaser is entitled to reimbursement from the Contractor, or from the proceeds, for the reasonable expenses of care and disposition, as well as for excess costs incurred or to be incurred;
 - 27.16.3.1 obtain applicable data and reports; and/or
 - 27.16.3.2 charge the Contractor for the costs incurred by the Purchaser.
- 27.17 In no event shall the Purchaser be responsible for any extension or delays in the scheduled deliveries or periods of performance under this Contract as a result of the Contractor's obligations to correct Defects, nor shall there be any adjustment of the delivery schedule or period of performance as a result of the Correction of Defects unless provided by a supplemental agreement with adequate consideration.

27.18 The rights and remedies of the Purchaser provided in this Clause shall not be affected in any way by any terms or conditions of this Contract concerning the conclusiveness of inspection and Acceptance and are in addition to, and do not limit, any rights afforded to the Purchaser by any other Clause of this Contract or applicable law.

28. **RIGHT OF ACCESS, EXAMINATION OF RECORDS**

28.1 The Contractor shall give to the Purchaser and/or his representative(s) full and free access to his premises as and when required for the purpose of this Contract and shall ensure the same right of access to the premises of his Sub-contractors, by the inclusion in any such Sub-contracts of a provision substantially as set forth in this Clause.

28.2 The Purchaser and/or his representative(s) shall continue to have such right of access and examination of records as set forth in Clause 28.1 above until final payment under the Contract or the end of the warranty provisions under the Contract, whichever occurs later.

28.3 The expiration of the Purchaser's rights as set forth in Clause 28.2 is further subject to the provisions of Clause 19 (Pricing of Changes, Amendments and Claims), where a three (3) year right is established following the agreement of contractual amendments or the settlement of claims based upon the submission of cost and pricing data.

28.4 The period of access and examination described in Clause 28.1 above for records not related to cost aspects of a dispute or claim but which relate to issues of fact arising under either proceedings under Clause 41 (Disputes) or Clause 42 (Arbitration), or the settlement of claims made by either Party pursuant to the performance of this Contract, shall continue until such appeals, litigation or claims have been disposed of.

29. **PATENT AND COPYRIGHT INDEMNITY**

29.1 The Contractor shall assume all liability against any and all third party claims that the services, Work and/or parts thereof, in whole or in part, infringe(s) an IPR in force in any countries, arising out of the manufacture, import, export, performance of the services or delivery of Work and/or out of the use or disposal by, or for the account of, the Purchaser of such Services and/or Work. The Contractor shall reimburse and/or indemnify the Purchaser, its officers, agents, employees and/or consultants: (i) for all costs, fees, damages, awards, settlement amounts and any other expenses awarded to the third party right holder against Purchaser and/or the final beneficiaries of the Work in relation to said third party claim; and (ii) for the costs and expenses incurred by the Purchaser in relation to said third party claims, including attorney fees. The Contractor shall be responsible for obtaining any licences necessary for the performance of this Contract and for making all other arrangements required to indemnify

the Purchaser from any liability for IPR infringement in said countries.

29.2 Each Party shall immediately notify the other of any intellectual property infringement claims of which he has knowledge and which pertain to the Work under this Contract.

29.3 This indemnity shall not apply under the following circumstances:

29.3.1 Patents or copyright which may be withheld from issue by order of the applicable government whether due to security regulations or otherwise;

29.3.2 An infringement resulting from specific written instructions from the Purchaser under this Contract;

29.3.3 An infringement resulting from changes made to the Work by the Purchaser without the Contractor prior written consent;

29.3.4 An infringement resulting from changes or additions to the Work subsequent to final delivery and Acceptance under this Contract.

30. INTELLECTUAL PROPERTY

30.1 *Purchaser Background IPR*

30.1.1 The Contractor is licensed to use, non-exclusively and royalty-free any Purchaser Background IPR that is or will be made available for the sole purpose of carrying out the Work.

30.1.2 The Contractor shall not use any Purchaser Background IPR other than for the purpose of carrying out the Work without the prior written agreement of the Purchaser. Any such agreement shall include the terms relating to such use.

30.1.3 The Purchaser gives no warranty as to the validity of any Purchaser Background IPR. The Contractor shall not do anything or act in any way which is inconsistent with or prejudicial to the ownership by the Purchaser of any Purchaser Background IPR.

30.2 *Contractor Background IPR*

30.2.1 Any use of Contractor Background IPR for the purpose of carrying out the Work pursuant to the Contract shall be free of any charge to Purchaser. The Contractor hereby grants to NATO a non-exclusive, royalty-free and irrevocable licence to use and authorise others to use any Contractor Background IPR for the purpose of exploiting or otherwise using the Foreground IPR.

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30.2.2 Any use of Contractor Background IPR is not limited to the number of users or the number of licenses required by the Contract for the use of system. The Purchaser reserves the right to use the Contractor Background IPR for any number of users and number of licenses as required, at no additional cost to the Purchaser.

30.3 ***Foreground IPR***

30.3.1 All Foreground IPR is the property of the Purchaser on behalf of NATO. Consequently, no statement shall be made restricting the rights of the Purchaser in the Foreground IPR.

30.3.2 The Contractor shall ensure that suitable arrangements are in place between its employees, agents, consultants and itself regarding Foreground IPR generated by said employees, agents, Subcontractors and consultants to allow the Contractor to fulfil its obligations under Clause 30.3.1 above.

30.3.3 The Contractor shall be entitled to use Foreground IPR on a non-exclusive, royalty free basis solely for the purpose of carrying out the Work.

30.3.4 The Contractor shall not use any Foreground IPR other than for the purpose of carrying out the Work without the Purchaser's prior written agreement. Any such agreement shall include terms relating to such use.

30.3.5 The Contractor shall provide the Purchaser, at the latest upon delivery of the Work and thereafter for the duration of the warranty and any purchased CLS agreement period, with full documented records of information in relation to the Work, including but not limited to, all drawings, specifications and other data that is necessary or useful to further develop, maintain and operate the Work.

30.3.6 The Contractor shall:

30.3.6.1 do all things necessary and sign all necessary or useful documents to enable the Purchaser to obtain the registration of the Foreground IPR as the Purchaser may require and select; and

30.3.6.2 to execute any formal assignment or other documents as may be necessary or useful to vest title to any Foreground IPR in the Purchaser.

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- 30.3.7 The Contractor undertakes:
- 30.3.7.1 to notify the Purchaser promptly of any invention or improvement to an invention or any design conceived or made by the Contractor; and
 - 30.3.7.2 to provide the Purchaser with such information as the Purchaser may reasonably request in order to:
 - (i) determine the patentability of such invention or improvement; (ii) assess the need for registering such invention or improvement; and (iii) evaluate the potential value to the Purchaser of such a patent or registration if issued.
- 30.3.8 If the Purchaser determines that it wishes to apply for one or more patents for the disclosed invention or improvement or for a registration for the disclosed design, it will prosecute such application(s) at its own expense. The Contractor undertakes to provide the Purchaser, at the Purchaser's expense, with such information and assistance as the Purchaser shall reasonably require to prosecute such application(s).

30.4 ***Third Party IPR***

- 30.4.1 Any use of Third Party IPR for the purpose of carrying out the Work pursuant to the Contract shall be free of any charge to the Purchaser. The Contractor hereby grants to NATO a non-exclusive, royalty-free and irrevocable licence to use and authorise others to use any Third Party IPR for the purpose of exploiting or otherwise using the Foreground IPR.
- 30.4.2 With the exception of COTS items, any use of Third Party IPR is not limited to the number of users or the number of licenses required by the Contract for the use of system. With the exception of COTS items, the Purchaser reserves the right to use the Third Party IPR for any number of users and number of licenses as required, at no additional cost to the Purchaser.
- 30.4.3 For COTS items, the Contractor shall be responsible for obtaining licences from the Third Party in line with the requirements of the Statement of Work (including numbers and locations of licences).
- 30.4.4 Where Third Party IPR is the subject of a licence or other agreement between the third party and the Purchaser or the Contractor, the Contractor shall not use any Third Party IPR for the purposes of carrying out work pursuant to the Contract

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without the prior written approval of the Purchaser. Contractor shall inform Purchaser in advance of any restrictions on the Purchaser's use.

30.4.5 If, after the award of the Contract, the Contractor becomes aware of the existence of any Third Party IPR which the Contractor is using or believes is needed for the performance of the Contract, the Contractor shall immediately give the Purchaser a written report identifying such IPR and if they are compliant with the other provisions in the contract. Any Third Party IPR under this clause is subject to the prior written approval by the Purchaser.

30.4.6 The Purchaser may consider open source solutions alongside proprietary ones in developments provided that such solutions are fully compliant with the requirements of this Contract. Contractor shall disclose in advance the open source license associated with the contemplated open source solution. The Purchaser reserves the right to refuse the incorporation of open source solutions that are deemed inadequate for incorporation in a NATO application (e.g. post-back obligations).

30.5 Subcontractor IPR

30.5.1 When placing a Sub-contract which is concerned with or involves the creation of IPR, the Contractor shall ensure that the Sub-contractor enters into the same agreement for the use of the IPR as stipulated in this Contract in such a way that the Purchaser will be entitled to use the IPR as agreed between the Purchaser and the Contractor. The Contractor shall include in the Sub-contract the content of the provisions of this Clause.

31. SOFTWARE WARRANTY

31.1 Statement of the Warranties

31.1.1 The Contractor warrants that each Software delivered under this Contract will conform to all requirements specified in the Contract. This will also include Software design specifications, including software configuration.

31.1.2 Regardless of the Purchaser initiation of or participation in developing Software design or specifications, each Software delivered under this Contract will conform to the essential Performance requirements set forth in this Contract, as those essential Performance requirements measured,

tested, and verified by tests and procedures set forth in this Contract.

31.2 Notification Requirement

31.2.1 The Contractor agrees to notify the Purchaser in writing immediately after he first discovers that a defect(s) may exist in Software delivered under this Contract, unless the Purchaser has first notified the Contractor, in writing, of the same defect(s).

31.2.2 The Purchaser shall notify the Contractor upon discovery that a defect(s) may exist in any Software accepted by the Purchaser under this Contract, unless the Contractor has first notified the Purchaser, in writing of the same defect(s).

31.3 Duration of the Warranty

31.3.1 For each Software delivered under this Contract, the Contractor Warranties stated in paragraph 31.1 above shall extend to all defects discovered within 12 months from the date of acceptance of the Software by the Purchaser.

31.4 Purchaser Remedies for Breach

31.4.1 The rights and remedies of the Purchaser under this Software Warranty:

31.4.2 Are in addition to any rights and remedies of the Purchaser under any other provision of this Contract, including, but not limited to, the Purchaser's rights in relation to latent defects, fraud, or gross mistakes that amount to fraud; and

31.4.3 Shall apply notwithstanding inspection, acceptance, or any other clauses or terms of this Contract;

31.4.4 In the event of any defect as defined herein with respect to a Software delivered under this Contract, the Purchaser, in its sole discretion may:

31.4.4.1 Require the Contractor to take such action as may be necessary to eliminate the defect, at no additional cost to the Purchaser for materials, labour, transportation, or otherwise;

31.4.4.2 Require the Contractor to supply, at no additional cost to the Purchaser, all materials and instructions necessary for the Purchaser to eliminate the defect and to pay costs reasonably incurred by the Purchaser in taking such action as

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may be necessary to eliminate the defect, or;

31.4.4.3 Equitably reduce the contract price

31.4.5 The Purchaser may elect the remedies provided in paragraph 31.4.4.1 or 31.4.4.2 above notwithstanding any dispute respecting the existence of or responsibility for any alleged defect as defined herein with respect to any Software delivered under this contract, provided that the Contractor will not be required to pay costs incurred by the Purchaser under paragraph 31.4.4.2 until final determination of the defect. In the event that the alleged defect is subsequently determined not to be a defect subject to this warranty but the Contractor has incurred costs under paragraph 31.4.4.1 and 31.4.4.2 as required by the Contract by virtue of this paragraph 31.4.3, the contract price under this contract shall be equitably adjusted.

31.4.6 Election by the Purchaser of the remedy provided under paragraph 31.4.4.1 and 31.4.4.2 above shall not preclude subsequent election of a different remedy under paragraph 31.4.4 if the defect is not successfully eliminated under the prior election with one month of the notification under paragraph 31.4.2 above.

31.5 Limitations and Exclusions from Warranty Coverage

31.5.1 This Software Warranty shall not apply to alleged defects that the Contractor demonstrates to be in or otherwise attributable to the Purchaser furnished property as determined, tested, and verified by the tests and procedures set forth in this Contract. Notwithstanding this paragraph , a defect is not attributable to Purchaser furnished property if it is the result of installation or modification of Purchaser furnished property by the Contractor or of the integration of Purchaser furnished property into any Software delivered under this Contract.

31.5.2 Any Purchaser Furnished Property needs to be checked and approved by the Contractor. Approval is implied once the Contractor starts using the Purchaser Furnished Property.

31.6 Markings

31.6.1 All Deliverables under this Contract will identify the owner of the Deliverable and if applicable, will prominently include notice of the existence of its warranty, its substance, its duration, and instructions to notify the Purchaser promptly if the Software is found to be defective. The markings should also be included in

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the operating and/or maintenance manuals or instructions accompanying such Software.

- 31.6.2 All Deliverables regardless of the media they are delivered onto and which are subject to export control restrictions shall be clearly marked indicating the type and nature of restriction as well as the national law imposing such restrictions. Nothing in this provision is intended to invalidate, void, or otherwise limit the rights of the Purchaser under this Contract.

32. NATO CODIFICATION

- 32.1 For the purposes of this Clause "Technical Data" means the drawings, specifications and technical documentation of those items designated by the Purchaser to support the equipment covered by the Contract, and required to fully identify the items and, if applicable, draft item identifications to the extent and in the form to be agreed between the Codification Authority and the Contractor.
- 32.2 In order to ensure the orderly identification of equipment, the Contractor shall furnish at the request of the Codification Authority the Technical Data required for the identification of the items of supply to the NATO codification system in the time scale stated in this Contract.
- 32.3 A recommended spare parts list or a similar data carrier prepared in accordance with instructions provided by the Purchaser as the basis for codification shall be supplied by the Contractor by the date established in this Contract.
- 32.4 The Contractor shall supply or require his Sub-contractor(s)/supplier(s) to supply on request for the period of time specified in the Contract the relevant Technical Data for all items and sub-contracted items to the Codification Authority and the Purchaser. The Contractor shall require that each Sub-contractor/supplier shall include identical conditions in any subsequent order which he may place.
- 32.5 The drawings, specifications, related documentation and, if applicable, draft item identifications, prepared when possible by the true manufacturer of the item, shall be supplied by the Contractor or his Sub-contractor(s)/supplier(s) direct to the Codification Authority and, if required, to the Purchaser as and when they become available or, at the latest within the time limits specified in the Contract. The Contractor shall inform the Codification Authority and Purchaser within 21 Days of receipt of the request if the required Technical Data are not immediately available, and shall impose a similar obligation upon his Sub-contractor(s)/supplier(s).

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- 32.6 Except as hereinafter provided, the Contractor shall require the Sub-contractor(s)/supplier(s) to furnish on request the information direct to the Codification Authority in the Sub-contractor(s)/supplier(s)' country, but the Contractor shall remain responsible for ensuring that the information is so furnished. In the event of a Sub-contract order being placed with a manufacturer in a non-NATO country, the Contractor shall be responsible for obtaining Technical Data from the Sub-contractor/supplier and furnishing it to the Purchaser.
- 32.7 Technical Data relating to any Sub-contractor's/supplier's items shall include but not be limited to the name and address of the true manufacturer(s), his/their true reference number(s), drawing or item Part number(s) and applicable data in addition to any Part or reference number(s) allocated by the Contractor, plus draft item identification(s) if required by the Codification Authority.
- 32.8 The Contractor shall provide the Technical Data required for codification of those items ordered with this Contract and also for the pertaining support items ordered with future contracts, including updating information regarding all agreed modifications, design or drawing changes made to the equipment or detailed Parts.
- 32.9 If the Contractor has previously supplied Technical Data (for the purpose stated in Clause 31.2), the Contractor is to state this fact and indicate to whom they were supplied and the Contractor shall not under normal circumstances be required to make a further supply of the Technical Data already provided. The Technical Data furnished by the Contractor and Sub-contractor(s)/supplier(s) are to be presented in accordance with the requirements for the preparation of item identification(s) as outlined in the Guide for Industry provided by the Codification Authority.
- 32.10 The Contractor should contact the Codification Authority for any information concerning the NATO codification system. This information is to be found at: "http://www.nato.int/structur/ac/135/ncs_guide/e_guide.htm"

32.11 Markings

- 32.11.1 All Deliverables under this Contract will identify the owner of the Deliverable and, if applicable, will prominently include notice of the existence of its warranty, its substance, its duration, and instructions to notify the Purchaser promptly if the Software is found to be defective. The markings should also be included in the operating and/or maintenance manuals or instructions accompanying such Software.
- 32.11.2 All Deliverables regardless of the media they are delivered onto

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and which are subject to export control restrictions shall be clearly marked indicating the type and nature of restriction as well as the national law imposing such restrictions. Nothing in this provision is intended to invalidate, void, or otherwise limit the rights of the Purchaser under this Contract.

33. RELEASE FROM CLAIMS

33.1 Prior to final payment under this Contract, the Contractor and each assignee under this Contract shall execute and deliver a release discharging the Purchaser, its officers, agents and employees from all liabilities, obligations and claims arising out of or under this Contract subject only to the following exceptions:

33.1.1 specified claims in stated amounts or in estimated amounts where the amounts are not susceptible to exact statement by the Contractor;

33.1.2 claims for reimbursement of costs (other than expenses of the Contractor by reason of his indemnification of the Purchaser against patent liability) including reasonable expenses incidental thereto, incurred by the Contractor under the provisions of this Contract relating to patents.

33.1.3 a patent infringement resulting from specific written instructions from the Purchaser under this Contract.

33.1.4 a patent infringement resulting from changes or additions to the goods and services subsequent to final delivery and acceptance under this Contract.

34. ASSIGNMENT OF CONTRACT

34.1 The Purchaser reserves the right to assign this Contract, in whole or in part, to another NATO body, agency or representative within NATO or NATO Nations. In such a case, the Purchaser shall notify the Contractor accordingly in writing.

34.2 NATO shall remain responsible for its obligations under the Contract and for the actions of the body, agency or representative to which this Contract may be assigned.

35. TRANSFER AND SUB-LETTING

35.1 The Contractor shall not give, bargain, sell, assign, sub-let or otherwise dispose of the Contract or any part thereof or the benefit or advantage of the

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Contract or any part thereof without the prior written consent of the Purchaser.

36. PURCHASER DELAY OF WORK

36.1 If the performance of all or any part of the Work is delayed or interrupted by an act of the Purchaser in the administration of this Contract, which act is not expressly or implicitly authorised by this Contract, or by the Purchaser's failure to act within the time specified in this Contract (or within a reasonable time if no time is specified), an adjustment shall be made for any increase in the cost of performance of this Contract caused by such delay or interruption and the Contract modified in writing accordingly.

36.2 Adjustment shall be made also in the delivery or performance dates and any other contractual provision affected by such delay or interruption. However, no adjustment shall be made under this Clause for any delay or interruption:

36.2.1 to the extent that performance would have been delayed or interrupted by any other cause, including the fault or negligence of the Contractor; or

36.2.2 for which an adjustment is provided or excluded under any other provision of this Contract.

36.3 No claim under this Clause shall be allowed:

36.3.1 if the Contractor has failed to notify the Purchaser in writing of the act or failure to act, indicating that this act or failure to act will result in a delay or increased costs;

36.3.2 for any costs incurred more than twenty (20) Days before the Contractor shall have notified the Purchaser in writing of the act or failure to act involved; and

36.3.3 unless the monetary claim, in an amount stated, is asserted in writing as soon as practicable after the termination of such delay or interruption, but not later than the date of final payment under the Contract.

37. CONTRACTOR NOTICE OF DELAY

37.1 In the event that the Contractor encounters difficulty in complying with the Contract schedule date(s) for whatever reason, including actual or potential labour disputes, the Contractor shall immediately notify the Contracting Authority in writing, giving pertinent details. This data shall be deemed to be informational in character and shall not be construed as a waiver by the Purchaser of any schedule or date, or of any rights or remedies provided by law or under this Contract.

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37.2 Notwithstanding the above the Contractor shall be deemed to be in delay without notice from the Purchaser and only by simple expiry of the due date.

38. LIQUIDATED DAMAGES

38.1 If the Contractor:

38.1.1 fails to meet the delivery schedule of the Work or any performance milestones specified in the Schedule of Work to this Contract, or any extension thereof, or

38.1.2 fails to obtain acceptance of the delivered Work as specified in the Contract, or, if no time for acceptance is specified in the contract within a reasonable time after work is delivered.

the actual damage to the Purchaser for the delay will be difficult or impossible to determine. Therefore, in lieu of actual damages the Contractor shall pay to the Purchaser, for each day of delinquency in achieving the deadline or milestone, fixed and agreed liquidated damages of .1% (one tenth of per cent) per day of the associated payment set forth in the Schedule of Payments provided in the Contract Special Provisions. If no Schedule of Payments is specifically set forth in the Contract Special Provisions, the liquidated damages will be assessed against the price of the applicable contract line item (CLIN) of the Schedule of Supplies, Services and Prices.

38.2 In addition to the liquidated damages referred to above, the Purchaser shall have the possibility of terminating this Contract in whole or in part, as provided in Clause 39 (Termination for Default). In the event of such termination, the Contractor shall be liable to pay the excess costs provided in Clause 38.5.

38.3 The Contractor shall not be charged with liquidated damages when the delay arises out of causes beyond the control and without the fault or negligence of the Contractor as defined in Clause 39.6 (Termination for Default). In such event, subject to the provisions of Clause 41 (Disputes), the Purchaser shall ascertain the facts and extent of the delay and shall extend the time for performance of the Contract when in his judgement the findings of the fact justify an extension.

38.4 Liquidated damages shall be payable to the Purchaser from the first day of delinquency and shall accrue at the rate specified in Clause 38.1 to 20% of the value of each line item individually not to exceed 15% of the value of the total Contract. These liquidated damages shall accrue automatically and without any further notice being required.

38.5 The rights and remedies of the Purchaser under this clause are in addition to any other rights and remedies provided by law or under this Contract.

39. TERMINATION FOR DEFAULT

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- 39.1 The Purchaser may, subject to Clause 39.6 below, by written notice of default to the Contractor, terminate the whole or any part of this Contract if the Contractor, inclusive but not limited to:
- 39.1.1 fails to make delivery of all or part of the Work within the time specified in the contract or any agreed extension thereof;
 - 39.1.2 fails to make progress as to endanger performance of this Contract in accordance with its terms;
 - 39.1.3 fails to meet the technical requirements or the Specifications of the Contract;
 - 39.1.4 fails to comply with Clause 11 (Security);
 - 39.1.5 transfer this Contract without the Purchaser's prior written consent;
 - 39.1.6 breaches any provision of this Contract; or
- 39.2 In the case of any of the circumstances set forth in Clause 39.1 above, the Purchaser shall issue a letter to the Contractor stating that an actual or potential default exists and requiring a response from the Contractor within ten (10) Days that identifies:
- 39.2.1 in the case of late delivery of Work, when the Contractor shall deliver the Work and what circumstances exist which may be considered excusable delays under Clause 39.6.
 - 39.2.2 in the case of the other circumstances identified in Clause 39.1 above, what steps the Contractor is taking to cure such failure(s) within a period of ten Days (or such longer period as the Purchaser may authorise in writing) after receipt of notice in writing from the Purchaser specifying such failure and identifying any circumstances which exist which may be considered excusable under Clause 39.6.
- 39.3 The Purchaser shall evaluate the response provided by the Contractor or, in the absence of a reply within the time period mentioned in Clause 39.2, all relevant elements of the case, and make a written determination within a reasonable period of time that:
- 39.3.1 sufficient grounds exist to terminate the Contract in whole or in part in accordance with this Clause and that the Contract is so terminated;

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- 39.3.2 there are mitigating circumstances and the Contract should be amended accordingly; or
 - 39.3.3 the Purchaser will enter a period of forbearance in which the Contractor must show progress, make deliveries, or comply with the Contract provisions as specified by the Purchaser. The Purchaser may apply other remedial actions as provided by this Contract during such period of forbearance. This period of forbearance shall in no event constitute a waiver of Purchaser's rights to terminate the Contract for default.
- 39.4 At the end of the period of forbearance, which may be extended at the Purchaser's discretion, the Purchaser may terminate this Contract in whole or in part as provided in Clause 39.1 if the Contractor has not made adequate progress, deliveries or compliance with the Contract provisions which were the terms of the period of forbearance.
- 39.5 In the event the Purchaser terminates this Contract in whole or in part, as provided in Clause 39.1, the Purchaser may procure, upon such terms and in such manner as the Purchaser may deem appropriate, Work similar to those so terminated, and the Contractor shall be liable to the Purchaser for any excess costs for such similar Work; however, the Contractor shall continue the performance of this Contract to the extent not terminated under the provisions of this clause.
- 39.6 Except with respect to the default of Sub-contractors, the Contractor shall not be held liable for a termination of the Contract for default if the failure to perform the Contract arises out of causes beyond the control and without the fault or negligence of the Contractor.
- 39.6.1 Such causes may include, but are not restricted to, acts of God, acts of the public enemy, acts of the Purchaser in its contractual capacity, acts of sovereign governments which the Contractor could not reasonably have anticipated, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and unusually severe weather; but in every case the failure to perform must be beyond the control and without the fault or negligence of the Contractor.
 - 39.6.2 If the failure to perform is caused by the default of a Sub-contractor, and if such default arises out of causes beyond the control of both the Contractor and Sub-contractor, without the fault or negligence of either of them, the Contractor shall not be held liable for a termination for default for failure to perform unless the Work to be furnished by the Sub-contractor were obtainable from other sources in sufficient time to permit

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the Contractor to meet the required delivery schedule.

39.7 If this Contract is terminated as provided in Clause 39.1, the Purchaser, in addition to any other rights provided in this Clause and the Contract, may require the Contractor to transfer title and deliver to the Purchaser, in the manner and to the extent directed by the Purchaser:

39.7.1 any completed Work with associated rights ;

39.7.2 such partially completed Work, materials, Parts, tools, dies, jigs, fixtures, plans, drawings, information, and Contract rights (hereinafter called "Manufacturing materials") with associated rights as the Contractor has specifically produced or specifically acquired for the performance of such part of this Contract as has been terminated;

39.8 In addition to Clause 39.7, the Contractor shall, upon direction of the Purchaser, protect and preserve property in the possession of the Contractor in which the Purchaser has an interest.

39.9 Payment for completed Work delivered to and accepted by the Purchaser shall be at the Contract price.

39.10 Payment for manufacturing materials delivered to and accepted by the Purchaser and for the protection and preservation of property shall be in an amount agreed upon by the Contractor and Purchaser, failure to agree to such amount shall be a dispute within the meaning of Clause 41 (Disputes).

39.11 The Purchaser may withhold from amounts otherwise due to the Contractor for such completed Work or manufacturing materials such sum as the Purchaser determines to be necessary to protect the Purchaser against loss because of outstanding liens or claims of former lien holders.

39.12 If, after notice of termination of this Contract under the provisions of this Clause, it is determined for any reason that the Contractor was not in default under the provisions of this Clause, or that the default was excusable under the provisions of this Clause, the rights and obligations of the Parties shall be the same as if the notice of termination had been issued pursuant to Clause 40 (Termination for the Convenience of the Purchaser).

39.13 If after such notice of termination of this Contract under the provisions of this Clause, it is determined for any reason that the Contractor was not in default under the provisions of this Clause and that the Parties agree that the Contract should be continued, the Contract shall be equitably adjusted to compensate for such termination and the Contract modified accordingly. Failure to agree to any such adjustment shall be a dispute within the meaning of Clause 41 (Disputes).

39.14 The rights and remedies of the Purchaser provided in this Clause shall not be

exclusive and are in addition to any other rights and remedies provided by law or under this Contract.

40. TERMINATION FOR THE CONVENIENCE OF THE PURCHASER

- 40.1 The performance of Work under this Contract may be terminated by the Purchaser in accordance with this Clause in whole, or from time to time in part, whenever the Purchaser shall determine that such termination is in the best interest of the Purchaser.
- 40.2 Any such termination shall be effected by delivery to the Contractor of a written notice of termination, signed by the Contracting Authority, specifying the extent to which performance of Work under the Contract is terminated, and the date upon which such termination becomes effective.
- 40.3 After receipt of a Notice of Termination and except as otherwise directed by the Contracting Authority, the Contractor shall:
 - 40.3.1 stop the Work on the date and to the extent specified in the notice of termination;
 - 40.3.2 place no further orders or Sub-contracts for Work, Parts, materials, services or facilities, except as may be necessary for completion of such portion of the Work under the Contract as is not terminated;
 - 40.3.3 terminate all orders and Sub-contracts to the extent that they relate to the performance of Work terminated by the Notice of Termination;
 - 40.3.4 assign to the Purchaser, in the manner, at the times and to the extent directed by the Purchaser, all of the right, title and interest of the Contractor under the orders and Sub-contracts so terminated, in which case the Purchaser shall have the right, in its discretion, to settle or pay any or all claims arising out of the termination of such orders and Sub-contracts;
 - 40.3.5 settle all outstanding liabilities and all claims arising out of such termination of orders and Sub-contracts, with the approval or ratification of the Purchaser to the extent he may require, which approval or ratification shall be final for all the purposes of this Clause;
 - 40.3.6 transfer title and deliver to the Purchaser in the manner, at the times, and to the extent, if any, directed by the Contracting Authority of:

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- 40.3.6.1 the fabricated parts, work in process, completed work, Work, and other material produced as a part of, or acquired in connection with the performance of the Work terminated by the notice of termination, and
- 40.3.6.2 the completed or partially completed plans, drawings, information, and other property which, if the Contract had been completed, would have been required to be furnished to the Purchaser;
- 40.3.7 use his best efforts to sell, in the manner, at the times, to the extent, and at the price or prices directed or authorised by the Contracting Authority, any property of the types referred to in Clause 40.3.6 above. However, the Contractor:
 - 40.3.7.1 shall not be required to extend credit to any Buyer; and
 - 40.3.7.2 may acquire any such property under the conditions prescribed by and at a price or prices approved by the Purchaser; and provided further that the proceeds of any such transfer or disposition shall be applied in reduction of any payments to be made by the Purchaser to the Contractor under this Contract or shall otherwise be credited to the price or cost of the Work or paid in such manner as the Contracting Authority may direct;
- 40.3.8 complete performance of such part of the Work as shall not have been terminated by the Notice of Termination; and
- 40.3.9 take such action as may be necessary, or as the Purchaser may direct, for the protection and preservation of the property related to this Contract which is in the possession of the Contractor and in which the Purchaser has or may acquire an interest.
- 40.4 The Contractor may submit to the Purchaser a list, certified as to quantity and quality, of any or all items of termination inventory not previously disposed of, exclusive of items the disposition of which has been directed or authorised by the Purchaser, and may request the Purchaser to remove such items or enter into a storage agreement covering the same; provided that the list submitted

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shall be subject to verification by the Purchaser upon removal of the items, or if the items are stored, within forty-five (45) Days from the date of submission of the list, and any necessary adjustment to correct the list as submitted shall be made prior to final settlement.

- 40.5 After receipt of a notice of termination, the Contractor shall submit to the Purchaser his termination Claim for the Work covered by the notice of termination, in the form and with certification prescribed by the Purchaser. Such claim shall be submitted promptly but in no event later than six (6) months from the effective date of termination, unless one or more extensions are granted in writing by the Purchaser, upon request of the Contractor made in writing within such six-month period or authorised extension thereof. However, if the Purchaser determines that the facts justify such action, the Purchaser may receive and act upon any such termination claim at any time after such six-month period or any extension thereof. Upon failure of the Contractor to submit his termination claim within the time allowed, the Purchaser may determine on the basis of information available to him, the amount, if any, due to the Contractor by reason of the termination and shall thereupon pay to the Contractor the amount so determined.
- 40.6 Subject to the provisions of Clause 40.5, the Contractor and the Purchaser may agree upon the whole or any part of the amount or amounts to be paid to the Contractor by reason of the total or partial termination of Work pursuant to this Clause, which amount or amounts may include a reasonable allowance for profit on work done; provided that such agreed amount or amounts exclusive of settlement costs shall not exceed total Contract price as reduced by the amount of payments otherwise made and as further reduced by the Contract price of the Work not terminated. The Contract shall be amended accordingly and the Contractor shall be paid the amount agreed.
- 40.7 In the event of the failure of the Contractor and the Purchaser to agree as provided in Clause 40.6 upon the whole amount to be paid to the Contractor by reason of the termination of Work pursuant to Clause 40, the Purchaser shall pay to the Contractor the amounts determined by the Purchaser as follows, but without duplication of any amounts agreed upon in accordance with Clause 40.6 the total of:
- 40.7.1 for completed Work accepted by the Purchaser (or sold or acquired as provided in Clause 40.3 above) and not therefore paid for, a sum equivalent to the aggregate price for such Work computed in accordance with the price or prices specified in the Contract, appropriately adjusted for any saving of freight or other charges;
 - 40.7.2 the costs incurred in the performance of the Work terminated including initial costs and preparatory expense allocable thereto, but exclusive of any costs attributable

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to Work paid or to be paid for under Clause 40.7.1;

- 40.7.3 the cost of settling and paying claims arising out of the termination of work under Sub-contracts or orders, as provided in Clause 40.3.5, which are properly chargeable to the terminated portion of the Contract, exclusive of amounts paid or payable on account of Work or materials delivered or services furnished by Sub-contractors or vendors prior to the effective date of the notice of termination, which amounts shall be included in the costs payable under Clause 40.7.2; and
 - 40.7.4 a sum, as profit on Clause 40.7.1 above, determined by the Purchaser to be fair and reasonable; provided, however, that if it appears that the Contractor would have sustained a loss on the entire Contract, had it been completed, no profit shall be included or allowed and an appropriate adjustment shall be made reducing the amount of the settlement to reflect the indicated rate of loss; and
 - 40.7.5 the reasonable costs of settlement, including accounting, legal, clerical and other expenses reasonably necessary for the preparation of settlement claims and supporting data with respect to the terminated portion of the Contract and for the termination and settlement of Sub-contracts there under, together with reasonable storage, transportation, and other costs incurred in connection with the protection, or disposition of property allocable to this Contract.
- 40.8 The total sum to be paid to the Contractor under Clause 40.7 shall not exceed the total Contract price as reduced by the amount of payments otherwise made and as further reduced by the Contract price of Work not terminated.
- 40.9 Except for normal spoilage, and except to the extent that the Purchaser shall have otherwise expressly assumed the risk of loss, there shall be excluded from the amounts payable to the Contractor, as provided in Clause 40.7 above, the fair value, as determined by the Purchaser, of property which is destroyed, lost, stolen, or damaged so as to become undeliverable to the Purchaser, or to a buyer pursuant to Clause 40.3.7 above.
- 40.10 The Contractor shall have the right to dispute, under the Clause 41 (Disputes), any determination made by the Purchaser under Clauses 40.5 and 40.7, except that if the Contractor has failed to submit his claim within the time provided in Clause 40.5 and has failed to request extension of such time, the Contractor shall be foreclosed from his right to dispute said determination. In

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any case where the Purchaser has made a determination of the amount due under Clauses 40.5 and 40.7, the Purchaser shall pay the Contractor the following:

40.10.1 if there is no right of appeal hereunder or if no timely appeal has been taken, the amount so determined by the Purchaser, or

40.10.2 if an appeal has been taken, the amount finally determined on such appeal.

40.11 In arriving at the amount due to the Contractor under this Clause there shall be deducted:

40.11.1 all unliquidated advance or other payments on account theretofore made to the Contractor, applicable to the terminated portion of this Contract;

40.11.2 any claim which the Purchaser may have against the Contractor in connection with this Contract; and

40.11.3 the agreed price for, or the proceeds of the sale of, any materials, Work, or other things acquired by the Contractor or sold, pursuant to the provisions of this Clause, and not otherwise recovered by or credited to the Purchaser.

40.12 If the termination hereunder is partial, prior to the settlement of the terminated portion of this Contract, the Contractor may file with the Purchaser, in accordance with Clause 16 (Changes), a request in writing for an equitable adjustment of the price or prices relating to the continued portion of the Contract (the portion not terminated by the notice of termination), and such equitable adjustment as may be agreed upon shall be made in such price or prices.

40.13 The Purchaser may from time to time, under such terms and conditions as it may prescribe, make partial payments and payments on account against costs incurred by the Contractor in connection with the terminated portion of this Contract whenever in the opinion of the Purchaser the aggregate of such payments shall be within the amount to which the Contractor will be entitled hereunder. If the total of such payment is in excess of the amount finally agreed or determined to be due under this Clause, such excess shall be payable by the Contractor to the Purchaser upon demand, together with interest calculated using the average of the official base rate(s) per annum of the deposit facility rate as notified by the European Central Bank or such other official source as may be determined by the Purchaser, for the period from the date the excess is received by the Contractor to the date such excess is repaid to the Purchaser, provided, however, that no interest shall be charged with respect to any such excess payment attributed to a reduction in the

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Contractor's claim by reason of retention or other disposition of termination inventory until ten days after the date of such retention or disposition or such later date as determined by the Purchaser by reason of the circumstances.

40.14 Unless otherwise provided for in this Contract, the Contractor, from the effective date of termination and for a period of three years after final settlement under this Contract, shall preserve and make available to the Purchaser at all reasonable times at the office of the Contractor, but without direct charge to the Purchaser, all his books, records, documents, computer files and other evidence bearing on the costs and expenses of the Contractor under this Contract and relating to the work terminated hereunder, or, to the extent approved by the Purchaser, photographs, micro-photographs, or other authentic reproductions thereof.

41. DISPUTES

41.1 Except to the extent to which special provision is made elsewhere in the Contract, all disputes, differences or questions which are not disposed of by agreement between the Parties to the Contract with respect to any matter arising out of or relating to the Contract, other than a matter as to which the decision of the Contracting Authority under the Contract is said to be final and conclusive, shall be decided by the Contracting Authority. The Contracting Authority shall reduce his decision to writing and mail or otherwise furnish a copy thereof to the Contractor.

41.2 The Contracting Authority shall not proceed with the evaluation and decision in respect of any claim until and unless the Contractor has submitted the attestation as foreseen in Clause 18 (Claims), as well as the complete proof and evidence of the claim (either by submission or by identification of the relevant documentation).

41.3 The Contracting Authority's decision shall be final and conclusive unless, within 30 Days from the date of receipt of such copy, the Contractor mails or otherwise furnishes to the Contracting Authority his decision to open arbitration proceedings in accordance with the Clause 42 (Arbitration). The burden of proof for both receipt and delivery of such documentation shall be by signed and dated registered mail receipt or by hand receipt as acknowledged and signed by the Contracting Authority.

41.4 Pending final decision of a dispute, the Contractor shall proceed diligently with the performance of the Contract, unless otherwise instructed by the Contracting Authority.

42. ARBITRATION

42.1 Within a period of thirty days from the date of receipt of the notification referred to in Clause 41.3 above, the Parties shall jointly appoint an arbitrator. In the event of failure to appoint an arbitrator, the dispute or disputes shall be

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submitted to an Arbitration Tribunal consisting of three arbitrators, one being appointed by the Purchaser, another by the other contracting party and the third, who shall act as President of the Tribunal, by these two arbitrators. Should one of the Parties fail to appoint an arbitrator during the fifteen days following the expiration of the first period of thirty days, or should the two arbitrators be unable to agree on the choice of the third member of the Arbitration Tribunal within thirty days following the expiration of the said first period, the appointment shall be made, within twenty-one days, at the request of the Party instituting the proceedings, by the Secretary General of the Permanent Court of Arbitration at The Hague.

- 42.2 Regardless of the procedure concerning the appointment of this Arbitration Tribunal, the third arbitrator will have to be of a nationality different from the nationality of the other two members of the Tribunal.
- 42.3 Any arbitrator must be of the nationality of any one of the member states of NATO and shall be bound by the rules of security in force within NATO.
- 42.4 Any person appearing before the Arbitration Tribunal in the capacity of an expert witness shall, if he is of the nationality of one of the member states of NATO, be bound by the rules of security in force within NATO. If he is of another nationality, no NATO classified documents or information shall be communicated to him.
- 42.5 An arbitrator, who, for any reason whatsoever, ceases to act as an arbitrator, shall be replaced under the procedure laid down in Clause 42.1 above.
- 42.6 The Contractor agrees to submit to the Arbitration Tribunal only such issues, facts, evidence and proof which the Contractor had beforehand identified and submitted to the Contracting Authority for decision in accordance with Clause 41 (Disputes). The jurisdictional authority of the Arbitration Tribunal shall be restricted to consider only those identical issues, facts, evidence and proof so identified and submitted to the Contracting Authority.
- 42.7 The Purchaser likewise agrees to restrict its submissions only to the information on which the Contracting Authority based its decision and not to introduce new information and arguments which cannot reasonably be deduced or inferred from the written decision of the Contracting Authority in response to the original dispute.
- 42.8 The Arbitration Tribunal will take its decisions by a majority vote. It shall decide where it will meet and, unless it decides otherwise, shall follow the arbitration procedures of the International Chamber of Commerce in force at the date of signature of the present Contract.
- 42.9 The awards of the arbitrator or of the Arbitration Tribunal shall be final and there shall be no right of appeal or recourse of any kind. These awards shall

determine the apportionment of the arbitration expenses.

42.10 Pending final decision of a dispute, the Contractor shall proceed diligently with the performance of the Contract, unless otherwise instructed by the Contracting Authority.

43. SEVERABILITY

43.1 If one or more of the provisions of this Contract is declared to be invalid, illegal or unenforceable in any respect under any applicable law, the validity, legality and enforceability of the remaining provisions shall not be affected. Each of the Parties shall use its best efforts to immediately and in good faith negotiate a legally valid replacement provision.

44. APPLICABLE LAW

44.1 This Contract shall be governed, interpreted and construed in accordance with the private contract law of the Kingdom of Belgium.

* *

ANNEX 1 TO GENERAL PROVISIONS: PURCHASER'S PRICING PRINCIPLESA. General

1. With regard to all actions included in Clause 19," Pricing of Changes, Amendments and Claims", the Parties agree that the Purchaser's Pricing Principles contained herein shall govern.
2. As may be requested by the Purchaser, the Contractor shall provide documentation that the standards or principles employed in the submission of cost or pricing data are in conformance with governing national policies and regulation. The Contractor, when submitting a price proposal based upon national standards and regulations, shall provide a point of contact within the national body governing such standards and regulations in order to allow Purchaser verification and audit.
3. Where such conformance cannot be demonstrated to the satisfaction of the Purchaser, the Purchaser's Pricing Principles will govern.
4. The Contractor shall clearly state whether national standards and rules or the Purchaser's Pricing Principles and formats are the basis for the price proposal.
5. Whether national standards or Purchaser pricing principles are applied, all cost and pricing data shall be verifiable, factual and include information reasonably required to explain the estimating process.
6. The Contractor shall also incorporate provisions corresponding to those mentioned herein in all sub-contracts, and shall require price and cost analysis provisions be included therein.

B. Purchaser's Pricing Principles

1. Allowable cost

A cost is allowable for consideration by the Purchaser if the following conditions are fulfilled:

- (a) it is incurred specifically for the Contract or benefits both the Contract and other work or is necessary to the overall operation of the business although a direct relationship to any particular product or service cannot be established and is allocated to them in respective proportion according to the benefit received;

i. Direct Costs

A direct cost is any cost which can be identified specifically with a particular cost objective as generally accepted. Direct costs are not limited to items which are incorporated in the end product as material or labour.

ii. Indirect Costs

An indirect cost is one which is not readily subject to treatment as a direct cost. When presented these costs shall be accumulated in logical cost groupings in accordance with sound accounting principles and the Contractor's established practices. An indirect cost may be allocated to more than one final cost objective. An indirect cost shall not be allocated to a final cost objective if other costs incurred for the same purpose, in like circumstances, have been included as a direct cost of that or any other final cost objective. Such costs shall be presented as overhead rates and be applied to each related direct cost grouping.

- (b) The Contractor shall specify the allocation of costs to either of the cost groupings. The method by which costs are accumulated and distributed as part of direct or indirect costs cannot be modified during the duration of the Contract.
- (c) it is reasonable and expedient in its nature and amount and does not exceed that which would be incurred by an ordinary prudent person in the conduct of competitive business;
- (d) it is not liable to any limitations or exclusion as to types or amounts of cost items as set forth herein.
- (e) The Purchaser will review other costs presented against the contract and will determine if they would be allowable.

2. Unallowable Costs

In general all costs which cannot be shown by the contractor to be directly or indirectly of benefit to the Contract are totally unallowable. =Examples of such costs are, among others:

- (a) Advertising costs
- (b) Costs of remuneration, having the nature of profit sharing.
- (c) Costs of maintaining, repairing and housing idle and excess facilities.
- (d) Fines and penalties as well as legal and administrative expenses resulting from a violation of laws and regulations.
- (e) Losses on other contracts or on expected follow-on contracts
- (f) Costs incurred for the creation of reserves for general contingencies or other reserves (e.g. for bad debts, including losses).
- (g) Losses on bad debts, including legal expenses and collection costs in connection with bad debts.

- (h) Costs incurred to raise capital.
- (i) Gains and losses of any nature arising from the sale or exchange of capital assets other than depreciable property.
- (j) Taxes on profits.
- (k) Contractual penalties incurred.
- (l) Commissions and gratuities.
- (m) Interest on borrowings.

3. Rates and Factors

- (a) The Contractor shall inform the Purchaser of his rates and factors the basis upon which they were computed.
- (b) If the Contractor's rates and factors for similar contracts placed with national or international public services have not been established or approved by a government agency or an agency accepted by his government, the Contractor shall provide the necessary data to support the proposed rates.
- (c) The term "provisional " used in the title of a rate or factor means a tentative rate established for interim billing purposes pending negotiation and agreement to the final rate or factor.
- (d) A rate or factor is pre-determined if it is fixed before or during a certain period and based on (estimated) costs to be incurred during this period. An rate or factor is post-determined if it is fixed after a certain period and based on costs actually incurred during this period. Pre-determined rates or factors shall be agreed upon as final rates whenever possible; otherwise the provisions of paragraph 3c above shall apply pending agreement to post-determined rates or factors.
- (e) Such rates or factors shall be determined on the basis of Contractor's properly supported actual cost experience.
- (f) If the rates or factors of the Contractor for similar contracts placed by national or international public services have been established or approved by a government agency or an agency accepted by his government and the Contractor proposes the application of these rates, he shall state the name and address of the agency which has accepted or approved the rates and the period for which they were established. If he proposes rates which vary from the rates mentioned above, he shall furthermore provide a justification for the difference.

4. Profit/Benefit

- (a) Over the entire life cycle of a given acquisition, Profit and/or Benefit may be subject to negotiation.
- (b) Subcontracting profit/benefit amounts are dependent upon the size, nature and oversight needs of the subcontract(s) the prime contractor will use for work performance period.
- (c) Profit/benefit is considered by the Purchaser to be directly related to the anticipated risk of the Contractor during the performance of the Contract.

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BOOK II

PART IV – STATEMENT OF WORK

(SOW)

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SOW ANNEX B: SITE INFORMATION DATA PACKAGE [NR]

SOW ANNEX C: SECURITY ASPECT LETTER & PROJECT SECURITY INSTRUCTIONS

SOW ANNEX D: SUPPORT TO SECURITY ACCREDITATION

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SECTION 1 INTRODUCTION

1.1. Overview

- 1.1.1. This Statement of Work (SOW) describes the responsibilities and efforts to be performed by the Contractor in satisfying the requirements of the Ship Shore Ship Buffer Project in Poland (SSSB-POL). The SOW is comprised of fourteen (14) sections that describe from a technical and the managerial standpoint the requirements for the Contractor's performance during the Contract.
- 1.1.2. The scope of the SSSB-POL project is to procure, design, deliver, install, test and support integration of communication equipment of the SSSB system in Poland. The SSSB-POL project is divided into two separate parts. The first is the Communications and Information System (CIS) project, also referred to as the Electronic Portion (EP) of the SSSB-POL project, which is the subject of this SOW and includes elements of Civil Works (CW). The second was a larger CW project whose responsibility was within another Contract already completed by the Host Nation Poland (HN POL). The present project aim is to procure, install, integrate and test a SSSB system that is consistent with the latest recommendations of the NCI Agency's AMDC2 SSSB Cell. On completion of the project, HN POL will assume full responsibility for Operation and Maintenance (O&M) activities. However, in line with normal practice the project will deliver tools, test equipment, documentation and initial training.
- 1.1.3. There will also be some limited Civil Works (CW) component that need to be carried out by the Contractor to enable the implementation of the EP of this project at the two radio sites. These requirements are stipulated in Section 12 of this SOW and shall be defined in the Site Preparation Data Package (SPDP).

1.2. Purpose of the Project

- 1.2.1. The purpose of this Contract is to implement the Electronic Portion (EP) of the two (2) Radio Sites (Transmit and Receive sites) for the SSSB-POL system, including also some limited associated civil works.

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- 1.2.2. The responsibilities in the overall SSSB Poland project is shared by the Contractor, HN POL and NCI Agency as illustrated in the figure below (the Contractor's area of responsibility is indicated in the grey area):

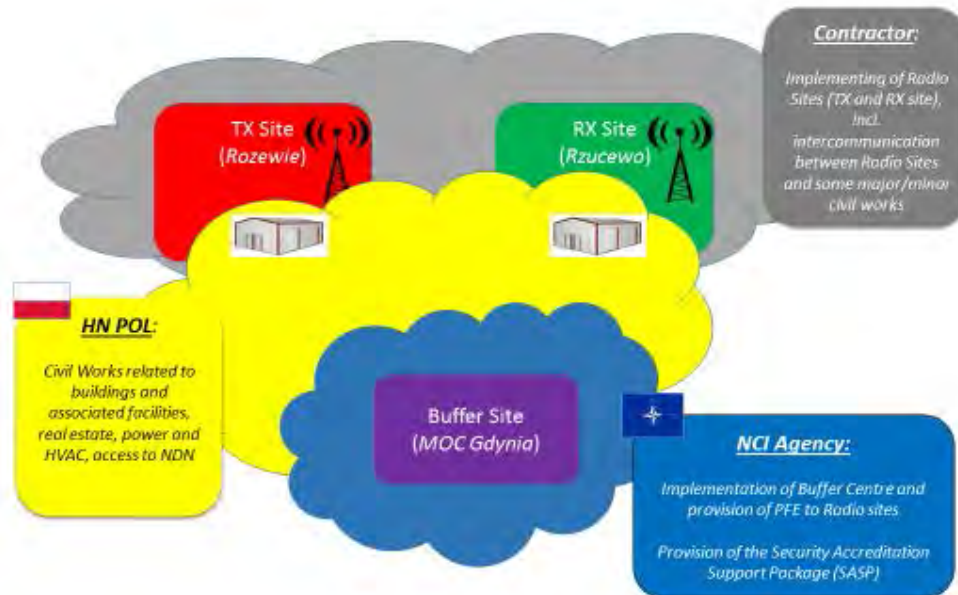


Figure 1: Separation of the overall POL SSSB Projects and responsibilities

1.3. Standards for interpretation of the Statement of Work

- 1.3.1. Throughout this Statement of Work (SOW), the following standards shall apply:
- Whenever requirements are stated herein to "include" a group of items, parameters, or other considerations, "include" means "included but not limited to";
 - Whenever reference is made to a section, tasks, or paragraph, the reference includes all subordinate and referenced paragraphs;
 - The order of the SOW requirements is not intended to specify the order in which they must be carried out unless explicitly stated. The SOW defines the activities the Contractor's process shall cover. (i.e., the Contractor's implementation plans determine the timing of Contractor detailed activities);
 - For the purpose of the SOW, the term "Purchaser" means the NATO Communications and Information Agency (NCI Agency) and/or its authorised representatives;

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- e. For purposes of the SOW, the term "Host Nation (HN)" means the Host Nation Poland, represented by the Ministry of Defence of Poland (MOD-POL) and/or its authorised representatives;
- f. The convention to be used for dates appearing in free text (e.g. quoting dates of meetings) is day-month-year and not month-day-year.

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SECTION 2 PROJECT MANAGEMENT

2.1. Purchaser's Project Management Approach

- 2.1.1. The Purchaser will manage the project using the PRINCE-2 Project Management methodology. Under this methodology the Project Executive (the Purchaser) controls the project through a Project Board which it chairs.
- 2.1.2. The Contractor shall nominate a management-level representative to the Project Board. This representative shall attend Project Board meetings when called upon and where it becomes evident that the project will fail to meet its objectives in terms of time, performance, quality or cost. The Contractor representative shall have authority to commit the Contractor's resources.
- 2.1.3. The role of the Contractor representative to the Project Board shall be:
 - a. Ensuring that the required Contractor-provided resources for the project are made available in accordance with the project plan;
 - b. Assessing the viability of delivering products on time and within the budget;
 - c. Represents the interests of those designing, developing, facilitating and implementing the projects products;
 - d. Accountable for the quality of products delivered and is responsible for the technical integrity of the project;
 - e. Providing a co-ordinated Supplier (Contractor) view.

2.2. Contractor's responsibility, Organisation and Personnel

- 2.2.1. The Contractor shall establish a project management organisation for the purpose of performing and managing the efforts necessary to satisfactorily discharge his responsibilities under this Contract.
- 2.2.2. The names and contact details of the Contractor's project management team and the Purchaser's project management team shall be exchanged at the Effective Date of Contract (EDC).
- 2.2.3. The Contractor shall provide the necessary manpower and resources to conduct and support the management and administration of his operations in order to meet the overall objectives of the Contract.
- 2.2.4. The Contractor shall get written approval of the Purchaser if any personnel and responsibility changes occur in the Contractor's project organisation during the Contract.
- 2.2.5. During project execution, the project shall be controlled in accordance with the approved Project Implementation Plan (PIP). As part of the monitoring

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and control function the Contractor shall advise the Purchaser at all times of potential implementation problems and schedule risks.

- 2.2.6. The Contractor's Project Manager, Deputy Project Manager, and associated personnel working at HN or Purchaser premises/sites shall hold a Personal Security Clearance (PSC) of at least "NATO SECRET" level. All Contractor personnel shall be required to confirm that they hold appropriate PSCs. Access will be denied to visit any HN POL or Purchaser's site unless confirmation has been received from, and confirmed/transmitted to the appropriate national security authority/security officer of the cognisant NATO authority, at least thirty (30) calendar days prior to any site visit. Failure to comply with requirement and any subsequent denial of access by the Purchaser, may not be used by the Contractor as the basis for a claim of adjustment, or an extension of schedule. Nor can the denial of access be considered a mitigating circumstance in the case of an assessment of Liquidated Damages and/ or a determination of Termination for Default by the Purchaser.
- 2.2.7. This requirement applies also to all personnel involved in this project as a result of subcontracts issued by the Contractor for effort under the prime Contract.
- 2.2.8. The Project Manager and the Deputy Project Manager, as well as System Engineers and other engineers, working at HN or Purchaser premises/sites shall be required to provide evidence that personnel can read, write and speak English to Level 3333 in line with STANAG 6001 (Ed. 2). The same, or higher, shall apply to any Contractor's representative taking and compiling the Minutes of Meeting (MoM) at the various review meetings.
- 2.2.9. The Purchaser reserves the right to request a replacement of personnel based on Contract performance reasons.

2.3. Project Implementation Plan (PIP)

2.3.1. General

- a. The Contractor shall prepare and submit a Project Implementation Plan (PIP) for Purchaser's approval that shall describe how the Contractor will implement the totality of the project, including details of the controls that will be applied. The PIP shall describe the processes and procedures that the Contractor will follow to plan, design, and test and install all the systems that are part of this Contract.
- b. The PIP shall identify how the Contractor intends to interact as part of the Project Board as described in SOW Section 2.1.

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- c. The PIP shall identify all major Contractor operating units and any sub-contractors involved in the development of the SSSB-POL system and shall describe the portion of the overall effort or deliverable item for which they are responsible for.
- d. The PIP shall cover all aspects of the project implementation, including the Contractor's project management structure and project control processes, personnel assignments, and external relationships necessary to provide the capability as required by this Contract.
- e. The PIP shall be sufficiently detailed to ensure that the Purchaser is able to assess the Contractor's plans and capability to implement the entire project in conformance with the requirements specified herein.
- f. The PIP shall define the major quality checkpoints that will be implemented while executing the project and the quality process to be used at each checkpoint.
- g. The PIP shall cite any references used in the quality management, such as methodologies, tools or best practice material.
- h. The PIP shall identify the organisation and responsibilities of the quality assurance team and its relation to the project team.
- i. If sub-contracted quality resources are used, the PIP shall describe the controls and processes in place for monitoring the sub-contractor's work against agreed timelines and levels of quality.
- j. The Contractor shall ensure that the PIP, including associated plans, remains up to date throughout the duration of the Project to reflect the actual state of the Contractor's organisation and efforts. Any changes to the PIP will require the Purchaser's approval.
- k. The PIP shall include the following sections and provide the major plans required under this Contract:
 - i. PIP Section 1: Project Management and Control
 - ii. PIP Section 2: System Engineering and Design
 - iii. PIP Section 3: Quality Assurance
 - iv. PIP Section 4: Configuration Management
 - v. PIP Section 5: Integrated Logistics Support
 - vi. PIP Section 6: Test and Evaluation (incl., if applicable: Security Test & Evaluation Plan – STEP)
 - vii. PIP Section 7: Technical Publication Development
 - viii. PIP Section 8: System Acceptance

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- ix. PIP Section 9: Training
 - x. PIP Section 10: Reliability, Availability, Maintainability and Testability (RAMT)
 - xi. PIP Section 11: Contractor Logistic Support (CLS)
 - xii. PIP Section 12: Security Accreditation Plan (SAP)
 - xiii. PIP Section 13: Risk Assessment and Management Plan (RAMP)
 - xiv. PIP Section 14: Site Installations and Civil Works
- I. Within six (6) calendar weeks from Effective Date of Contract (EDC + 6 weeks), the Contractor shall submit the Draft PIP to the Purchaser for review. NLT eight (8) weeks after EDC (EDC + 8 weeks), a presentation shall be held by the Contractor to the Purchaser in a PIP Review Meeting. This presentation shall consist of an outline of the salient features of planned project management and an assessment of the risk areas involved in the project schedule and meeting the requirements of the Contract. During the presentation of the Draft PIP, the Purchaser will discuss the preliminary design of the systems (and associated components) that is proposed including matters of interest with the Contractor.
- m. Before and/or during the presentation, the Purchaser will provide initial comments and an assessment of the Draft PIP concerning the need for correction of error and/or inconsistency and the inclusion of material that has been omitted.
- n. At EDC + 10 weeks, and after receipt of the Purchaser's comments, the Contractor shall deliver, for Purchaser's acceptance, the final version of the PIP that shall address and incorporate all Purchaser comments concerning deviations from and omissions of Contract requirements. Purchaser's acceptance of the final PIP is expected within three (3) weeks after submission of this final version.
- o. The final version of the PIP, as accepted by the Purchaser, shall be the official document against which the Contractor is expected to conduct the performance of the Contract and shall be used to measure Contract progress against the delivery requirements of the Schedule.

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- p. Purchaser's acceptance of the final version of the PIP does not constitute Purchaser approval of the Contractor's plan, but signifies that the Purchaser considers the plan to be a logical and satisfactory approach to the management of the required activities, based upon the information provided. This approval in no way relieves the Contractor from its responsibilities to meet the requirements stated in this Contract. The requirements of the Contract supersede the statements of the PIP in the case of any conflict, ambiguity or omission.
- q. The Contractor shall provide copies of all documents, spreadsheets, Work Breakdown Structure (WBS), Gantt Charts, etc, that are presented in the PIP to the Purchaser in the quantities as specified in the SSS and format as specified in SOW SECTION 13 below.

2.3.2. PIP Section 1 – Project Management and Control (PMC)

- a. In PIP Section 1 the Contractor shall establish, provide and maintain a Project Management and Control Plan (PMCP) that shall describe how the Contractor will implement the totality of the project, including details on the project control processes that shall be applied.
- b. The PMCP shall define in detail how the Contractor intends to manage this project from EDC through to Final System Acceptance (FSA) and throughout the Warranty period. It shall consider all aspects of project management and control and demonstrate by means of programme analysis and planning how all the critical dates defined in the Contract shall be met. In order to be compatible with the Purchaser's software used for project management purposes, all documents, worksheets, drawings, slides and schedules/plans shall be prepared using the software tools as indicated in SOW SECTION 13 below. This Section of the PIP shall include, but not be limited to, the following aspects:
 - i. A description of the management structure of the Contractor's Project Team Organisation (PTO) that shall indicate its relationship within the company structure;
 - ii. A list of personnel assigned to the Contractor's PTO that shall define their respective roles, responsibilities and authority;
 - iii. A description of Contractor and sub-contractor (or any third party) relationships that shall demonstrate how the Contractor effectively manages, monitors and controls the sub-contractor(s).
- c. As a part of the PMCP of the PIP, the Contractor shall also establish, deliver and maintain a Project Work Breakdown Structure (PWBS), as follows:

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- i. The PWBS shall define all work packages and the relationship between the work packages and the supplies and services to be delivered to the Purchaser. The Contractor shall capture 100% of the work defined by the project scope, as well as all deliverables – internal, external, and interim – in terms of the work to be completed, including project management, in the PWBS;
 - ii. The PWBS shall include a PWBS Dictionary that describes each component of the PWBS with milestones, deliverables, activities, scope, and dates, resources, costs, quality;
 - iii. The PWBS shall decompose the work packages to a level that exposes all project risk factors and allows accurate estimate of each work item's duration, resource requirements, inputs and outputs, and predecessors and successors;
 - iv. Activity or series of activities defined in the PWBS shall not be longer than a single reporting period;
 - v. The PWBS elements shall be coded sequentially to reveal a hierarchical structure;
 - vi. The PWBS shall identify the scope of work for all PIP sections and shall capture all associated deliverables – internal, external and interim - in terms of work to be completed;
 - vii. The PWBS shall define interfaces between the Contractor's deliverables and Purchaser Furnished Equipment (PFE)/ Facilities/Information regarding the project.
- d. During the performance of the Contract, the Contractor shall not change the PWBS, its associated definitions, or any of its reporting elements without the approval of the Purchaser.
 - e. The Contractor shall use the PWBS as the primary framework for Contract planning and reporting to the Purchaser. The PWBS shall define the products to be developed and produced, and relate the elements of work to each other and to the end product.
 - f. As a part the PMCP of the PIP, the Contractor shall also establish, deliver and maintain a Project Master Schedule (PMS) that contains all Contract events and milestones. The PMS shall correlate with the PWBS. The PMS shall show the start and completion dates of each activity, using calendar year timescales divided into weeks and shall show the interfaces with other activities.

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- i. The PMS shall depict the sequence, duration, and relationship among PWBS, tasks, work packages and work items;
 - ii. The PMS shall identify the start and finish dates, duration, predecessors, successors, and resource requirements for each work item;
 - iii. The PMS shall include the delivery dates for all project products, including at least the initial version and the final one;
 - iv. The PMS shall include activity network, activity GANTT, Programme Evaluation Review Technique (PERT) charts, developed in formats interoperable with Microsoft ® (MS) Project 2010, showing detailed and high level schedules with associated resources and dependencies, milestone, and critical path views of the project schedule; Critical paths shall be clearly identified in the PMS;
 - v. The Contractor shall maintain the baseline version of the PMS on the relevant documentation folder.
- g. The PMCP shall cover the following areas as a minimum:
- i. Project Scope;
 - ii. Major Deliverables;
 - iii. Assumptions;
 - iv. Dependencies;
 - v. Project organisation;
 - vi. Internal structure which shall include a project organisational diagramme;
 - vii. Roles and responsibilities of each organisational unit;
 - viii. Project resources, Key personnel, their qualifications, and their responsibilities (All resources shall be assigned to project task within the PIP);
 - ix. Organisational boundaries between the project organisation and the parent and subcontracted organisations;
 - x. Project management processes;

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- xi. Project start-up, which shall include staffing, basis of cost and schedule estimates, and project infrastructure;
- xii. Project control, which shall include monitoring, reporting, and change management of work packages;
- xiii. Issue Management (IM), which shall include the identification, reporting, assessment, and logging of project issues (including linkages to risk registers);
- xiv. Communications Management (CM), Project Checkpoint Reports (refer to Para 2.4 below), and all other communications with the Purchaser;
- xv. Security Management (SM), which shall include personnel and facility (site) security;
- xvi. Purchaser involvement via meetings, reporting, modification and change, implementation, verification, approval, acceptance and access to facilities;
- xvii. Sub-Contracting plan demonstrating that the Contractor can effectively manage, monitor and control the sub-contractors and that the sub-contractors will agree to abide by the requirements of the prime Contract as pertains to flow-down provisions.

- h. The Contractor shall identify in his PMCP the constraints of the implementation environment, their effects on the project execution and their mitigation measures.

2.3.3. PIP Section 2 - System Engineering and Design

- a. The Contractor shall provide in PIP Section 2, an outline of the System Engineering and Design for the SSSB-POL system. This section shall address the design of the system proposed in accordance with the System Engineering Design Document, which shall be part of this PIP Section 2 (see SOW paragraph 4.2 below).
- b. The PIP shall also address and include the System Safety (see SOW paragraph 4.3), the Exposure to Radio Frequency Fields (see section 4.4), the Electromagnetic Interference and Compatibility (EMI/EMC) (see section 4.5) and the Lightning Protection (see section 4.5.12). Those above plans shall be part of the PIP Section 2. During the presentation of the PIP, the Purchaser will review the preliminary design of the system (and associated components) that is proposed.

2.3.4. PIP Section 3 - Quality Assurance

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- a. The Contractor shall provide in PIP Section 3 description of the Contractor's Quality Assurance Organisation and Quality Assurance (QA) / Quality Control (QC) System, which shall be in accordance with SECTION 6 below.
- 2.3.5. PIP Section 4 - Configuration Management (CM)
- a. The Contractor shall provide in PIP Section 4 a Configuration Management CM Plan that shall define the initial configuration items CI(s), the organisation and procedures used to manage the configuration of the functional and physical characteristics of CI(s), including interfaces and configuration identification documents, as set forth in SOW SECTION 7 below.
 - b. Configuration Management (CM), which shall include Configuration Item (CI) identification, identification and control of change requests and deficiency reports, configuration status accounting, auditing, and co-ordination of Contractor and Purchaser configuration management and change control processes, for both documentation and material deliverables (i.e. services).
- 2.3.6. PIP Section 5 - Integrated Logistic Support (ILS)
- a. The Contractor shall describe in PIP Section 5 how he intends to fulfil all Integrated Logistics Support (ILS) requirements in accordance with SOW SECTION 8 below.
- 2.3.7. PIP Section 6 - Test and Evaluation
- a. The Contractor shall define in PIP Section 6 his proposed test organisation and provide a Test and Evaluation Plan (TEP) in accordance with SOW SECTION 10 below. If applicable, this plan shall also include a Security Test and Evaluation Plan (STEP).
- 2.3.8. PIP Section 7 - Documentation
- a. The Contractor shall provide in PIP Section 7 a detailed plan to deliver all documentation in accordance with SOW SECTION 13 below. The Contractor shall identify the documentation team and the individual responsible within his organisation to ensure such documentation is delivered on schedule and to the Contract requirements. The Contractor shall provide in PIP Section 7 a detailed review plan for all documentation, which will allow sufficient time (minimum of 10 working days) for all documentation to be reviewed by the Purchaser prior to the final agreed delivery date.
- 2.3.9. PIP Section 8 - System Acceptance
- a. The Contractor shall provide in PIP Section 8 a Plan to accomplish all the activities required to ensure successful Provisional System Acceptance (PSA), and successful Final System Acceptance (FSA), in order to meet the requirements of SOW SECTION 11 below.

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- 2.3.10. PIP Section 9 - Training
 - a. The Contractor shall provide in PIP Section 9 a Plan to fulfil the Training requirements of the Contract as specified in SOW SECTION 14 below.
- 2.3.11. PIP Section 10 - Reliability, Availability, Maintainability and Testability (RAMT)
 - a. The Contractor shall provide in Section 10 his Plan to fulfil the Reliability, Availability, Maintainability and Testability requirements of the Contract as specified in SOW SECTION 9 below.
- 2.3.12. PIP Section 11 – Contractor Logistics Support (CLS)
 - a. The Contractor shall provide in Section 11 of the PIP a Contractor Logistics Support (CLS) Plan, which shall describe the services that the Contractor shall perform during the Warranty period as set forth in SOW SECTION 8 below and during all contracted CLS periods if exercised.
- 2.3.13. PIP Section 12 - Security Accreditation Plan (SAP)¹
 - a. The Contractor shall provide in PIP Section 12 his Plan to fulfil the Security Accreditation requirements of the Contract as specified in SOW SECTION 5 below.
- 2.3.14. PIP Section 13 - Risk Assessment and Management Plan (RAMP)
 - a. The Contractor shall provide in PIP Section 13 his Plan to fulfil the Risk Assessment and Management requirements of the Contract as specified in SOW paragraph 2.7 below. This RAMP shall define the strategy for risk management and the way the risk management process, which shall include risk identification, risk assessment, risk mitigation, risk monitoring, and risk reporting, shall be conducted throughout the Contract duration.
 - b. Risk management, which shall include the Contractor's and sub-contractor's process for risk identification, assessment, mitigation, monitoring, reporting and escalation of any issues, once identified.
- 2.3.15. PIP Section 14 – Site Installation and Civil Works
 - a. The Contractor shall provide in PIP Section 14 his Plan to fulfil the Site Installation and Civil Works requirements of the Contract as specified in SOW Section 12 and SOW Annex B herein.

¹ This SAP addresses the Contractor's plans to fulfil the requirements of this Contract. Note that the actual SAP, as part of the Security Accreditation Support Package (SASP), will be produced by the Purchaser (NCI Agency), and the Contractor's SAP may provide necessary input.

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- b. If required, in order to mitigate potential disruption of national communication services by Contractor activities, the Contractor shall develop a System Installation Transition Plan (SITP) in coordination with the HN POL and the Purchaser that shall ensure minimum disruption of provision of national communications services between the site preparation phase and Radio Site Acceptance Tests (RSAT). Such SITP shall be subject to the approval of HN in cooperation with the Purchaser. The Contractor shall have delivered a preliminary SITP shall include, but not be limited to; a work schedule and task list for system installation that maximises the amount of on-air time and minimized off-air time for HN communications services, until the HN communications services could be supported as part of the SSSB-POL system.

2.4. Project Checkpoint Reports (PCR)

- 2.4.1. The Contractor shall prepare and submit a Project Checkpoint Report (PCR) to the Purchaser every two months after EDC for the duration of the Contract. The PCR shall contain as a minimum the following information:
 - a. Date of checkpoint
 - b. Period covered
 - c. Follow-ups from previous reports
 - d. Activities during the period
 - e. Products completed during the period
 - f. Quality work carried out during the period
 - g. Tolerance Status (Costs, Delays and Performances).
 - h. Actual or potential risk and issue update
 - i. Work planned for the next period
 - j. Products to be completed during the next period.
- 2.4.2. The PCR may be appended to the Project Progress Report (PPR) for those periods when the two reports coincide.

2.5. Project Progress Reports (PPR)

- 2.5.1. The Contractor shall prepare and submit a Project Progress Report (PPR) to the Purchaser Project Management Team no later than 1 week in advance of any Project Progress Meeting (PPM) (see section 2.6).
- 2.5.2. The PPR shall summarise the progress since the previous PPM, accomplishments, schedule of service deliveries against progress, difficulties encountered and resolution of any issues raised in previous PPM.

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- 2.5.3. The PPR shall include, but shall not be limited to:
- a. Overall project progress, which shall include the activities performed and works completed during the preceding reporting period.
 - b. Schedule of deliverables against progress, difficulties encountered, resolution of any issues.
 - c. The Contractor's Risk Log and Issue Log, which shall be compliant with PRINCE2.
 - d. A list of Change Proposals with the current status
 - e. Configuration Status Reports (CSR) for the system and all documentation.
 - f. An up-to-date Project Plan (GANTT chart).
 - g. A proposed agenda for the upcoming PPM, which may include a summary of items to be discussed
- 2.5.4. The Purchaser will confirm in writing the specific agenda with the Contractor, prior to each PPM.

2.6. Project Progress Meetings (PPM)

- 2.6.1. The Contractor shall organise and participate in Project Progress Meetings (PPM) as scheduled below, and chaired by the Purchaser. The Contractor shall ensure that the Contractor's Project Manager and appropriate support staff attend the meetings.
- 2.6.2. The first Project Progress Meeting / Kick-Off Meeting (PPM#1 / KOM) shall be conducted three (3) weeks after EDC (EDC + 3 weeks). The Contractor shall introduce to the Purchaser the individuals of his organisation (including sub-contractors) that are responsible for critical missions in the proposed project implementation.
- 2.6.3. The second Project Progress Meeting / Project Implementation Plan (PIP) Meeting (PPM#2 / PIP meeting) shall be conducted at EDC + 8 weeks (ref. section 2.3.1 above).
- 2.6.4. The third PPM (PPM#3) shall be conducted with the PDR Meeting, the fourth (PPM#4) with the Critical Design Review (CDR) Meeting, and the fifth (PPM#5) with the FAT.
- 2.6.5. Thereafter PPMs will be held every four (4) months, unless agreed otherwise. A PPM may be cancelled or postponed by the Purchaser without financial penalty.
- 2.6.6. The PPM agenda proposed by the Contractor to the Purchaser approval shall include the following agenda items (non-exhaustive):
- a. Approval of the Minutes of previous PPM

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- b. The Contractor's presentation of the Project Progress Report
 - c. Review of project risks and issues
 - d. Review of action items from previous meetings
 - e. Schedule Review
 - f. Discussion/resolution of problems and areas of concern
 - g. Any other business (AOB)
- 2.6.7. The Contractor shall be responsible for producing the Minutes of Meeting (MoM) for the PPM and providing a draft copy for Purchaser comments within one week following the PPM and prior to final dissemination. The Purchaser will then provide comments and/or corrections made against the draft copy to the Contractor within two weeks of receipt.
- 2.6.8. The Contractor shall incorporate comments and/or corrections and return a final copy of the MoM to the Purchaser within one week of receipt of the Purchaser's comments and/or corrections.
- 2.6.9. The Contractor shall not consider the MoM as the basis for changes to the terms and conditions or scope of work of the Contract in the absence of a formal Contract Amendment.
- 2.6.10. During the meetings the Contractor may be requested by the Purchaser to provide detailed presentations on specific items at the subsequent PPM. A copy of the presentation material used at these activity reviews shall be handed over to the Purchaser. The Contractor shall be responsible for the following specific actions in the conduct of reviews:
- a. Developing a schedule and agenda for accomplishing the required views;
 - b. Co-ordinating the review, schedule and agenda with the Purchaser, and provide the Purchaser with appropriate Progress Reports prior to the review;
 - c. Ensuring participation of sub-contractors, vendors and suppliers, as necessary;
 - d. Organising and presenting briefings as necessary.

2.7. Risk Management Programme

- 2.7.1. The Contractor shall implement and maintain as part of his overall project management process a structured programme of risk identification, assessment and management. The programme shall address as a minimum the following areas.

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- a. Risk Assessment and Management Plan (RAMP) as described in PIP Section 13. The RAMP shall define the strategy for risk management and the way the risk management process, which shall include risk identification, risk assessment, risk mitigation, risk monitoring, and risk reporting, shall be conducted throughout the Contract duration;
 - b. The identification of risks for the completion of the SOW-related tasks;
 - c. Analysis of potential risks to identify risk dependent areas;
 - d. Assessment of the probability of each risk occurring, and quantification of its possible impacts;
 - e. Identification of a risk owner for each risk;
 - f. Alternative risk mitigation measures to decrease the effects of the potential risks identified;
 - g. Mitigation plan for when risks become issues.
- 2.7.2. The Contractor shall require each major sub-contractor to implement a programme of risk identification, assessment and management. The Contractor shall be responsible for integrating these programmes into a single programme.
- 2.7.3. The Contractor shall appoint and identify a risk manager to be the focal point for the implementation of the risk management programme.
- 2.7.4. Risk Reporting
- a. The Contractor shall include in the PPR(s) a section or another report on all identified risks in descending order of priority. The section or report shall include a current assessment of the impact of each risk on work performance and schedules. The Contractor's plans/schedules for risk abatement, mitigation, and work-around shall also be presented.
- 2.7.5. Risk Status and Alarm Reporting
- a. Progress reports submitted by the Contractor shall address the status, potential impact and corresponding planning information for all identified risks. Any new risk area identified by the Contractor/sub-contractor having the potential for significant impact on the accomplishment of the Contract tasks or schedules shall immediately be brought to the attention of the Purchaser.

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SECTION 3 SCOPE OF WORK

3.1. Overall requirements

- 3.1.1. The scope of the project is to implement two new SSSB radio sites at Rozewie and Rzucewo, near the Baltic coast in Poland.
- 3.1.2. The scope also includes support to the integration of the two radio sites with the buffer center at the Maritime Operations Centre (MOC) in Gdynia, to facilitate communications for air and naval surveillance in the HF/UHF frequency ranges with data Link-11/Link-22 modes and voice mode. Figure 2 below depicts the location of those sites.

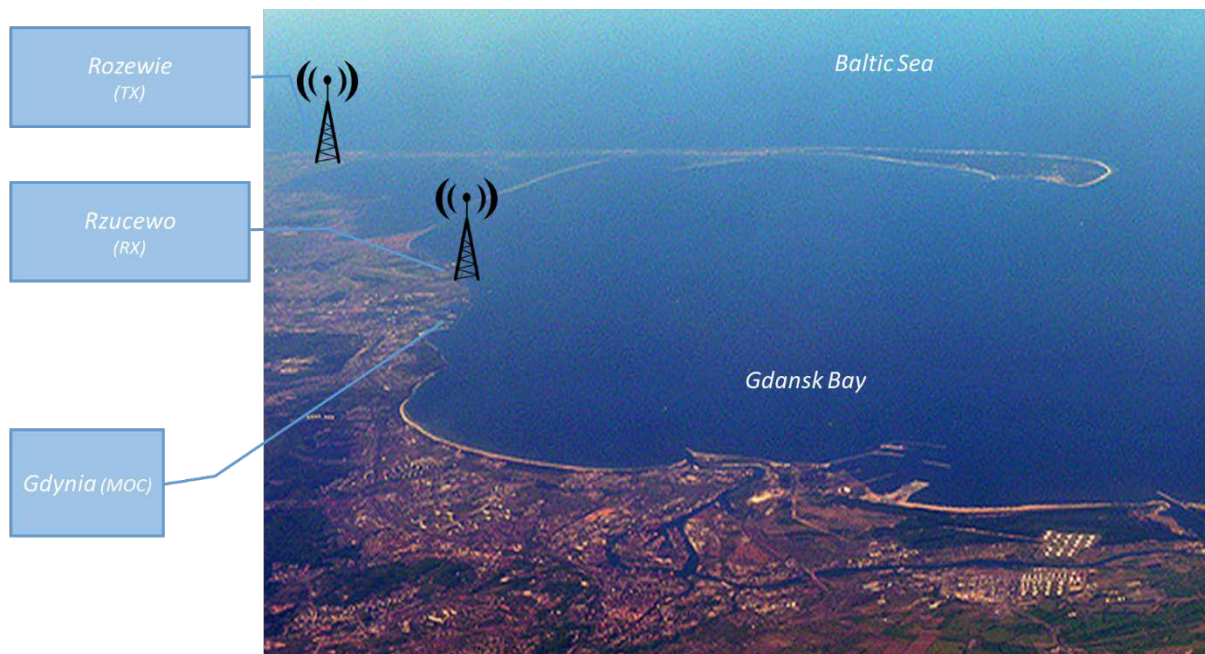


Figure 2: Site locations (Radio sites Rozewie, Rzucewo, MOC Gdynia)

- 3.1.3. The EP of this project can be sub-divided into the following portions:
 - a. Radio Communication Sub-system:

To be installed at the radio sites and dedicated to the Ship-Shore-Ship communication in HF (BLOS) and in UHF (LOS) in the Link-11/Link-22 modes for the data exchange and in voice mode for the operators coordination. To be interfaced with the inter-site communication sub-system.

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b. Inter-site Communication sub-system:

This sub-system is dedicated to the connection between radio sites and the buffer centre at the MOC Gdynia. Implementation of the sub-systems between radio sites shall be the Contractor's responsibility. Implementation of the sub-system between MOC Gdynia and to the TX/RX Radio Sites at Rozewie and Rzucewo will be the HN responsibility. Nevertheless, the Contractor shall support the integration and testing of the overall inter-site communication sub-system (including the sub-system between the radio sites, and between radio sites and the MOC).

c. Infrastructure facilities

The Civil Works (CW) associated with the general infrastructure (e.g. buildings, mains power, general HVAC, etc.) to host the equipment at the radio sites has already been completed by HN POL and is not in scope of this Contract.

Additional CW-related works for the installation of CIS equipment (e.g. antenna masts, cable trenching, indoor cabinets, etc.) is within the scope of this Contract and to be carried out by the Contractor. This includes any additional no-break (UPS) or additional HVAC components that may be required to enable the faultless operations of the CIS equipment to be installed at the radio sites.

3.1.4. The SSSB Command and Control system to be installed at the buffer center at MOC Gdynia will be dedicated to the two radio sites at Rozewie and Rzucewo, for:

- a. Management of the radio sub-systems;
- b. Translation of the Link-11 and Link-22 protocols into Link-1 and Link-11B in accordance with STANAG 5511, STANAG 5522, STANAG 5601, etc. Presentation of the Air, Surface and Subsurface tactical picture;
- c. Management of the Voice coordination of the Link-11/Link-22 data link;
- d. Provide secure data encryption of Link-11/Link-22 (COMSEC);
- e. Monitoring of the correct operations of infrastructure and equipment.

3.1.5. Installation of the SSSB system at the buffer center at MOC Gdynia is not scope of this Contract, but will be accomplished by the Purchaser (ie. NCI Agency's AMDC2 SSSB Cell).

3.1.6. The applicable System Requirement Specifications (SRS) for SSSB-POL is presented in SOW Annex A.

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3.2. Operational Requirement

- 3.2.1. The detailed description of the operational requirement is presented in SOW Annex A, Para 2.5.

3.3. Implementation Objectives

- 3.3.1. The Contract shall be implemented in the following three (3) phases;
- a. Phase I: Design and Factory Acceptance Test (FAT) phase
 - b. Phase II: Delivery, Installation and integration phase
 - c. Phase III: Testing and Acceptance phase (RSAT, SAT, PSA, FSA)
- 3.3.2. The implementation shall be completed and handed over by the Contractor to the Purchaser and HN POL according to the timescales specified in the Schedule of Supplies and Services (SSS).
- 3.3.3. The Contractor shall be responsible for the implementation of two (2) fully integrated and operational SSSB Radio Sites and their intercommunication sub-systems. The Contractor shall provide all the necessary material and perform all the services required to execute the respective installation.
- 3.3.4. During the Design and FAT phase the Contractor shall perform Factory Acceptance Tests (FAT) for any SSSB sub-system as agreed with the Purchaser in order to demonstrate compliance with the technical requirements of this Contract. The FAT(s) shall be completed NLT EDC + 29 weeks.
- 3.3.5. Following the successful completion of the Design and FAT phase the Purchaser will authorise the Contractor to start the delivery and installation activities.
- 3.3.6. The Contractor shall perform the installations of the systems at the HN facilities in Rozewie and Rzucewo. The Contractor's activities shall include preparations for and execution of delivery, installation, integration, testing and preparing for acceptance and for system operational use. The Contractor shall provide the deliverables specified in the Schedule of Services and Supplies (SSS).

3.4. Purchaser's and Host Nations' Responsibilities

- 3.4.1. The Purchaser is responsible for the administration of the Contract, which includes, but is by far not limited to negotiation of Contract amendments and payment of invoices.
- 3.4.2. The Purchaser and the HN POL (as marked in the table below) will provide the following items as Purchaser Furnished Equipment (PFE) and Purchaser

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Furnished Property (PFP) to the Contractor² at the two Radio sites, as per following table.

<i>DESCRIPTION of PFE/PFP</i>	<i>Provided by</i>	<i>Expected delivery</i>
HF-TX/UHF Site - Rozewie		
National Defence Network (NDN) Connectivity	HN	Before installation starts
Main Power Distribution Panel (MPDP) and Prime Power Supply System	HN	Before installation starts
Short-break Power Supply Sub-system (SB PSS) (Emergency Power Generating Set)	HN	Before installation starts
Building for accommodation of TX equipment and for accommodation of its supporting systems such as SB and NB PSS, HVAC and FES	HN	Before installation starts
Electrical Connection of the site (an agreement on electrical connection to the site between the Contractor and the local site will need to be put in place and described in detail)	HN	Before installation starts
Connection to the fresh water supply network	HN	Before installation starts
Electrical Supply network	HN	Before installation starts
Fence around the site	HN	Before installation starts
Site boundaries lighting	HN	Before installation starts

² Existing equipment on site, to be integrated and adapted by the Contractor as required in the SOW.

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<i>DESCRIPTION of PFE/PFP</i>	<i>Provided by</i>	<i>Expected delivery</i>
Facility building	HN	Before installation starts
Climate Control System (HVAC)	HN	Before installation starts
Electronic surveillance and alarm system	HN	Before installation starts
RoIP server	NCI Agency	1 month before FAT
Link-11 DTS (MFL)	NCI Agency	1 month before FAT
TOD-HQ (GPS, military grade, SAASM), incl. antenna	NCI Agency	1 month before FAT
Versatile Link Interface Remote (VLI/R)	NCI Agency	1 month before FAT
SSSB Radio Management system (set)	NCI Agency	1 month before FAT
Signal Processing Controller (SPC)	NCI Agency	1 month before FAT
AIS receiver, incl. antenna	NCI Agency	1 month before FAT
Networking (LAN) equipment and interfaces to NDN (set)	NCI Agency	1 month before FAT
HF-RX Site – Rzucewo		
National Defence Network (NDN) Connectivity	HN	Before installation starts
Main Power Distribution Panel (MPDP) and Prime Power Supply System	HN	Before installation starts
Short-break Power Supply Sub-system (SB PSS) (Emergency Power Generating Set)	HN	Before installation starts
Building for accommodation of Rx equipment and for accommodation of its supporting systems such as SB and NB PSS, HVAC and FES	HN	Before installation starts

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<i>DESCRIPTION of PFE/PFP</i>	<i>Provided by</i>	<i>Expected delivery</i>
Electrical Connection of the site (an agreement on electrical connection to the site between the Contractor and the local site will need to be put in place and described in detail)	HN	Before installation starts
Connection to the fresh water supply network	HN	Before installation starts
Electrical Supply network	HN	Before installation starts
Fence around the site	HN	Before installation starts
Site boundaries lighting	HN	Before installation starts
Facility building	HN	Before installation starts
Climate Control system (HVAC)	HN	Before installation starts
Electronic surveillance and alarm system	HN	Before installation starts
SSSB Radio Management system (set)	NCI Agency	1 month before FAT
Signal Processing Controller (SPC)	NCI Agency	1 month before FAT
TOD-HQ (GPS, military grade, SAASM), incl. antenna	NCI Agency	1 month before FAT
AIS receiver, incl. antenna	NCI Agency	1 month before FAT
Networking (LAN) equipment and interfaces to NDN (set)	NCI Agency	1 month before FAT

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<i>DESCRIPTION of PFE/PFP</i>	<i>Provided by</i>	<i>Expected delivery</i>
Spares		
Spares parts and kits for NCI Agency provided PFE	NCI Agency	1 month before FAT

- 3.4.3. With regard to the PFE’s listed above, the Purchaser respectively HN POL will obtain the following services and provide them to the Contractor:
- a. Make the PFE/PFP and services, available in due time to the Contractor;
 - b. Ensure timely availability of an appropriate installation environment, including prime power lines, communications lines and external connectivity, such as connections to NDN, according to the specifications provided by the Purchaser;
 - c. Ensure availability and timely access to installation sites and other related premises (pending timely RFV submissions by the Contractor via the appropriate channels);
 - d. Ensure timely availability of CW-related documentation, including building and site plans, required by the Contractor to plan, design and execute works according to this Contract;
 - e. Provide Prime Power Supply System (PSS), terminated at the MPDP. As stipulated in SOW SECTION 12 and section 3.5 below, it is the Contractor’s responsibility to provide and install SSSB-dedicated Power Distribution Panels (with associated cabling and plugs) in such a manner that they will be integrated into the Prime Power Supply System (provided by HN) at the sites. The integration into the site’s Prime Power Supply System is the Contractor’s responsibility;
 - f. Provide NB PSS at the two Radio Sites, unless otherwise stated;
 - g. Void;
 - h. The HN will be responsible for the provision of a local liaison Point of Contact (POC) for daily liaison with the Contractor on CW related matters. NCI Agency will maintain the relationship with the HN POL for this purpose. However, the Contractor is responsible to the Purchaser for all works under this Contract, including Civil Works as stipulated in SECTION 12 and in other relevant paragraphs of this Contract;

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- i. HN POL will provide a pool of frequencies for testing of the SSSB System. These frequencies shall cover the range required to maintain HF and UHF communication throughout the day (in summer and winter time) and suitable for different range of HF and UHF communication distances;
- j. HN POL will provide the required IP connectivity over the NDN between the Radio Sites at Rozewie / Rzuewo and the MOC at Gydnia;
- k. Void;
- l. Dismantling, movement and reinstallation of existing utilities (i.e. water pipes, sewage system, gas pipes, communication lines, power lines, etc.) interfering with areas designated for the Contractor's works is a HN responsibility. This activity will only be exercised if the Contractor's provided equipment and structures cannot be relocated to other areas that will void utility relocation and at the same time will assure full functionality of the systems;
- m. The HN will provide training equipment or special equipment/tools requirements including those support equipment, such as a Projector and Screen, White Board with White Board Markers, photo copier machine, etc.;
- n. The HN will assure that the students, who will be selected for systems training, meet the requirements below:
 - i. Operators will have or will acquire knowledge of specific Operating Systems and Tools;
 - ii. Maintainers will have or will acquire knowledge of digital Radio technology;
 - iii. System Administrators will have or will acquire knowledge of specific Operating Systems and Servers and will also be instructed in digital radio and transmission techniques;
 - iv. Personnel selected to attend the courses (training) will meet the minimum Standardized Language Proficiency (SLP) of 2222 in English corresponding to NATO STANAG 6001.

3.5. Contractor's responsibilities and activities

- 3.5.1. The services provided by the Contractor shall consist of design, procurement and delivery of hardware, software and documentation, as well as commissioning activities, installation, integration, testing and training, to meet all the requirements of SSSB-POL project as detailed throughout this document. This shall include documentation to allow the Purchaser to

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- customise the Radio Management sub-system to be provided as PFE to the Contractor.
- 3.5.2. It is also the Contractor's responsibility to test the integration of the Contractor's provided equipment with relevant equipment, elements and systems provided as PFE and demonstrate that both, the Contractor's and PFE are compatible and function correctly as stipulated in this SOW.
 - 3.5.3. The Contractor shall inform the NCI Agency Project Manager (PM) and Contracting Officer (CO) as detailed in the Special Contract Provisions of all contractually relevant events.
 - 3.5.4. When applicable, the Contractor shall use the PFE-provided spares to ensure that NCIA provided PFE remains in a serviceable condition. Any spares used/consumed by the Contractor shall be replenished at the Contractor's expense.
 - 3.5.5. When applicable, all PFE and PFP shall be used by the Contractor to the maximum extent possible. All PFE and PFP not used by the Contractor for this project must be stored in a location to be defined by HN POL.
 - 3.5.6. When applicable, the Contractor shall arrange locations on site for storage of all equipment and structures dismantled and demolished by the Contractor under this Contract.
 - 3.5.7. When applicable, the Contractor shall dispose of any dismantled equipment and demolished structures, which are identified by the Contractor in the SPDP.
 - 3.5.8. With regard to Civil Works, the Contractor shall provide/install all equipment, material and erect/demolish structures as stipulated in SECTION 12 of this SOW.
 - 3.5.9. Concerning Civil Works, the Contractor shall provide all the necessary calculations and fulfil all the necessary formalities, including but not limited to, obtaining and being aware of any required National permits, authorisations and their associated application timelines.
 - 3.5.10. The Contractor shall execute any necessary site clearance works at on-site antenna farm locations. HN POL will not be responsible for disposal of any waste material from these sites. It is the Contractor's responsibility to prepare relevant temporary storage areas at the locations as specified by the HN prior to disposal of any associated waste material off-site. The disposal of any such material from the site, to a location less than 100 km away from the site, and as indicated by the HN POL, shall also be the responsibility of the Contractor.
 - 3.5.11. The Contractor shall provide and install SSSB-dedicated Power Distribution Panels (PDP) (with associated cabling and plugs) in such a manner that they will be integrated into Prime Power Supply (PPS) System (provided by HN).

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The integration into the Prime Power Supply System is the Contractor's responsibility.

- 3.5.12. Void.
- 3.5.13. No additional NB backup power, or UPS, is anticipated. However, if it is subsequently found that additional UPS capacity is required for the correct operations of the CIS equipment in the facility building of the radio sites, then the provision of such additional UPS will be a Contractor's responsibility. Also, if replacement of battery pack(s) of existing UPS appliances is required, then the Contractor shall provide such replacement.
- 3.5.14. The Contractor-provided systems and equipment under the prospective Contract shall be compatible with the existing infrastructure of the SSSB Radio Sites as presented in SOW Annex B. More detailed information will be provided to the Contractor during Contractor site surveys (see section 3.6). The Contractor shall confirm that the existing infrastructure is suitable for SSSB accommodation (in terms of floor space allocation, power budget, (augmented) UPS capacity, etc.). In order to assure proper coordination of CW packages and to execute above mentioned controls, the Contractor will liaise with the HN as specified at SOW section 12.3.
- 3.5.15. When applicable, the Contractor shall take into consideration the location of Methane/natural gas network to avoid accidental damages that could be done while doing various earth or drilling works.

3.6. Site Surveys and Site Survey Reports

- 3.6.1. Before the submission of the draft PIP, the Contractor shall perform site surveys at each site to determine any requirements to prepare the site locations to receive the equipment for installation. Those site surveys shall be conducted by EDC + 4 weeks. The Contractor shall also verify the listing of existing equipment and other site specific details made available by the HN, as preliminarily stipulated in SOW Annex B. Any possible requirements for Civil Works shall also be identified. The Contractor shall collect required data during these site surveys in order to be able to produce the Site Preparation Data Package (SPDP) for each site respectively, as stipulated at SOW section 12.6.
- 3.6.2. Two (2) weeks following the completion of the site survey, the Contractor shall prepare a draft Site Survey Report (SSR) that provides, but is not limited to the following information: all available and usable floor plan layouts, cable routing, configuration and wiring assignments, antenna farm layout with associated cabling and ducting, antenna access roads layout, PSS system layout and schematics, graphical depiction of Contractor provided equipment and its integration with equipment, elements and systems provided as PFE, basic civil works requirements. Beside the graphics and schematics, the Contractor shall also provide relevant information in narrative form including

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where applicable matrixes, tables and item lists. The Contractor shall submit the draft SSR as specified in the SSS and in the format specified in SOW paragraph 13.4 below to the Purchaser for review within two (2) weeks after the relevant Site Survey.

- 3.6.3. The SSR shall also include a Site Survey Plan. The Site Survey Plan shall contain but not be limited to: draft site survey workbook of checklists, fill in forms, installation sketches, contact information, installation specifications and any other documentation proposed to support site surveys.
- 3.6.4. Purchaser and HN POL will provide comments within three (3) weeks after receipt of the draft SSR. After receipt of the Purchaser's comments, the Contractor shall deliver the final version, including the incorporation of all Purchaser comments, within one (1) week.

3.7. Site Installation Specification (SIS)

- 3.7.1. The Contractor shall provide to the Purchaser and HN, for each site, Site Installation Specification (SIS) documentation with information as stipulated below.
- 3.7.2. The SIS document is a very detailed and upgraded document, based on Site Survey Report (SSR) and Site Preparation Data Package (SPDP) as appropriate and detailed in SOW SECTION 12.
- 3.7.3. The Contractor shall deliver the SIS to the Purchaser in a first Draft form no later than CDR + 4 weeks as well as installation drawings, specifications and standards that he intends to employ during production and installation. The Final Draft of the SIS shall be delivered to the Purchaser no later than CDR + 10 weeks. Before delivery of the Final Draft version the first Draft version of the SIS is to be reviewed and discussed as laid out in the paragraphs below.
- 3.7.4. The Purchaser may reserve up to four (4) weeks for the review of the SIS Draft package and to send the comments to the Contractor. The Contractor shall prepare and submit a Final Draft SIS covering each of the sites within two (2) weeks of receipt of the Purchaser's comments. This Final Draft SIS shall be detailed enough to allow assessment of the magnitude of site installation works to be performed by the Contractor at each site.
- 3.7.5. Upon review by the Purchaser and HN of the Final Draft SIS, the Purchaser may co-ordinate a meeting, with the participation of HN and Contractor no later than CDR + 15 weeks, in order to provide comments on the Final Draft SIS. This meeting may coincide with a PPM, if possible.
- 3.7.6. After this meeting, an updated and complete version of the Final SIS shall be provided (if required) by the Contractor, within one (1) week, for approval. Parties will aim at finalising the site facilities requirements so that each site will be ready before delivery of the SSSB CIS equipment to the sites.

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- 3.7.7. Approval of the SIS by the Purchaser in no way relieves the Contractor of his responsibilities to achieve the contractual and technical requirements of this Contract.
- 3.7.8. The schedule for submission of the draft and approved SIS shall be incorporated in the PIP.
- 3.7.9. The Contractor shall provide for each site a complete SIS with updated “As Designed” drawings of how all of the major assemblies of the Purchaser/Contractor supplied equipment are to be physically installed and mechanically/electrically integrated.
- 3.7.10. The SIS documentation, as a minimum – but not limited to, shall consist of:
- a. All applicable floor and wall plans to include cable penetrations, and routing;
 - b. Physical details of all equipment, apparatus and devices;
 - c. Location plans with complete details of all cross-connection frames and patch panels;
 - d. Location plans of all ancillary equipment, terminations and/or connections;
 - e. Plans and descriptions presenting all grounding conductors, electrodes, joints and their connections to the existing earthing and grounding systems;
 - f. Physical details of all rack cabling, cabinet cabling, cable runs and cable routing with length, cable numbers and cable functions to include as appropriate all connections, connectors and sockets;
 - g. Details covering all wiring termination points including wire numbers and colour coding, if applicable;
 - h. The functions of all inter-connecting cables with their codes, colour code and the function of each separate conductor;
 - i. The physical details covering all cable trays and ducts for inter-communication equipment being part of this Contract;
 - j. The list and layout of equipment as well as cabinet orientation to be installed including functional description of each component;
 - k. Site layout, System/equipment site installation plans and programme, antenna farm area installation;
 - l. The implementation structure, responsibilities and management control of sub-contractor(s);
 - m. Exact location of HF-TX, UHF and HF-RX antennas, as well as microwave DLOS antennas, taking into account the existing electromagnetic circumstances on the sites;

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- n. Analysis of the design approach applied for each sub-system. The analysis shall also describe the design approach applied for equipment and structures that will be installed and implemented by the Contractor under the Civil Works package. The Contractor shall also describe the measures taken to ensure efficient and effective integration of sub-systems into respective systems and consequently into the complete SSSB System;
- o. Definition of Civil Works, relevant dismantling and demolition works and other tasks realized as a part of site preparation and site restoration that are the Contractor's responsibility as stipulated in SECTION 12 of this SOW. Physical details of all Civil Works equipment and structures shall be presented both graphically and in narrative form including where applicable matrixes, tables and item lists;
- p. Identification of interfaces throughout the system to ensure interface compatibility as well as interfaces with communications infrastructure, power supply, cooling system and fire extinguishing system.

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SECTION 4 SYSTEM DESIGN AND ENGINEERING

4.1. General

4.1.1. As a minimum, the Contractor shall take into account the following reference documentation for his implementation. Other reference documentation regarding communication system design is mentioned in the respective annexes:

- a. SDIP-28/1 (Dec 2009) NATO Zoning Procedures
- b. SDIP-29/2 (Mar 2015) – Selection and Installation of Equipment for the Processing of Classified Information
- c. SDIP-31/2 (Mar 2011) – Instructions for the Control and Safeguarding of NATO COMSEC Materials for Non-NATO Nations and International Organizations (NNN/IO)
- d. STANAG 4370 (Environmental testing and associated Allied Environmental Conditions Test Publications (AECTP))
- e. STANAG 7201 (The Human Engineering Test and Evaluation Procedures for systems, equipment and facilities)
- f. STANAG 4133 (Method of specifying electrical power supplies: standard types of electrical power)
- g. IEC-60364, Part 4, Chapter 41 (Electrical installations of buildings, Protection for safety, Protection against electric shock)
- h. IEC 332 (Tests on electric and optical fibre cables under fire conditions)
- i. IEC 1034 (Measurement of smoke density of cables burning under defined conditions)
- j. ASTM E 662 (Standard Test Method for Specific Optical Density of Smoke Generated by Solid Materials)
- k. MIL-STD-454 (Standard of Workmanship)
- l. MIL-STD-1472D (Consoles/Work-positions)
- m. MIL-STD-461-F (Electromagnetic Interference)
- n. MIL-STD-882E (System Safety)
- o. STANAG 2345 (Evaluation and Control of Personnel Exposure to Radio Frequency Fields, 3 kHz to 300 GHz)
- p. Directive 2002/49/EC of the European Parliament and of the Council of 25 June 2002 (Environmental Noise Directive)
- q. STANAG 4372 – SATURN, A Fast Frequency Hopping ECCM Mode for UHF Radio, Dec 2008, NSA/1328(2008)-C3/4372

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- r. STANAG 4246 – Have Quick UHF Secure and Jam-Resistant Communications Equipment, Jan 1987
- s. STANAG 4205, Edition 3 – Technical Standards for Single Channel UHF Radio Equipment

4.1.2. The Contractor shall implement a system engineering programme that shall be a continuing function throughout the duration of the Contract in order to provide technical integration and co-ordination of design, fabrication, installation and test activities.

4.1.3. The system engineering programme shall include:

- a. Compatibility of hardware and software;
- b. The justification for function and performance allocations to various sub-systems and equipment to achieve overall system requirements;
- c. Methodology for identification and resolution of technical problem areas that may develop during design, fabrication, installation and testing.

4.2. System Engineering and Design Plan (SEDP)

4.2.1. The Contractor shall provide, as part of the PIP Section 2 (see section 2.3.3), a System Engineering and Design Plan (SEDP) that shall establish and define the system engineering programme. This shall also include all PFE provided.

4.2.2. The plan shall include:

- a. Hardware and software functional description;
- b. Development and preparation of detailed equipment design specifications in line with the technical approach appropriate to fulfil the Purchaser's performance requirements;
- c. Equipment performance calculations;
- d. The description of the hardware, software and mechanical integration of assemblies, sub-assemblies and components into a coherent system;
- e. Identification of interfaces throughout the system to ensure interface compatibility and interface control;
- f. Development and preparation of detailed engineering drawings;
- g. Technical reviews and reports;
- h. Co-ordination with fabrication, installation and testing activities;
- i. System Safety Engineering plan;

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- i. System Safety Hazard Analysis Report
- ii. Environmental and Safety Requirements
- j. Installation Engineering Plan;
- k. An Electromagnetic Interference and Compatibility Plan.

4.3. System Safety Engineering Plan (SSEP)

- 4.3.1. The Contractor shall apply engineering principles, criteria, and techniques to identify and eliminate safety hazards in the SSSB-POL system in accordance with Military Standards (MIL-STD)-882E and equivalent HN law, if any.
- 4.3.2. The Contractor shall design and/or select all equipment on the basis of inherent safety features that protect not only the human operators and maintainers but also the equipment itself.
- 4.3.3. The Contractor shall establish a System Safety Programme in accordance with “MIL-STD-882E, Section 4”, to fulfil the safety requirements of the Contract.
- 4.3.4. The Contractor shall provide, as part of the PIP Section 2 (see section 2.3.3), a System Safety Engineering Plan (SSEP) in accordance with MIL-STD-882E.
 - a. The Contractor shall describe his risk assessment method in the SSEP.
 - b. The Contractor shall document in his SSEP the procedures to control design, selection, procurement and manufacture of parts and materials. Revisions to the SSEP shall incorporate Purchaser-agreed changes, additions or deletions that have evolved during the conduct of the Programme.
- 4.3.5. Safety verification shall be conducted at each site prior to SAT to ensure compliance with the SSEP. The safety verification shall verify the safety requirements for all types of hazards not eliminated by design. The Contractor shall document the safety verification process in the SSEP. The Contractor’s responsibilities shall be defined in the SSEP.
- 4.3.6. System Safety Engineering Plan shall also include System Safety Hazard Analysis Report (SSHAR) as mentioned in MIL-STD-882E.
- 4.3.7. **Environmental and Safety Requirements:** The System Safety Engineering Plan (SSEP) shall also define Environmental and Safety Requirements as defined in the following sub-paragraphs:
 - a. Environmental requirements shall be implemented and verified by the Contractor in accordance with National laws and regulations.

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- b. The Contractor is obliged to comply with the national legislation concerning job accidents, incident prevention and hygiene at work. The Contractor is also obliged to make legal arrangements for protection of the life and security of all the personnel and to guarantee medical assistance whenever necessary due to job accidents. The same legal arrangements shall be applied to sub-contractor personnel under the Contractor's responsibility.
- c. Health and Safety (H&S) Hazards: The physical presence, operation and maintenance of the system shall pose no H&S hazards to personnel.
- d. Carcinogenic and Radio-active Materials, Mercury: Materials containing known carcinogenic substances, radio-active materials or mercury shall only be used with the prior authorisation of the Purchaser with the exception of Radium that is not to be used to achieve self-luminosity.
- e. Hazard Warning Labels: Equipment warning labels shall be attached wherever there is any potential electrical, chemical, electromagnetic radiation or heat hazard or a potential hazard caused by human contact with materials, particularly when removal of covers will expose the hazard.
- f. The release of any toxic or corrosive fumes as a result of materials used, or under specified environmental and service conditions, such as heating, results in conflagration are to ensure that materials do not:
 - i. Form any acidic or corrosive alkali gases that may be released into the atmosphere.
 - ii. Do not produce any toxic or corrosive fumes that would be detrimental to the performance of the equipment or health of personnel.
 - iii. Do not produce any gases with the potential to produce an explosive atmosphere.
- g. Asbestos Materials: Equipment shall not contain any asbestos material.
- h. Glass Fibre Materials: Glass fibre materials shall not be used as the outer surface or covering on cables, wire or other items where they may cause skin irritation to operating personnel.
- i. Moving Part Protection: Any rotating or other moving parts such as ventilators, blowers, drive belts etc., shall be shielded or protected adequately to prevent accidental contact by and cause an injury to any personnel during operation and maintenance.
- j. Equipment Edges: Projecting and overhanging edges of equipment items shall be kept to a minimum. Edges and corners shall be rounded or protection provided.

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- k. Environmental Conditions Indoors, temperature, humidity: Equipment shall function without degradation under the environmental conditions as specified at SOW Annex-A.
- l. RF Exposure Levels: The Contractor shall apply the doctrine stipulated in STANAG 2345 or equivalent Host Nation law for evaluation and control of personnel exposure to radio frequency fields 2 MHz to 400 MHz. It is the Contractor's responsibility to obtain the HN national regulations regarding this issue. RF fields generated by the system in operation shall not exceed the Permissible Exposure Levels (PEL) as specified in national regulations or in STANAG 2345, whichever is more restrictive. See also section 4.5 below.
- m. Noise Levels: Noise generated by the system in operation shall not exceed the levels specified in the local regulations or Environmental Noise Directive (2002/49/EC), whichever is more restrictive for operational, maintenance areas. The following noise limits shall apply:

Maximum noise level at perimeter of the site	Maximum noise level in operational and maintenance areas	Maximum noise level in all other areas
55 dB (A)	55 dB (A)	75 dB (A)

4.4. Installation Engineering Plan (IEP)

- 4.4.1. The Installation Engineering Plan (IEP) is required to define, explain and monitor the engineering method and procedures to be used by the Contractor, and to present the system design in terms of work statement/order requirements. It provides the Purchaser with the opportunity to monitor and review the Contractor's engineering efforts and to determine performance-cost trade-offs that may be required.
- 4.4.2. The Contractor shall provide, as part of the PIP Section 2 (see section 2.3.3), the Installation Engineering Plan (IEP), which shall contain the following:
 - a. The IEP shall define the activity specific implementation structure, responsibilities, lines of control, sub-contractor management structure.
 - b. Listing of Major and Minor Equipment to be installed: This listing shall contain a brief functional description of each item, its operating characteristics, and any abnormal criteria required for installation.
 - c. Engineering Implementation Schedules: These schedules shall cover milestone dates such as delivery of Contractor furnished equipment (CFE) and Purchaser Furnished Equipment (PFE); installation; number of required tests; interface with other systems.

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- d. Planned Layout: This section shall contain the criteria for the planned equipment layout, a block diagramme to show signal flow, considerations of radio frequency interference and radiation effects, interface tie-ins, and considerations such as efficiency of the proposed configuration in terms of access requirements for operation, maintenance, installations, and removal. Included will be consideration of space between equipment walls ceilings, references shall be made to all applicable system drawings and recommendations for maximum and/or minimum configurations.
 - e. Protocol of receipt of DHS (Delivery of Hardware on Site).
 - f. Checkout procedures
 - g. Noise levels Report
 - h. Electromagnetic levels Report
- 4.4.3. Protocol of Receipt of the Delivery of HW on Site (DHS): This document constitutes proof of delivery by the Contractor of the hardware items. The HW delivered on site is verified against two lists: shipping list (check qty/identification of boxes/pallets) and items lists (once the boxes are open, and it is verified that the right qty of equipment has been delivered on site iaw As-Designed products lists). Damage or incidences are recorded in the Protocol of receipt. But this document does not constitute a formal handover of the ownership of the equipment.
- 4.4.4. Checkout procedure: This will cover the checklist to be inspected once the installation is done: Equipment is properly installed, labels properly affixed, grounding, equipment labels identification, power connection, all equipment is installed in the rack iaw the cabinet orientation and the list of equipment. This checkout procedures can also be used prior to the Acceptance of the Installation/Integration.
- 4.5. Electromagnetic Interference and Compatibility (EMI/EMC) Control Plan**
- 4.5.1. As part of the SEDP, an EMI/EMC Control Plan – to be provided by the Contractor – is required. The plan shall identify all measures taken to ensure electromagnetic compatibility of the SSSB system and its apparatus, in accordance with 2004/108/CE and MIL-STD-461-F. The standards/norms applied by the manufacturers shall be mentioned. A Certificate of Compliance (CoC) to the mentioned norms shall also be included. In his design, the Contractor shall take into account the constraints of the site, number of simultaneous transmissions and EMC. An EMC study of the transmitter site shall demonstrate that Public and Occupational exposure levels are within limits stipulated in respective international and national guidelines.

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- 4.5.2. With regards to EMC, the SSSB-POL system and its electronic equipment, shall during its lifetime, operate within its defined specifications, and be to both military (NATO) and HN POL National/Military environmental standards.
- 4.5.3. Power supply, HVAC, lights, other electrical and mechanical equipment and installations as well as buildings and structures shall not have any negative influence on the communication systems and vice versa.
- 4.5.4. Every system installed separately or in combination with other systems must comply with the EMC requirements.
- 4.5.5. The conducted interferences (currents) through cables and wiring caused by the SSSB system and its apparatus shall be in accordance with applicable European Norms (EN).
- 4.5.6. Electromagnetic Interference Radiated Immunity:
- a. The SSSB system shall remain functional within its specifications during and after exposure to external electromagnetic fields as per applicable EN norms.
 - b. The SSSB systems shall remain functional within its specifications during and after exposure to external electromagnetic fields caused by transmitters installed nearby, as per applicable EN norms.
 - c. The Contractor shall provide the EMC compatibility between equipment to demonstrate that the system works as a whole. The interoperability testing shall obviously be part of the system acceptance. EMC equipment level acceptance shall be done by verification of EMC compliance certificates.
- 4.5.7. Electromagnetic Interference Conducted Immunity:
- a. The systems shall remain functional within their specifications during and after exposure to conducted interference / currents in general as per applicable EN norms.
 - b. The systems shall remain functional within their specifications during and after exposure to conducted interference currents entering via the power supply as per applicable EN norms.
 - c. The systems shall remain functional within their specifications during and after exposure to conducted interference currents caused by exposure to electromagnetic fields as per applicable EN norms.
 - d. Transients: Any shelters (if required) for equipment shall be able to handle fast transients / burst as per EN 61000-4-4.
- 4.5.8. Electrostatic discharge: The systems shall remain functional within their specifications during and after an electro static discharge as defined in EN 61000-4-2.
- 4.5.9. The Contractor shall develop a plan for control of Electromagnetic Interference (EMI). This plan shall form a sub-set of the System Engineering

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and Design Plan of the PIP Section 2 and shall include a description of the interference reduction programme and the engineering design procedures and techniques that shall be used to achieve conformance with the requirements of this Contract.

- 4.5.10. The control plan shall also identify all measures taken to ensure EMC of the SSSB system is within the requirements of PFE.
- 4.5.11. The EMI/EMC Control Plan shall contain and not limited to the following items:
- a. Management Controls: Specific organisational responsibilities, lines of authority and the control of implementation planning etc. shall be stated, together with details of the EMI/EMC requirements imposed on sub-contractors and test requirements placed upon testing establishments.
 - b. Mechanical Design: The control plan shall describe criteria for selection at the design stage of the materials and manufacturing techniques to be employed so that inherent attenuation to electromagnetic emanations and susceptibility shall be provided, without compromising other mechanical considerations of individual equipment design and specifications.
 - c. Electrical/Electronic Circuit Design: This section shall fully describe the EMI suppression techniques that shall be applied to all parts and circuitry, in terms of both the generation of undesirable emanations and susceptibility to the fields and voltage levels as specified elsewhere in this Contract and, for the case of sub-systems/equipment units, levels allocated by the Contractor (including specific requirements placed on sub-contractors) for the various equipment units comprising the SSSB system.
- 4.5.12. Lightning Protection
- a. The SSSB system shall comply with the international standard for lightning protection – International Electro technical Commission (IEC)-62305.
 - b. The equipment shall not be damaged and the Communications and Information Systems (CIS) equipment shall continue to operate without degradation when subjected to the lightning waveforms conforming to AECTP 250 - leaflet 254 atmospheric electricity and lightning.
 - c. Appropriate Surge Protection Devices (SPD) and other lightning protection measures according to EN 61643-11, IEC 61643-12 and IEC 62305 shall be used to provide sufficient protection for the equipment.
 - d. The earth electrode shall be able to handle the lightning current for dispersal into the ground.

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- e. The equipment shall withstand the effects of induced currents into the system as per EN61000-4-5, Limit: Level 4.
- f. The Radio-Frequency (RF) coaxial cables from the antennas connected to the related CIS equipment shall be equipped with an appropriate SPD and provide sufficient protection.
- g. The SPD devices shall be able to handle the multiple strokes lightning flash consisting of average of 3-4 strikes.
- h. The Contractor shall provide and install the lightning protection measures for each equipment and CW that are provided and implemented by the Contractor.

4.6. TEMPEST Requirements

For the two Radio Sites Rozewie and Rzucewo there are no TEMPEST requirements³.

4.7. System Design and Technical Reviews

The System Design shall include the following activities, reviews, documents and reports:

4.7.1. Technical Reviews (SRR, PDR and CDR):

- a. The Contractor's system engineering programme shall include provision for three (3) Technical Reviews, the SRR, PDR and CDR. During technical reviews the Purchaser shall examine the functional requirements and the Detailed Design Specification (DDS). The schedule and planned conduct of the SRR, PDR and CDR and resulting documentation and reports shall be included in the SEDP. The plan shall also identify and list specific CI(s) subject to technical reviews at sub-system and equipment levels. This listing shall be subject to update until such time as the system hardware and software baseline is established.
- b. The technical reviews shall include three review meetings as described following:

³ However, at the MOC Gdynia there are certain TEMPEST requirements, but which are out of scope of this Contract.

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- i. System Requirements Review (SRR) shall take place between PIP Acceptance and PDR at a date to be mutually agreed between the Contractor and the Purchaser within four (4) weeks of PIP Acceptance;
 - ii. Preliminary Design Review (PDR) Meeting (at the date specified in the SSS);
 - iii. Critical Design Review (CDR) Meeting (at the date specified in the SSS).
- c. For each technical review, the Contractor shall:
- i. Provide well-defined entry and exit criteria based on Contract requirements;
 - ii. Demonstrate, wherever possible, the products under review;
 - iii. Substantiate decisions with technical details and associated rationale;
 - iv. Ensure appropriate participation including that of sub-contractors, vendors, and suppliers;
 - v. Be able to host the review at an appropriate Contractor facility (or facilities), if not hosted at Purchaser or HN facilities (by mutual agreement);
 - vi. Provide administrative support, e.g. resources, materials, meeting rooms, security;
 - vii. Provide meeting agendas, at least 3 weeks before the meeting;
 - viii. Provide Minutes of Meeting (MoM) that document the proceedings including key points, decisions, action items, and any issues with associated rationale; open and unresolved items (action items) with their closure requirements and responsibilities. MoM of the technical reviews are to be provided to the Purchaser for review and comment not later than one (1) week after the meeting respective.
- d. Technical Reviews shall be conducted to demonstrate progress in converging on viable traceable system requirements that are balanced with cost, schedule and risk.

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- e. Technical Reviews shall confirm the total system detailed design approach (integrated composite of people, product and process solutions) satisfies the functional baseline, risks are mitigated with closure plans for remaining risks demonstrating the required progress and that the total system is ready for detailed design

4.7.2. System Requirement Review (SRR)

- a. The Contractor shall conduct a System Requirement Review (SRR) Meeting before PDR. A formal agenda shall be provided by the Contractor, and at the end of the meeting formal Minutes of Meeting (MoM) shall be produced that are to be provided to the Purchaser for review and comment within one (1) week of any meeting.
- b. The objective of this review is to ensure the system requirements are understood adequately by the Contractor and a draft functional (requirements) baseline is established.
- c. During the meeting presentations on the results of the System Requirements analysis shall be conducted (the result of requirements analysis shall be captured in the Requirements Analysis Report (RAR)). In addition, Purchaser / Contractor common requirements understanding, common functional and system design understanding shall be achieved.
- d. The SRR shall be conducted to demonstrate progress in converging on viable, traceable system requirements that are balanced with cost, schedule and risk by confirming that:
 - i. Customer requirements (including environmental, usage modes, and other pertinent factors) were analysed and translated into system-specific functional and performance requirements;
 - ii. Technology validation and demonstration plans are complete and closure plans on technical demonstrations and maturations are achieving required progress;
 - iii. Critical technologies for personnel, product, and process solutions have been identified and assessed.
- e. SRR Entry Conditions
 - i. All following relevant documentation have been delivered:
 - Approved PIP Documentation;
 - Draft Requirement Analysis Report (RAR)The Contractor shall present the results of this analysis (RAR) together with an early identification of inconsistencies, conflicts,

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and incompleteness, potential problems and/or risk areas at the System Requirements Review (SRR);

ii. Approved Agenda (SRR).

f. SRR Exit Conditions

i. RAR has been formally submitted by the Contractor and approved by the Purchaser;

ii. All action items as documented in the Minutes of Meeting (MoM) of the SRR meeting have been agreed by the Purchaser as closed;

iii. Overall Summary Schedule have been provided by Contractor;

iv. Technical risks have been assessed and minimised;

v. MoM have been recorded, reviewed by the Purchaser and approved.

4.7.3. Preliminary Design Review and Critical Design Review (PDR and CDR)

a. The Contractor shall provide the PDR Package (PDR Draft documentation) three (3) weeks before the PDR meeting, in order to allow the Purchaser and HN to review the documents, this including the Draft version of the DDS.

b. The Contractor shall provide the CDR Package (CDR Draft documentation) three (3) weeks before the CDR meeting, in order to allow the Purchaser and HN to review the documents, this including the Final Draft version of the DDS (following the discussions at the CDR meeting, the Contractor shall finalise the Final DDS within two (2) weeks after this meeting).

c. Both Technical Reviews, PDR and CDR, shall consider all aspects of the design and cover all functional and performance requirements. It shall include for each Configuration Item (CI):

i. Any allocated functional and performance requirements derived from overall requirements specified in the Contract;

ii. CI specifications which are to include drawings, schematic diagrammes, models, manuals and other data as appropriate and address the followingas a minimum:

(1) Functional specifications;

(1) Performance specifications (technical and environmental) including RAMT requirements;

(2) Interface requirement specifications;

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- (3) Interface control document (ICD) specifications;
 - (4) Physical layout (form and fit), including human engineering;
 - (5) Sub-system integration requirements;
 - (6) Current fabrication status and test results available to validate the design approach and achievement of relevant specification;
 - (7) Site specifications.
- d. In preparation and conduct of a Technical Review the Contractor shall:
- i. Host and develop the meeting agenda for the reviews;
 - ii. Provide the Purchaser with appropriate technical material including draft CI specifications in quantities specified in the SSS and in format specified in SOW paragraph 13.3 below;
 - iii. Provide reports from, and ensure participation by sub-contractors, vendors and suppliers as necessary;
 - iv. Organise and present briefings as necessary;
 - v. Provide appropriate facilities, administrative services and summary meeting reports;
 - vi. Provide schedule, test and design data and supporting analysis for the reviews;
 - vii. Provide appropriate technical personnel at the reviews;
 - viii. Provide the Purchaser with draft copies of the summary meeting reports in the format specified in SOW paragraph 13.3 below NLT two (2) weeks subsequent to the reviews.
- e. The principle purpose of Purchaser participation is to approve the Contractor's design. Such approval is based upon Contractor-supplied information and in no way relieves the Contractor's obligation to deliver a system wholly in conformity with the technical and environmental performance specifications contained in this Contract. Sufficiently detailed information and test data shall be provided to assure the Purchaser that all functional and performance requirements have been achieved or have been modified to achievable limits without prejudice to contractual specifications.
- f. PDR Entry Conditions
- i. All following relevant documentation have been delivered:

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- ii. Approved Final PIP Documentation. SRR has been conducted and all actions from the SRR have been agreed and closed.
 - iii. Draft System & Sub-system Detailed Design Specifications (DDS).
 - iv. Requirement Analysis Report.
 - v. Interface Requirement Specifications.
 - vi. As Designed Product Drawings and Associated Equipment Lists.
 - vii. Installation Engineering Plan.
 - viii. Site Activation Plan.
 - ix. Site specifications.
 - x. The HW for related sites has been proposed by the Contractor.
 - xi. Approved Agenda (PDR)
- g. PDR Exit Conditions
- i. The documents related to PDR reviews have been formally submitted by Contractor and approved by the Purchaser.
 - ii. Site Preparation Data Package (SPDP) as defined in SOW SECTION 12 has been finalised and approved
 - iii. All actions items, as documented in the MoM of the PDR meeting, have been agreed by the Purchaser as closed.
 - iv. The HW for sites has been reviewed.
 - v. Overall Summary Schedule have been provided by Contractor.
 - vi. Technical risks have been assessed and minimised.
 - vii. RAMT deliverables have been agreed
 - viii. MoM has been recorded and approved.
- h. For PDR documentation, the Contractor shall deliver “Detailed Design Specifications (DDS)” in Draft form including:

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- i. Equipment design specifications.
 - ii. Engineering data and drawings.
 - iii. Preliminary installation drawings for each installation location, as long as infrastructure requirements (power, cooling and civil works) and define the Configuration items, including drivers/software/firmware adaptations, are compliant with SOW SECTION 4.
- i. For PDR documentation, the Contractor shall deliver “Requirement Analysis Report” in compliance with SOW SECTION 4.
 - j. For PDR documentation, the Contractor shall deliver “Interface Requirement Specification” in compliance with SOW SECTION 4
 - k. For PDR documentation, the Contractor shall deliver “As Designed Product Drawings and Associated Equipment Lists” in compliance with SOW SECTION 4
 - l. For PDR documentation, the Contractor shall also deliver Installation Engineering Plan and Site Activation Plan, in compliance with SOW SECTION 4
 - m. Critical Design Review (CDR) Entry Conditions
 - i. All exit objectives of the PDR have been met as follows:
 - (1) All documents related to the PDR have been reviewed, commented upon, updated accordingly, delivered and approved by the Purchaser.
 - (2) System Design (As described in System & Sub-system Detailed Design Specifications Plan & Interface Requirement Specifications-IRS) is delivered and the CDRLs (Contractual Data Requirements Lists) are approved.
 - (3) All actions items, as documented in the MoM of the PDR meeting, have been agreed by the Purchaser as closed.
 - (4) The MoM of the PDR meeting have been approved.
 - ii. All Documents related to CDR reviews have been submitted and these documents have been reviewed by NCI Agency.
 - iii. The HW for related sites has been proposed by the Contractor.
 - iv. Approved Agenda (CDR)

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- n. Critical Design Review (CDR) Exit Conditions
 - i. Approvable documents related to CDR reviews have been formally submitted by Contractor and approved by NCI Agency.
 - ii. The HW for sites has been selected.
 - iii. All action items to CDR, as documented in the MoM of the CDR review meeting have been agreed by NCIA as closed.
 - iv. Overall Summary Schedule provided by Contractor.
 - v. Technical risks assessed and minimised.
 - vi. Revised PIP Documentation (if required).
 - vii. MoM recorded and approved.
- o. To be included in the CDR documentation, the Contractor shall also deliver an interface Control and Management document, defining detailed interface requirements throughout the system and resolving methods to ensure interface compatibility, including system design, communications infrastructure and any CW-related interface issues, if applicable (e.g. power supply, HVAC, fire extinguishing system, etc.). This shall also include the Application Programming Interface (API) documentation of the various interface components.
- p. An output of the CDR shall be the CI specifications. The equipment covered by a CI specification shall be subject to configuration management once the specification has been approved. The Contractor shall provide the final version of CI specifications in a format specified in SOW section 13.3 to the Purchaser within five (5) weeks after the CDR meeting.

4.7.4. System & Sub-system Detailed Design Specifications (DDS)

- a. The purpose of the Detailed Design Specifications (DDS) is to provide visibility for the Purchaser into the proposed detailed design of the system, its development and to provide documentation against that the Purchaser may evaluate progress, foresee difficulties and provide guidance and recommendations to protect its interests.
- b. The Contractor shall deliver the DDS to the Purchaser in Draft form as part of the PDR documentation and in a final form as part of the Critical Design Review (CDR) according to the SSS. The DDS shall encompass the areas set forth in PIP Section 2 in a refined and comprehensive manner to a minimum of CI level.

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- c. The System & Sub-system DDS shall contain as a minimum (but not limited to) the following:
- i. Conformance Matrix linking Contract Requirements to details of the design specification;
 - ii. Presentation of detailed equipment and Civil Works (as stipulated in SECTION 12) design specification;
 - iii. Potential information inputs to the Security design documentation generated by the Purchaser (refer to SOW Annex D);
 - iv. Equipment performance calculations;
 - v. Identification of interfaces and interdependencies throughout the system to ensure interface compatibility, including API documentation;
 - vi. Definition of the CI(s);
 - vii. An Interface diagramme (detailed);
 - viii. Software licensing, support and warranty agreements;
 - ix. Design for System Management and Configuration Tools including security considerations;
 - x. Proposed antenna definitions and specifications of materials used as to include requirements specified at Book II Part IV (SOW) Annex-A and its Appendix-1;
 - xi. The physical layout and operation principles of the SSSB system for each capability;
 - xii. Proposed system topology, routing and transport for each capability;
 - xiii. All design constraints identified in the Detailed Design Specification Plan, for each capability;
 - xiv. Detailed description of how the Contractor's proposed system shall meet the functional requirements in the System Requirement Specifications (SRS in SOW Annex-A) for each capability;

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- xv. Detailed description of the main design features of the interfaces with each relevant other system in the SRS in line with the associated design constraints identified in the SRS for each capability;
 - xvi. A list of equipment (Hardware and software/firmware) planned to be delivered for each capability.
- d. The Purchaser will review the document and provide its comments and observations in the Technical Reviews to be held according to the SSS.
 - e. The Contractor shall deliver the Draft version of the DDS to the Purchaser no later than three (3) weeks prior to the PDR meeting.
 - f. The comments and observations provided by the Purchaser shall be incorporated by the Contractor into the DDS.
 - g. The Contractor shall deliver the Final Draft version of the DDS to the Purchaser not later than three (3) weeks prior to the CDR meeting. Following the discussions at the CDR meeting, the Contractor shall deliver the Final DDS within two (2) weeks after this meeting. Where Purchaser comments and observations have not been included into the Final Document, the Contractor shall include a separate annex noting the exclusion of such comments and observations and providing a rationale for the exclusion.
 - h. It shall be noted that the DDS is the product of the Contractor. Review of the Draft version and delivery of the Final version does not imply acceptance of the detailed design by the Purchaser. It remains the sole responsibility of the Contractor to prove the design through the regime of testing set forth in the Contract and it shall be the sole responsibility of the Contractor in the event that the design proves deficient in terms of the Contract functional and/or performance requirements.
- 4.7.5. Interface Requirements Specification (IRS)
- a. The Contractor shall prepare an Interface Requirement Specification (IRS) document as part of the Detailed Design Specification (DDS) documentation that specifies the interfaces among the HW and SW components of the system.
- 4.7.6. Requirement Analysis Report (RAR):
- a. The Contractor shall prepare a Requirement Analysis Report (RAR) upon completion of the System Requirements Review. The RAR shall describe the result of requirement analysis indicating the inconsistent, incomplete, inadequately detailed, redundant and non-feasible requirements (if any). It shall also contain Contractor proposed changes and refinements.

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4.7.7. 'As Designed' Product Drawings and Associated Equipment List

- a. The Contractor shall prepare product drawings and associated equipment lists to provide engineering data to support competitive procurement and maintenance for hardware. These drawings represent the highest level of design disclosure.

4.7.8. Site Activation Plan:

- a. The Site Activation Plan is designed to supply information on the conditions and actions necessary to ensure a successful activation or operational transition of any new system.
- b. The content of the Site Activation Plan shall be provided in the Contractor's format and shall at least include:
 - i. A set of conditions that must exist prior to start of activation;
 - ii. A detailed priority listing of actions/events that must occur for a successful activation;
 - iii. The responsibilities of the Contractor;
 - iv. The responsibilities of the Purchaser;
 - v. Time phasing of actions/events;
 - vi. An assessment of impact on MOC operations.

4.8. Workmanship, Labelling and Cabling

4.8.1. MIL-STD-454 Requirement 9 shall be applied as the Standard of Workmanship.

4.8.2. Weight Labelling: Items weighing more than the one-person values in table "Weight Limits" shall be prominently labelled with the weight of the object and the lift limitation, e.g. two-person lift, three-person lift, mechanical lift, etc

Handling Function		Weight Limit (kg)
a.	Lift object from the floor and place it on a surface not greater than 1.5 m above the floor.	16
b.	Lift an object from the floor and place it on a surface not greater than 0.9 m above the floor.	20
c.	Carry an object up to 10 m.	19

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- 4.8.3. European Community EMI Conformity for COTS Items: Each COTS item, including cables, shall bear the European Community (EC) CE conformity marking and the Contractor shall present to the Purchaser a copy of the relevant Manufacturer's Declaration of Conformity i.a.w. the EC Council Directive 89/336/EEC on the approximation of the laws of the Member States relating to electromagnetic compatibility.
- 4.8.4. Cables/Connectors:
 - a. Power cables shall be Low Smoke Zero Halogen (LSZH) cables. The preference for other cables is be LSZH cable standard as well. In all cases Polish regulations and standards shall take precedence in this matter.

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SECTION 5 SYSTEM SECURITY REQUIREMENTS

5.1. Purpose

This section describes the minimum security requirements for the SSSB-POL system and project, in accordance with the current NATO and National Security Policies concerning the protection of NATO classified information and National classified information.

5.2. References

5.2.1. NATO Security Policies are contained in the following documents:

- a) C-M(2002)49-Corr12 (14 Sep 2015) – NATO Security Policy
- b) AC/35-D/2000-Rev7 (07 Jan 2013) – Directive on Personnel Security
- c) AC/35-D/2001-Rev2 (07 Jan 2008) – Directive on Physical Security
- d) AC/35-D/1030 (20 May 2005) – Guidelines on Physical Security
- e) AC/35-D/2004-Rev3 (15 Nov 2013) – Primary Directive on CIS Security
- f) AC/35-D/2002-Rev4 (17 Jan 2012) – Directive on the Security of Information
- g) C-M (2008)0113 (27 Nov 2008) – The Primary Directive on Information Management
- h) AC/35-D/1021-Rev 3 (31 Jan 2012) – Guidelines for the Security Approval or Security Accreditation of Communication and Information Systems (CIS)
- i) AC/35-D/1017-Rev3 (29 Jun 2017) – Guidelines for Security Risk Management (SRM) of Communication and Information Systems (CIS)
- j) AC/35-D/1014-Rev3 (31 Jan 2012) – Guidelines for the Structure and Content of Security Operating Procedures (SecOps) for CIS
- k) AC/35-D/1015-Rev3 (31 Jan 2012) – Guidelines for the Development of Security Requirements Statements (SRSs)
- l) AC/35-D/1019-Rev1 (12 Dec 2008) – Guidelines for the Security Evaluation and Certification of Communication and Information Systems (CIS)
- m) AC/322-D/0030-Rev5 (23 Feb 2011) – INFOSEC Technical and Implementation Directive for the Interconnection of Communication and Information Systems CIS

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- n) AC/322-D/0049 (29 Apr 2002) – Directive for Transmission Security
- o) AC/322-D(2007)0036 (12 Jul 2007) – Technical and Implementation Directive on Emission Security.
- p) AC/322-D(2015)0031 (18 Dec 2015) – CIS Security Technical and Implementation Directive on Cryptographic Security and Mechanisms for the Protection of NATO Information within NNN & IO CIS
- q) AC/322-D/0048-Rev2 (09 Dec 2011) – Technical and Implementation Directive on Computer and Local Area Network (LAN) Security
- r) NATO Computer Incident Response Capability (NCIRC) security settings for MS Windows ® operating systems
- s) AC/35-D/2005-Rev3 (12 Oct 2015) – Management Directive on CIS Security
- t) SDIP-28/1 (Dec 2009) – NATO Zoning Procedures
- u) SDIP-29/2 (Mar 2015) – Selection and Installation of Equipment for the Processing of Classified Information

5.2.2. In case of inconsistency between NATO Security Policy Documentation and SSSB Specific Security Documentation, the NATO Security Policy Documentation takes precedence.

5.3. SSSB-POL System Security Requirements

5.3.1. General Classification Requirements for SSSB documentation:

- a. In general no higher than NATO RESTRICTED.

5.3.2. The SSSB-POL system's mode of Operation will be:

- a. NATO SECRET System-High: all data associated with the SSSB Operation shall be protected as if it is NATO SECRET and a review and release capability has to be considered.

5.3.3. General approach on SSSB Security Accreditation

- a. The Contractor shall deliver the system and components subject to the scope of this activity, accreditable up to NATO SECRET level.
- b. The overall SSSB-POL system shall be subject to security accreditation by HN POL. The ultimate aim is to achieve the 'Approval to Operate' (ATO) status for the entire SSSB-POL system at FSA milestone. Security accreditation activities will be initiated at PSA milestone.

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- c. The Polish Security Accreditation Authority (SAA/SKW) will be responsible of approving the security-related documentation and will issue the (possibly interim and) final Security Accreditation Statement for the SSSB-POL system.
- d. Security accreditation with regard to the interconnection of the SSSB-POL system to the NS WAN is the common responsibility of the HN's SAA/SKW and the NATO CIS Security Accreditation Board (NSAB).
- e. Security accreditation of interconnection of the SSSB-POL system to its National Defence Network (NDN) is the responsibility of the Polish SAA/SKW.
- f. For more guidance on the general accreditation process, see Annex D (Support to Security Accreditation) of this SOW.

5.3.4. Security Evaluation and Certification (SEC)

- a. The SSSB-POL system components shall possess Product Certification Reports issued by the authorised Evaluation and Certification Authorities as results of Security Evaluation and Certification process as defined in bullets e) and i).
- b. The required standard of certification process that is to be employed for accreditation purposes shall be approved within the STEP (ref. SOW Annex D).
- c. All software shall be selected from the NATO Approved Fielded Product List (AFPL) for NS networks. All information assurance products shall be selected from NATO Information Assurance Product Catalogue (NIAPC) with 'green' evaluation scheme.

5.3.5. Security Requirements

- a. The SSSB-POL system shall as a minimum have implemented the security mechanisms as defined in the NATO Security Policy and supporting directives and guidelines mentioned in SOW para. 5.2.1, bullets a) through i), INFOSEC Technical and Implementation directives mentioned in SOW para. 5.2.1 bullets j) through u).
- b. Every system that needs to be directly interconnected to the SSSB system must follow a series of rules. The security mechanisms given in the SISRS mentioned in SOW Annex D shall as a minimum be implemented. The compliance of external systems to those rules must be written and signed by the responsible national Security accreditation authority.
- c. It shall be demonstrated that the SSSB POL system shall possess all the security features stated in reference documents at SOW paragraph 5.2.1.

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5.3.6. Security Testing and Validation

- a. It shall be demonstrated that security mechanisms of the system work as claimed in the system documentation. The demonstration shall be carried out to illustrate the mechanisms used that prevent any unauthorised users from bypassing or otherwise defeating the security protection mechanisms.
- b. Security testing and validation will in principle be lead by the Purchaser, especially as this concerns mostly the installation at the SSSB Buffer centre (MOC Gdynia). However, the Contractor may be requested, as part of the scope of this Contract, to provide additional inputs, as and when required, to the Purchaser on any security testing and validation related activities (in line with NATO or National Security standards) on the Contractor's inputs into the SSSB system via the two Radio Sites.

5.3.7. Security Documentation

- a. Necessary security documentation required to assist in the Security Accreditation by the relevant HN authorities (or NSAB, in accordance with para. 5.3.3.d) will in principle be produced by the Purchaser (NCI Agency, Cyber Security). However, the Contractor may be requested, as part of the scope of this Contract, to provide additional inputs, as and when required, to the Purchaser on any security-related details (in line with NATO or National Security standards) on the Contractor's inputs into the SSSB system via the two Radio Sites. Refer also to SOW Annex D for the support expected from the Contractor

5.3.8. Interconnectivity

- a. The security accreditation shall also be done for interconnection of the SSSB-POL system to NATO systems and to other national systems.

5.4. SSSB-POL Project Security Requirements

5.4.1. General Classification Requirements for SSSB documentation:

- a. The existence and purpose of SSSB systems is classified as "NATO UNCLASSIFIED". The SSSB security requirements associated with the enforcement mechanism are classified as "NATO RESTRICTED";
- b. Each paragraph in a classified document shall display a classification marking. The classification marking shall be placed prior to the beginning of the text of the paragraph, for example: "13. (NR) Each paragraph in a classified document";
- c. If a document contains a paragraph classified as NR, the entire document shall be classified as NR, and labelled as such in the headers and footers on each page of the document with the phrase "NATO RESTRICTED".

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- 5.4.2. The Contractor shall provide the security aspects related to requirements in the SOW. The Contractor's design shall meet the safety and security requirements as laid down in the SOW. The Contractor shall agree to abide by and implement the security mechanism as defined in the NATO Security Policy and supporting directives as per the SOW references.

5.5. Information Exchange

- 5.5.1. Any necessary exchange of physical documentation or CD-ROM media, classified at up to NATO RESTRICTED, between the Contractor and the Purchaser and/or HN POL shall be by registered mail in accordance with current national regulations (e.g. double envelope, commercial courier service).

5.6. Resourcing

- 5.6.1. The Contractor Project Manager, Deputy Project Manager, and all personnel working on the SSSB-POL project at HN or Contractor/Purchaser premises/sites shall normally have a Personal Security Clearance (PSC) of NATO SECRET level as a minimum. However, low level workers of Polish nationality only may exceptionally have no clearance in line with HN POL regulations.
- 5.6.2. Requests for visits (RFV) shall be notified in writing and co-ordinated in advance with the HN POL MoD via the relevant national channels. All visiting personnel shall comply with POL and NATO security regulations. A minimum of 30 working days notice is required for all visits, and the Contractor shall take good note of the necessary lead times for national processing and approvals of RFVs.

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SECTION 6 QUALITY ASSURANCE (QA)

6.1. Introduction

6.1.1. The following reference documentation applies for QA purposes:

- (a) Allied Quality Assurance Publication (AQAP) - 2000
- (b) AQAP - 2110
- (c) AQAP - 2210
- (d) AQAP - 2070
- (e) AQAP 160 - NATO Integrated Quality Requirements for Software throughout the Life Cycle
- (f) AQAP - 169 NATO Guidance on the use of AQAP - 160
- (g) ISO/IEC 12207 – Software Life Cycle Process
- (h) ISO/IEC 15288 – Systems and Software Engineering – System Life Cycle Process
- (i) AQAP 2009 - NATO Guidance on the use of the AQAP-2000 Series
- (j) AQAP-2000 Series
- (k) AQAP 2050 - NATO Project Assessment Model
- (l) AQAP 2105 - NATO Requirements for Deliverable Quality Plans
- (m) AQAP 2310 - NATO Quality Management System Requirements for Aviation, Space and Defence Suppliers
- (n) International Standards 9000 Series
- (o) International Standard 10012-1 (ISO-10012-1)
- (p) Applicable NATO Standardisation Agreements
- (q) STANAG 4107
- (r) STANAG 4427

6.2. Quality Control System

6.2.1. The Purchaser will apply STANAG 4107 and AQAP(s) specified above (para. 6.1.1, references (a) thru (m)) that the Contractor shall herewith accept and agree to.

6.2.2. The Contractor shall establish, document and maintain an effective QC System in accordance with 6.1.1 reference (a) and/or equivalent to ISO 9000 Series Standards throughout the life-cycle of the Contract.

6.2.3. The Purchaser may delegate the Quality Assurance to the appropriate Government Quality Assurance Authority (GQAA) in accordance with

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STANAG 4107. The GQAA, when accepting the STANAG 4107 Request for GQAA Services, appoints his QA Representative(s) (QAR). The Purchaser, through their own Quality Assurance, however, will retain the overall supervisory and liaison authority concerning all QA/QC matters, and for this purpose will use their own QA Personnel. The term "National QAR" (NQAR) shall apply to any of the Purchaser-appointed QARs, whether nominated by the GQAA or by Purchaser QA. During the entire Contract implementation, the NQAR(s) within their own rights, defined in the Contract applicable AQAPs, shall assure the Contractors and sub-contractor's compliance with all contractual requirements.

6.3. Quality Assurance (QA) Programme

- 6.3.1. The Contractor shall be responsible for the control of quality of all deliverables and associated contractual products throughout the life-cycle of the Contract.
- 6.3.2. The QA Programme shall ensure that procedures are developed, implemented and maintained to adequately control the development, design, production, testing and configuration of all deliverables. The QA Programme will be described in the QA Plan outlined below. The programme is subject to review and/or rejection by the Purchaser, or its delegated representative(s), whenever it does not meet the QA requirements. It will be subject to review for adequacy, compliance and effectiveness. The overall QA Programme will adhere to the provisions of SOW SECTION 6 above Reference (a) and be consistent with the project philosophy of integrating COTS hardware and software as applicable.

6.4. Applicability

- 6.4.1. The QA programme shall apply to all hardware, software and documentation being developed, designed, acquired, integrated, maintained, or used under the Contract. This includes non-deliverable test and support hardware and software. Firmware shall be controlled in the same manner as software. The QA programme shall also apply to CW throughout the life cycle of delivered infrastructure (with associated earth, electrical and ducting works, etc.) and systems (such as NB PSS, EPDP, HVAC, grounding, etc.). The QA programme is also applicable to the whole package of documents, designs, plans and drawings pertaining to CW at any given stage of the project.

6.5. Organisation

- 6.5.1. The Contractor shall designate at least one person to perform the QA function for this project. Contractor personnel within the QA organisation shall have sufficient responsibility, authority, organisational freedom and

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independence to review and evaluate activities, identify problems and initiate or recommend appropriate corrective action.

- 6.5.2. Personnel performing QA functions shall have specific documented definitions of their assigned duties. In no case shall the Contractor QA personnel performing QA functions be the same personnel responsible for performing other tasks that are reviewed by QA.
- 6.5.3. Contractor QA personnel shall participate in the early planning and development stages to ensure that attributes of good quality for life-cycle procurement are specified in programme plans, standards, specifications and documentation. After establishment of attributes, controls and procedures, Contractor QA personnel shall ensure that all elements of the QA Programme are properly executed, including inspections, tests, analysis, reviews and audits.
- 6.5.4. A Contractor QA person shall be designated as the Contractor's QA Management Representative and point of contact to interface with the Purchaser on quality control matters or his delegated National Quality Assurance Representative (NQAR) and identified in the Quality Plan.

6.6. QA Plan

- 6.6.1. The Contractor shall provide a QA Plan to the Purchaser in accordance with the requirements of the above mentioned AQAPs, and as amended herein. The QA Plan shall be submitted to the Purchaser for review as part of the PIP's Section 3 (see SOW section 2.3.1.k.iii). The QA Plan shall be structured as a living document subject to revision / update, as and when required.
- 6.6.2. The QA Plan shall reference, and/or document, and explain the Contractor's QA procedures for analysis, software support, development, design, production, installation, configuration management, control of Purchaser furnished property, documentation, records, programming standards and coding conventions, library controls, reviews and audits, testing, corrective action and certification as specifically related to this project.
- 6.6.3. The QA Plan shall be compatible and consistent with all other plans, specifications, standards, documents and schedules that are used under this Contract. All Contractor procedures referenced in the QA Plan shall either be submitted with the plan, or described in the plan and made available for review by the Purchaser upon demand.

6.7. Corrective Actions

- 6.7.1. The Contractor's corrective action system shall ensure prompt detection, documentation and correction of problems and deficiencies. The corrective

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action system shall track all reported and recorded problems and deficiencies until their closure and clearance.

6.8. Sub-Contractor Control

- 6.8.1. In the event that the Contractor sub-contracts any of the work contained in this Contract, the Purchaser reserves the right to perform reviews and audits at any of the sub-contractor(s) facilities. Such reviews and audits shall not be used by the Contractor as evidence of effective control of sub-contractor's quality. The Contractor shall conduct periodic audits of the sub-contractors.

6.9. Certificates of Conformity (CoC)

- 6.9.1. When satisfied that the products and/or services provided by the Contractor are in conformance with the terms of this Contract, a CoC per SOW 6.1.1, references (f) Annex B shall be countersigned and stamped by the cognisant NQAR(s). The preparation of the CoC(s) shall be the responsibility of the Contractor.
- 6.9.2. CoC(s) shall be required for all quantities contained in each Contract line item. The Contractor shall submit copies of the CoC(s) to the Purchaser in quantities specified in SSS on delivery of the equipment.

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SECTION 7 CONFIGURATION MANAGEMENT (CM)

7.1. General

- 7.1.1. Configuration Management (CM) applies processes and tools to establish and maintain consistency between products and product requirements. CM establishes a structure for products and product configuration information and selects, defines, documents and baselines product attributes in sufficient detail to support the product lifecycle.
- 7.1.2. The following reference documentation applies for CM purposes: ACMP-2009 NATO Guidance on Configuration Management.
- 7.1.3. The Contractor shall be responsible for the project HW and SW Configuration Management
- 7.1.4. The Contractor shall be responsible for establishing and maintaining an effective CM organisation to implement the CM programme in accordance with STANAG 4427 and managing the CM functions (configuration identification and documentation, configuration control, configuration status accounting, configuration audits).
- 7.1.5. The Contractor shall be responsible for the application of all necessary CM procedures, in accordance with the requirement and guidance stated below, throughout the life of the basic Contract, and during the optional CLS (if applicable, see section 8.6.4)
- 7.1.6. Whenever System or SSSB-POL System or SSSB-POL System/Equipment is mentioned the definitions will also include SSSB-POL Supporting Systems, provided by the Contractor, such as augmented NB PSS (if applicable), antenna masts, aircraft warning lights, lightning protection, grounding.

7.2. Configuration Management Plan (CMP)

- 7.2.1. The Contractor shall provide a CMP in accordance with ACMP-2009 NATO Guidance on Configuration Management, tailored to the requirements of the proposed technical solution. The CMP shall be periodically updated as required. The CMP shall be part of the PIP Section 4 (see para. 2.3.1.k.iv). The CMP shall be maintained during the optional CLS period as well (in case the optional CLS is executed).
- 7.2.2. In producing the CMP, the Contractor shall define the organisation and procedures used to configuration manage the functional and physical characteristics of CI(s), including interfaces and configuration identification documents. He shall ensure that all required elements of CM are applied in such a manner as to provide a comprehensive CM programme.

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- 7.2.3. The CMP shall address all disciplines within this SOW section and shall as a minimum include, but not be limited to the following CMP Sections:
- a. Introduction
 - b. Organisation
 - c. Configuration Identification and Documentation (CID)
 - d. Configuration Control (CC)
 - e. Configuration Status Accounting (CSA)
 - f. Configuration Audits
 - g. Management tools/Interface management
- 7.2.4. The Contractor shall provide detailed proposals for the documents that shall comprise the above baselines to be included in the CMP for approval by the Purchaser.
- 7.2.5. The Contractor shall propose in the CMP a Requests for Deviation (RFD) (s) and Requests for Waiver (RFW) format based on the requirements given in ACMP-2009 NATO Guidance on Configuration Management
- 7.2.6. The Contractor shall propose a deliverable version control system as part of the CMP detailed below. This version control system shall allow for the unique identification of all changes to the deliverables, no matter how minor the change. The version control system shall also identify a difference between major and minor changes. Any doubt as to whether a revision constitutes a major or minor change shall be referred to the Purchaser for decision
- 7.2.7. The Contractor shall provide structure, content and initial details for this plan in the proposal phase so to show the concept of the activity.

7.3. Configuration Identification and Documentation (CID)

- 7.3.1. The Contractor shall establish a configuration identification system. The system shall identify all documents necessary to provide a full technical description of the characteristics of the Hardware and Software CID(s) that require control at the time each baseline is established and shall include the relevant deliverables in the Contract.
- 7.3.2. The Contractor shall propose appropriate CID(s) in the CMP including an explanation of the rationale and criteria used in the selection process that shall be based on the criteria for selection of CID(s).
- 7.3.3. The CID structure shall be in the form of a CI tree structure (an explicit part of the CMP) with the System being the top level CID and shall show the relationships between the lower level CID.

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7.4. Configuration Control (CC)

- 7.4.1. The Contractor shall describe his Configuration Control (CC) procedures in the CMP.
- 7.4.2. The Contractor shall be responsible for issuing in a timely manner all approved changes and revisions to the functional, development and product baseline documents included in the Contract. This includes changes originated both by the Contractor and the Purchaser. Copies of change pages or documented revisions shall be provided in accordance with the Schedule of Deliverables. Where a change affects more than one document, or affects documents previously approved and delivered, the Contractor shall ensure that the change is properly reflected in all baseline documents affected by that change.
- 7.4.3. The Purchaser must approve all changes prior to becoming effective.

7.5. Configuration Status Accounting (CSA)

- 7.5.1. The Contractor shall be fully responsible for the Configuration Status Accounting (CSA) for all CID(s) in accordance with ACMP-2009 NATO Guidance on Configuration Management. This system shall consist of reports that shall be prepared and delivered in a manner, format and schedule that shall be proposed by the Contractor in his CMP and approved by the Purchaser.
- 7.5.2. At the end of the Contract, the Contractor shall deliver a set of final CSA reports for each CID in quantities as specified in the SSS and in format as specified in SECTION 13 below.
- 7.5.3. In addition, the Contractor shall develop and maintain a CSA Database using the appropriate database management and other related software tools for the entire period of the Contract.

7.6. Configuration Audits

- 7.6.1. Configuration audits shall be established by the Contractor to verify compliance with the specifications and other Contract requirements in accordance with ACMP-2009 NATO Guidance on Configuration Management. The Contractor shall include in the CMP detailed proposals for the audits.
- 7.6.2. The audits shall be carried out jointly by the Contractor and the Purchaser in accordance with the Contractor's approved CMP and shall consist of a Functional Configuration Audit (FCA) and Physical Configuration Audit (PCA), see below:
- 7.6.3. Functional Configuration Audit (FCA) is the formal examination of functional characteristics of a configuration item, or system to verify that the item has

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achieved the requirements specified in its functional and/or allocated configuration documentation. In this Contract, the FCA shall primarily consist of reviews of all the component-based requirements of the Contract, Contract documentation, tests or test results where necessary, to demonstrate the full compliance of the functional requirements of allocated components delivered to the Purchaser.

- 7.6.4. Physical Configuration Audit (PCA) is the formal examination of the 'as-built' configuration of a configuration item and system against the technical documentation to verify the product baseline. In this Contract the PCA shall consist of a review and verification of design documentation against the delivered system and individual system components. The PCA shall also include a review of system-wise functional and performance requirements that were not reviewed at FCA.
- 7.6.5. Audit Location. The FCA and the PCA shall be conducted after the FAT at the Contractors site/factory and after RSAT at site respectively. The Contractor is to ensure that after completion of the FCA and PCA Minutes of Meetings detailing these activities are published and distributed to the Purchaser for review.

7.7. Configuration Management Tools

- 7.7.1. The various baselines referred in this SOW (see SOW section 7.8) shall be established by the Contractor using automated tools.
- 7.7.2. The Contractor's software tool shall be agreed with the Purchaser prior to Contract signature.
- 7.7.3. The Contractor shall deliver the software tools and appropriate licenses to the Purchaser at the kick-off of the project.
- 7.7.4. The Contractor shall maintain a CSA database using the agreed software tools for the entire period of the Contract.
- 7.7.5. The Contractor shall transfer the current CSA database to the Purchaser upon request.
- 7.7.6. During the life cycle of the project and until the end of the (optional) CLS period (see SOW section 8.26), all baselined documents created under this Contract shall be maintained by the Contractor in the CSA database using the agreed software tools to allow efficient update, automated tracking of changes through all affected CID(s) and baseline documents, and continued automated maintenance and printing of these documents, including tables, figures, and readings.

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7.8. Baselines

- 7.8.1. Functional Baseline: The Contractor shall propose the CID that he considers to best describe the functional baseline, which includes all necessary functional characteristics, the test requirements, interface characteristics and the design constraints. From this, the Contractor shall establish the Development and Product baselines as described below.
- 7.8.2. Development (Allocated) Baseline: The Contractor's Development Baseline shall comprise the configuration documentation, which includes:
- a. Functional and system design documentation, development specifications, performance specifications, and interface characteristics and documentation,
 - b. The allocation of functional characteristics to CID(s),
 - c. Design constraints,
 - d. The verification and testing deliverables required to demonstrate achievement of the functional baseline.
- 7.8.3. Product Baseline: The product baseline shall comprise the configuration documentation, which includes:
- a. Product, material and process specifications,
 - b. Engineering drawings,
 - c. Other technical documentation for CID(s) that satisfactorily reflects the requirements of the functional and development baselines,
 - d. Production acceptance test results/reports.
- 7.8.4. The Contractor shall ensure that there is full traceability through all baselines back to the functional baseline.
- 7.8.5. The Contractor shall maintain the baselines in a database established by the Contractor as specified under CM Tools.
- 7.8.6. At the end of the Contract, the Contractor shall deliver the baseline documentation in quantities as specified in the SSS and in a format that complies with SOW SECTION 13 below. As part of the CM database, as specified under CM tools below, the Contractor shall transfer a copy of the current version of all baselines to the Purchaser at Contract completion.

7.9. Engineering Change Proposals (ECP)

- 7.9.1. Changes to baselined CID(s) shall be processed as either Class I or Class II Engineering Change Proposals (ECPs) as defined in ACMP-2009 NATO Guidance on Configuration Management.

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- 7.9.2. The Contractor shall propose in the CMP an ECP format based on the requirements as laid out at that reference.
- 7.9.3. The Contractor shall use the CC procedures specified in the CMP for the preparation, submission for approval implementation and handling of ECP(s) to baselined CID(s). When submitting ECP(s), the Contractor shall assign a priority rating of Emergency, Urgent or Routine. Extensions to the target times for processing Class I ECP(s) shall be mutually agreed upon by the Contractor and Purchaser. No Class I ECP shall be implemented until it has been approved by the Purchaser.
- 7.9.4. Prior to implementation, all Class II ECP(s) shall be submitted by the Contractor to the Purchaser for review and classification concurrence. If the Purchaser's representative does not concur with the classification, Class I ECP procedures shall be applied and the ECP shall be formally submitted to the Purchaser for approval or disapproval.
- 7.9.5. All design changes shall be appropriately reflected in the technical documentation by the issue of appropriate changes or revisions. The Contractor shall provide all such changes/revisions to the Purchaser.

7.10. Requests for Deviation and Waiver

- 7.10.1. If required, the Contractor shall prepare, handle, and submit for approval, Requests for Deviation (RFD) (s) and Requests for Waiver (RFW) as defined in ACMP-2009 NATO Guidance on Configuration Management.
- 7.10.2. The Contractor shall be aware that permanent departures from a baseline shall be accomplished by ECP action, rather than by RFD.

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SECTION 8 INTEGRATED LOGISTIC SUPPORT

8.1. Integrated Logistic Support (ILS) Programme

- 8.1.1. The Contractor shall establish an ILS Programme to manage the ILS activities within this Contract.
- 8.1.2. The Contractor shall appoint an ILS manager to conduct the ILS Programme with functional subordinates to reflect the programme ILS managerial structure.
- 8.1.3. The Contractor shall designate an experienced ILS manager who shall be at a level commensurate with the systems engineering and the software engineering managers.
- 8.1.4. The Contractor's ILS manager shall serve as the focal point for interface with the Purchaser in all matters relating to the ILS programme.

8.2. Integrated Logistics Support Plan (ILSP)

- 8.2.1. The Contractor shall provide an Integrated Logistics Support Plan (ILSP) that shall incorporate Purchaser-approved changes, additions, and deletions.
- 8.2.2. The ILSP shall establish the policies, procedures, and methodologies to ensure the reliability and availability requirements are achieved in the context of the contract and to refine the support products to be delivered under this Contract.
- 8.2.3. The ILSP shall describe the Contractor's plans for the management control, interface, and integration of all elements of the Contractor's Integrated Logistics Support Programme with the system engineering and design processes.
- 8.2.4. The ILSP shall describe the Contractor's approach for each logistic element described in the following sub-plans:
 - a. RM&T Programme Plan
 - b. Logistics Support Analysis (LSA) Process Plan
 - c. Supply Support Plan
 - d. Support Equipment (SE)
 - e. Facilities' plan
 - f. Parts Obsolescence Management Plan (POMP)
- 8.2.5. The ILSP shall also describe the approach to Logistics Support Analysis Record (LSAR) for the implementation, warranty and post-warranty (as per CLS phase).

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- 8.2.6. The ILSP shall document the Contractor's plans, organisational structure, procedures and activities to be implemented, followed and performed to ensure that logistics and the logistics support elements influence and interface with system design and other functional areas and to satisfy all supportability criteria of the fielded system.
- 8.2.7. The ILSP shall also explain the interface of the Contractor's ILS structure and the overall design process with his subcontractors, vendors and suppliers.
- 8.2.8. The ILSP shall include a schedule of the ILS Programme and a detailed description of the interaction of the ILS activities with the other activities performed under this SOW.
- 8.2.9. The ILSP shall be updated as required throughout the Contract Phases and it shall be flexible enough to be extended into the CLS phases
- 8.2.10. The ILSP shall be structured as a living document subject to revision / update, as and when required.
- 8.2.11. The Contractor shall apply as reference the documentation mentioned in this section.
- 8.2.12. The Contractor shall provide structure, content and initial details for this plan in the proposal phase so to show the concept of the activity.

8.3. Maintenance Strategy

- 8.3.1. Maintenance tasks are addressed both for hardware and software
- 8.3.2. Maintenance tasks are performed on site, at military maintenance facilities, at industry maintenance facilities
- 8.3.3. There shall be four (4) level of maintenance to ensure the highest possible availability of the Product.
- 8.3.4. The goal of Level 1 maintenance: implies a fast and easy exchange of LRUs performed on the Product by organizational personnel when a malfunction occurs
- 8.3.5. The goal of Level 2 maintenance: implies exchange of LRUs and/or the replacement of modules, performed on the Product by organizational personnel when a malfunction occurs
- 8.3.6. The goal of Level 3 maintenance: implies the repair of subassemblies, modules and LRUs after their replacement at maintenance Level 1 and Level 2. Testing on test-benches or integration tests can be included. Level 3 maintenance can be performed either on Product or at specific repair shops.
- 8.3.7. The goal of Level 4 maintenance: all repairs and overhaul activities beyond Level 1 to Level 3 capabilities must be ensured.

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- a. Repair of subassemblies, modules and LRUs after their replacement at maintenance Level 1 to Level 3
- b. Major modifications to improve the design and/or operational activities will be prepared and, if necessary, embodied at this level

8.4. Hardware Maintenance Concept

8.4.1. Hardware Maintenance levels used are generally known as HL1, HL2 HL3 and HL4.

8.4.2. Organizational Maintenance (HL1) is Hardware maintenance capable of being carried out:

- a. On-site
- b. By relatively low technical skill level personnel performing preventive maintenance and changing Line Replaceable Units (LRU) on the basis of diagnostic outputs;
- c. Using Built-In-Test (BIT) facilities for start-up and on-line diagnostics, by referring to main equipment Technical Manuals (TM)
- d. No Tools and Test Equipment (TTE) are envisioned to be used
- e. Typical tasks will include visual inspection, preventative maintenance tasks, manual reconfiguration if necessary, external adjustments, removal and replacement of repairable LRUs
- f. Includes system failure recovery by the application of simple on-line diagnostics or technician initiated restart of the system and the use of off-line diagnostics which do not require external test module support
- g. Generation of equipment failure reports, supply requisitions and other pertinent maintenance and supply records

8.4.3. Organizational Maintenance (HL2) is Hardware maintenance capable of being carried out:

- a. On-site
- b. By higher technical skill level personnel performing preventive maintenance and changing Line Replaceable Units (LRU) on the basis of diagnostic outputs;

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- c. Using Built-In-Test (BIT) facilities for start-up and on-line diagnostics, simple Tools and Test Equipment (TTE) (standard and special-to-type) in addition to BIT as a means for on-line and off-line diagnostics, and by referring to main equipment Technical Manuals (TM) to perform exhaustive fault isolation
- d. Simple either commercial or special to type TTE are envisioned to be used (e.g.: screwdrivers, multimeters, oscilloscope, adapters, peculiar support equipment);
- e. Where the fault is beyond the capabilities of HL1 technical support, HL2 activities will be performed by Support Site personnel (through on-site intervention).
- f. Where remote fault management is not feasible, technicians from the host site will travel to the remote site hand carrying relevant spares to perform maintenance tasks
- g. Generation of equipment failure reports, supply requisitions and other pertinent maintenance and supply records.

8.4.4. Intermediate Maintenance (HL3) is Hardware maintenance capable of being carried out:

- a. At maintenance facilities and through technical support and assistance or on-site intervention/work by maintenance personnel with skills enabling tasks to be accomplished within the relevant technologies.
- b. By higher technical skill level personnel performing:
 - i. repairing, testing and calibrating Line Replaceable Units (LRU), Shop Replaceable Units (SRU), and spare parts
 - ii. on-site investigations and major scheduled servicing/overhaul, detailed inspection, major equipment repair, major equipment modification, complicated adjustments, system/equipment testing,
 - iii. failure trend analysis including reporting to relevant Purchaser authorities and Post Design Services (PDS)
- c. Repair tasks will be performed using Automatic Test Equipment (ATE), general purpose and special-to-type TTE, calibration equipment, any applicable support software, and the necessary equipment TMs and a Technical Data Package (TDP).
- d. Where the fault is beyond the capabilities of HL1/2 technical support, HL3 activities will be performed by Support Site personnel (through on-site intervention)

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- e. Generation of equipment failure reports, supply requisitions and other pertinent maintenance and supply records.
- 8.4.5. Depot Maintenance (HL4) is Hardware maintenance capable of being carried out:
- a. At maintenance facilities (industry or military) and through technical support and assistance or on-site intervention/work by maintenance personnel with skills enabling tasks to be accomplished within the relevant technologies.
 - b. Where the fault is beyond the capabilities of HL1-3 technical support, HL4 activities will be performed by the Contractor
 - c. Generation of equipment failure reports, supply requisitions and other pertinent maintenance and supply records.
- 8.4.6. The hardware maintenance concept is based on the modularity of the equipment. The modules to be removed from the system/equipment for replacement repair or any other offequipment maintenance will be considered as Line Replaceable Units (LRUs), with the following characteristics:
- a. Its failure can be detected and indicated by a BIT system or by abnormal condition/failure display, in conjunction with TMs and general-purpose test equipment.
 - b. It is easily accessed for replacement purposes.
 - c. It is easy to replace, through the use of a plug-in connector, screwed terminal, nut/bolt fixing or similar connector.
 - d. It has minimal adjustment requirements, such as voltage level settings; adjustments may be carried out with the BIT or with general-purpose tools and test equipment.
 - e. When only one LRU has failed, its replacement returns the system/equipment to full operational status.

8.5. Software Maintenance Concept

- 8.5.1. Software Maintenance levels used are generally known as SL1, SL2 SL3 and SL4.
- 8.5.2. Organizational Maintenance (SL1) is Software maintenance capable of being carried out with the same characteristics highlighted for HL1. SL1 are those functions/tasks in support of the on-site software that are within the capabilities of site maintenance personnel. This includes software failure recovery by the application of simple diagnostics, or site maintenance personnel initiated restart.

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- 8.5.3. Organizational Maintenance (SL2) is Software maintenance capable of being carried out with the same characteristics highlighted for HL2 e.g. SW settings, simple SW customizations (per site/instance), SW reloading/installation with automated or detailed procedures reported in the TMs, execution of scripts, management of users/profiles. SL2 are those functions/tasks in support of the on-site software that are within the capabilities of a System Administrator.
- 8.5.4. Intermediate Maintenance (SL3) is Software maintenance capable of being carried out with the same characteristics highlighted for HL3 e.g. SW/FW fine tuning (per site/instance), SW/FW bugs recording and reporting, SW/FW troubleshooting including Operating Systems. SL3 (on-site intervention) comprises those functions/tasks in support of the on-site software that require specialist intervention (SW System architects, SW programmers, experienced Systems' Administrators, Network specialists). The tasks can be performed either by software personnel visiting the site or by remote diagnostics if enabled by the System and allowed by Security.
- 8.5.5. Depot Maintenance (SL4) is Software maintenance capable of being carried out with the same characteristics highlighted for HL4 e.g. SW/FW debugging, re-coding and testing (both in simulated and emulated environments), SW/FW patches creation and deployment. The tasks can be performed by software engineers in properly configured environments (SW development and testing facilities) under strict configuration control.
- 8.5.6. Software Corrective Maintenance refers to changes necessitated by actual errors in a software product. If the software product does not meet its requirements, corrective maintenance is performed. Is a Reactive modification of a software product performed after delivery to correct discovered problems.
- 8.5.7. Software Preventive Maintenance refers to the changes necessitated by detecting potential errors in a software product. Is a modification of a software product after delivery to detect and correct latent faults in the software product before they become effective faults.
- 8.5.8. Software Adaptive and Perfective changes are enhancements to a software product. These changes are those that were not in the design specifications or the released software.
- a. Adaptive changes are those changes necessary to accommodate a changing environment. Adaptive changes include changes to implement new system interface requirements, new system requirements, or new hardware requirements. Is a modification of a software product performed after delivery to keep a software product usable in a changed or changing environment

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- b. Perfective changes improve the software product's performance or maintainability. A perfective change might entail providing new functionality improvements for users or reverse engineering to create maintenance documentation that did not exist previously or to change existing documentation. Is a modification of a software product after delivery to improve performance or maintainability

8.6. Logistic Support Concept

- 8.6.1. The Contractor shall adopt the following maintenance approach when developing the logistic support concept:
 - a. NATO Maintenance Task (NMT) will be performed by NATO personnel (military or civilian)
 - b. Industry Maintenance Task (IMT) will be performed by industry personnel under a Contractor Logistics Support arrangement.
- 8.6.2. Maintenance tasks addressed to Hardware Maintenance levels HL1, HL2 and Software Maintenance Level SL1, SL2 shall be NMT
- 8.6.3. Maintenance tasks addressed to Hardware Maintenance levels HL3, and Software Maintenance Level SL3, shall be NMT or IMT based on Contractor suggestion and NATO Contracting Authority agreement.
- 8.6.4. Maintenance tasks addressed to Hardware Maintenance levels HL3, and Software Maintenance Level SL3, if agreed to be IMT, will be subject to further investigation during CLS phase in order to envision a planned migration into NMT.
- 8.6.5. Maintenance tasks addressed to Hardware Maintenance levels HL4 and Software Maintenance Level SL4 shall be IMT.
- 8.6.6. For NATO Contracting Authority Provided Hardware and Software, the Maintenance responsibility will be retained by the providing agency.
- 8.6.7. The Contractor shall design the System and its support to enable at least 95% of HW and SW failures to be solved at HL1/2 and SL1/2 level and, in any case, to meet the Operational Availability requirements.

8.7. Logistic Support Analysis (LSA)

- 8.7.1. This activity is the effort to identify, document, and establish an effective and economical way to perform the total range and quantity of maintenance tasks applicable to the end item.
- 8.7.2. This activity also entails the identification of logistic resources required to support the maintenance tasks

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- 8.7.3. The Contractor shall establish an LSA Process to manage the execution of the LSA tasks required by this SOW and the interfaces with other activities within the Contract.
- 8.7.4. The Contractor's LSA Process shall be a progressive and iterative effort, performed incrementally and in parallel with the design phases and shall support the generation of CDRL to support ILS development efforts.
- 8.7.5. The Contractor shall document the LSA Process Plan as a sub-plan in the ILSP.
- 8.7.6. The Contractor shall provide all LSA relevant data (also known as LSAR) in ASD S3000L (last available issue) format. The data shall be delivered through agreed electronic distribution media (preferably via Data Exchange Sets (DEXs)).
- 8.7.7. The LSA process shall address both software and hardware system elements to the level specified in this Contract.
- 8.7.8. The Contractor shall provide a Maintenance Task Analysis (MTA) that summarizes the maintenance planning
- 8.7.9. The Contractor shall assign System Breakdown Codes (SBC) to give a structured view on the Item under Analysis concerning functional and physical breakdown, or both in a mixed way and to facilitate LSA and RM&T data management functions.
- 8.7.10. The objectives of the LSA Process are to:
 - a. Cause logistic support considerations to influence design decisions while meeting the operational sustainability requirements;
 - b. Identify support problems and cost drivers;
 - c. Develop logistic support resource requirements;
 - d. Develop a logistic support data base containing the data necessary to support the system.
- 8.7.11. The Contractor shall identify the corrective maintenance, preventive maintenance and operations support tasks required to support operational readiness of the system
- 8.7.12. The Contractor shall analyse the results of the FMECA to identify candidate corrective maintenance tasks.
- 8.7.13. The Contractor shall analyze and select preventive maintenance tasks and develop a scheduled maintenance programme that is consistent with the maintenance concept described for the intended use of the system. The decision logic used for task selection shall implement the following priorities:
 - a. Avoidance of safety and mission critical failures.
 - b. The achievement of system availability requirements

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- c. Sustainability of deployed operations in accordance with the intended use and the logistics support environment of the system
 - d. Minimization of Life Cycle Cost
- 8.7.14. The Contractor shall perform task analysis covering hardware and software for the tasks identified. The Contractor shall assess initially the skill levels and tools and test equipment required for each task and shall only assess facilities, spares and consumables, specific training, technical documentation requirements, task instructions and man-minutes by skill. The Contractor shall document the results of the task analysis
- 8.7.15. The Contractor shall perform Level Of Repair Analysis (LORA) to recommend the most cost efficient solution for the level at which each maintenance task should be performed and the decision to repair or discard unserviceable LRUs, taking into account the technical requirements and logistics constraints.
- 8.7.16. The Contractor shall generate a LORA candidate list containing those items and tasks not clearly allocated as NMT or IMT maintenance as a consequence of the MTA and those items for which a repair/discard decision is not immediately evident.
- 8.7.17. The Contractor shall determine the level (HL1-4 or SL1-4) and the location at which each maintenance task should be performed, including detail on any NMT for which specific limited support by industry personnel is recommended.

8.8. Mean Time To Repair

- 8.8.1. Mean Time To Repair (MTTR) for hardware faults is the average elapsed time of corrective maintenance. The MTTR elements contributing to the MTTR value shall be those listed in MIL-HDBK-470A, section D2.0, Table D-I.
- 8.8.2. For HL1/2 tasks, the MTTR shall not exceed 30 minutes.
- 8.8.3. For HL3 tasks, the MTTR target figure is 120 minutes.

8.9. Administrative Logistic Delay Time

- 8.9.1. The Administrative Logistics Delay Time (ALDT) is the time the system/equipment is inoperable due to delays in maintenance that are attributable to administration and logistics delays.
- 8.9.2. For the purpose of performing Ao calculations, the ALDT per hardware repair or software fault recovery is the sum of the time required to obtain the logistic resources (e.g. spares, tools and technician). It is calculated from the time the fault is reported to time of commencing the repair task.

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<i>Support Level</i>	<i>ALDT for Manned sites</i>
HL 1/2	30 min
HL 3	72 h
SL 1/2	30 min
SL 3	72 h

8.10. Manpower and Personnel

- 8.10.1. The Contractor shall describe how the personnel requirements analysis will be performed in conjunction with the logistics analysis, and focus on identifying the skills needed to operate, maintain, and support the system.
- 8.10.2. The results of the maintenance task analysis dictate the skill levels and personnel requirements for operational support for the fielded system. Hardware/Software integration, human factors engineering, and safety requirements are an integral part in determining the manpower and personnel requirements.
- 8.10.3. Personnel required for installation, checkout, operation, handling, and sustaining maintenance of the system and its associated test and support equipment shall be identified, trained, and available prior to any field testing.

8.11. Supply Support Concept

- 8.11.1. The Contractor shall be responsible for the provision at each site of initial spares in sufficient quantities to ensure that the operational availability is achieved, whilst taking into account the MTTR and ALDT for HL1, HL2 and HL3.
- 8.11.2. Serviceable spare parts held on site shall be sufficient as a minimum to maintain a 99% probability of replacing all LRUs which are expected to fail during any 7 days period without external support. This is to allow for a period of "closed-door" operations (CDO).
- 8.11.3. The Contractor shall provide a fully detailed and priced Recommended Spare Parts List (RSPL) and a Recommended Consumable Items List (RCIL) no later than one (1) month after CDR meeting that shall detail comprehensively all spares in a hierarchical breakdown.
- 8.11.4. This RSPL and RCIL shall include as a minimum:

<i>Field</i>	<i>Description</i>
Project Identifier	is a string of characters used to uniquely identify a Project and to differentiate it from other Projects.
Contract Identifier	is a string of characters used to uniquely identify a Contract and to differentiate it from other Contracts.

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Field	Description
CLIN	Contract Line Item Number (number-10 digits maximum). Sequence number assigned to a particular line item in a given contract. The combination CLIN-Contract No. shall always be unique.
OEM Part identifier	is a string of characters that are unique to the issuing organization which is used to designate a HW or SW Part As Designed and to differentiate it from other designed parts. Part Number given to this item by the original manufacturer.
OEM Part Name	is a word or phrase by which the breakdown element is known and can be easily referenced
OEM Identifier	is a string of characters used to uniquely identify an organization and to differentiate it from other organizations. Code of the Company that has manufactured this item. This is an internationally recognized 5-digit code which is unique to that company (CAGE Code).
NSN	NATO Stock Number (number-13 digits). Identifies an item codified by one of the NATO countries' National Codification Bureaus. It shall always be linked to at least one part number with the corresponding manufacturer code (manc). It is recommended that the Contractor system integrator requests codification from the National Codification Bureau of the original manufacturer's country. If NSN is known prior to system delivery it shall be added in this field.
Vendor Part identifier	If any is a string of characters that are unique to the issuing organization which is used to designate a HW or SW Part As Designed and to differentiate it from other designed parts. Part Number given to this item by the vendor.
Vendor Part Name	If any is a word or phrase by which the breakdown element is known and can be easily referenced
Vendor Identifier	is a string of characters used to uniquely identify an organization and to differentiate it from other organizations. Code of the Company that has manufactured this item. This is an internationally recognized 5-digit code which is unique to that company.
Weight Unit of Measure	(e.g.: kg, g)
Unit Weight (packed)	Weight of the item packed (gross weight)
Unit Weight (unpacked)	Weight of the item unpacked (net weight)
Dimensions Unit of Measure	(e.g.: m, cm, mm)
Length	Item packed length

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<i>Field</i>	<i>Description</i>
Width	Item packed width
Height	Item packed height
Quantity	<p>is the amount of a product variant included in a contract Enter the quantity of the product variant included in a contract.*Note: Default value of 0</p> <p>Shows the quantity of this item ordered as individual item in this contract, i.e. if it is not delivered built-in in another unit. In case the item is not ordered as individual item or as spare unit but is built-in in another assembly, enter "0" (zero) in this field *Note: Serialised items shall only have a quantity of 1</p>
Failure Rate	<p>For a particular interval, the total number of failures within a population of an item divided by the total functional life of the population during the measurement interval.</p> <p>Assumption measurement intervals: 1,000,000 hours</p>
Failure Rate Data Source	<p>The source of the failure rates. Failure rate data can be obtained from sources such as appropriate reliability predictions, test and evaluation results, field data from past systems of similar design and environmental use, or failure rate data sources such as MIL-HDBK-217 etc.</p>
Part Logistics Category	<p>is a support classification that defines the role of a hardware or software part as designed in the context of product support.</p> <ul style="list-style-type: none"> • End Item • System Subsystem • Hardware Maintenance Significant Items (MSI) to be split into the following categories: <ul style="list-style-type: none"> ○ LS (Statistical Life LRUs) such as Computers, Power PCs, Switches, Routers, IF modules, RF modules, Breakers, Power Supplies, Monitors, Modems, Power Amplifiers etc. ○ LL (Limited Life LRUs) such as Batteries, flexible waveguides, oscillators, ○ II (Insurance Items) like docking stations, Keyboards, Mice, Cables, mechanical parts (e.g. Racks, drawers), simple E/M parts (e.g. patch panels,) ○ C[T] (Technical Consumables) such as fuses, gas dischargers cartridges, surge protection devices, lamps, bulbs, leds etc. ○ C[NT] (Non-Technical Consumables) such as POL (Petrols, Oils, Lubricants), water, gas, ○ C[G] (Generic Consumables) like printer cartridges, toners, printers' paper, ○ AP (Attaching Parts) like washers, gaskets (not EMI), nuts, bolts, screws, etc. • Software (SW) to be split into the following categories: <ul style="list-style-type: none"> ○ SWA (Application Software) such as Contractors' developed Application SW, COTS Application SW (e.g. MS Office, Adobe Acrobat etc.) ○ SWO (Software Operating Systems) such as Linux, Unix, MS Windows, LynxOS, Android, IOS etc. ○ Firmware ○ Device drivers • Support equipment and tools <ul style="list-style-type: none"> ○ CHT (Common Hand Tool)

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<i>Field</i>	<i>Description</i>
	<ul style="list-style-type: none"> ○ CSE (Common Support Equipment) ○ PSE (Peculiar Support Equipment) • Facility (Test Facility, Operational facility, Training facility, Depot facility) • Training Equipment
Hardware Part Repairability	<p>is a support classification which defines whether the Hardware Part As Designed is repairable from a technical perspective (eg, a vendor/supplier standpoint) independent of customer maintenance concepts.</p> <p>Classifier:</p> <ul style="list-style-type: none"> • repairable • non-repairable • NA (Not applicable)
Procurement Lead Time	For non-repairable and repairable parts. Time needed to procure the item To be provided in calendar days
Turn Around Time	For repairable parts Mandatory for repairable items only, not applicable for non-repairable items. This is the internal TAT (from reception of the item until the declaration of ready to ship). To be provided in calendar days.
Breakdown Element Identifier	is a string of characters used to uniquely identify a Breakdown Element and to differentiate it from other Breakdown Elements that comprise a product. Note: Can be used to establish a hierarchical structure of the technical system.
Breakdown Element Name	is a word or phrase by which the breakdown element is known and can be easily referenced.
Parent Breakdown Element Identifier	is a string of characters used to identify the parent of the Breakdown Element
Currency	Currency (text-3 digits). International 3-digit code (ISO) representing the currency in which the item purchase price (or the estimated value) is expressed.
Price	Item Price (number-11 digits). Unit price with 2 decimals.
Warranty Expiration Date	Warranty Expiration Date (date: DD/MM/YY). Shows the date on which the warranty of this item expires, which is usually N days after delivery of the item. If delivery is scheduled for a certain date, warranty expiration date = delivery date + warranty period in days.

- 8.11.5. The Contractor shall provide RSPL and RCIL relevant data in ASD S2000M (last available issue) format. The data shall be delivered through agreed electronic distribution media (preferably via Data Exchange Sets (DEXs)).
- 8.11.6. The Contractor shall provide a full set of Spare Parts to be delivered to each site not later than one month before PSA, fulfilling the requirements set above and sufficient to meet the Operational Availability Requirements.
- 8.11.7. The spare parts shall be packed in reusable containers, properly marked and protected, including Part Number, Serial Number (if applicable), NSN and part description (as per OEM part name).

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8.12. Tools and Test Equipment

- 8.12.1. The Contractor shall design the system to minimize or eliminate the need for special tools and test equipment. Any special tools and test equipment requirements shall be identified and/or any analysis planned shall be highlighted. The requirements and approach for calibration of support and test equipment shall be identified.
- 8.12.2. The Contractor shall provide a fully detailed and priced Recommended Tools and Test Equipment List (RTTL) no later than one (1) month after CDR meeting, for standard and special-to-type tools, test equipment and test fixtures, cables, connectors, support equipment, such as cranes, lifting platforms, etc. in accordance with the SSS up to Level 2.
- 8.12.3. Requirements for standard and special-to-type tools, test equipment and test fixtures, cables, connectors etc. to enable the prescribed maintenance shall be minimal, comprising no more than such items as radio tester, automated test equipment, torque screwdrivers, etc.
- 8.12.4. Quantities of such items to be recommended shall be the minimum consistent with the number required per maintenance operation, with no allowances being included for redundancy.
- 8.12.5. The list shall clearly indicate for what maintenance action the recommended item will be used, parameters to be measured (if applicable), minimum/maximum test equipment specification requirement etc
- 8.12.6. After agreement on the lists with the Purchaser, the Contractor shall deliver the Tools and Test Equipment (one set per site) at no additional cost for the Purchaser, not later than 1 month before the PSA.

8.13. Facilities and Installation

- 8.13.1. The Contractor shall include all facility requirements:
 - a. Flow chart/schedule outlining for ensuring the facility meets specifications;
 - b. Installation planning (data should be provided to the logistics engineers for the assessment of life cycle cost impacts related to support facilities);
 - c. Power requirements, cabling diagrams, physical layouts, and accessibility for maintenance (essential inputs to the project database and maintainability task analyses).

8.14. Provisioning Conferences

- 8.14.1. The Contractor shall organise a Provisioning Conference at his premises at a time and place to be mutually agreed:

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- a. No less than 30 days after submission of the RSPL and RCIL and all relevant documentation including the full range of drawings
 - b. No less than 90 days prior to the PSA;
- 8.14.2. Appropriate technical staff with knowledge of the equipment/project concerned shall be assigned by the Contractor to enable the Purchaser to make a reasoned selection of the spare parts, tools and test equipment etc. required.
- 8.14.3. The Contractor shall provide the agenda and the minutes of the conference. Purchaser representatives will attend the meetings to ensure that proper assumptions, procedures and calculations are being used.
- 8.14.4. The Contractor shall make available all relevant data and documentation including:
- a. LSA documentation and reports
 - b. Technical Data Package (TDP)
 - c. Technical Manuals (TM)
 - d. the most recent deliverable configuration of equipment.
- 8.14.5. Additional provisioning conferences shall be held when any change in equipment which affects the spare parts, repair parts, TTE or consumables requirements is proposed by the Contractor and approved by the Purchaser

8.15. Marking of Items and Components

- 8.15.1. A nameplate in English language with non-erasable letters/numbers, giving the serial number, NCI Agency Contract number and the part number shall be properly attached in a prominent position on each major assembly to enable reading and control with easy access when installed.
- 8.15.2. The marking of Items and Components, with the Original Equipment Manufacturer (OEM) part number, is to ensure proper and quick identification of major equipment assembly, subassembly, module down to printed circuit board or lowest level produced in the programme, as they are procured, stored and issued. This information is also necessary for positive identification upon removal for maintenance purposes and to prevent loss of utilisation of items, which have been separated from their original packages or containers.
- 8.15.3. Marking shall be accomplished in a manner, which will not adversely affect the life and utility of the item or component.
- 8.15.4. Whenever practicable, the marking shall be located in such a manner as to allow it to be visible after installation.
- 8.15.5. The marking shall be as permanent as the normal life expectancy of the material on which it is applied and shall be such as required for ready

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legibility and identification. Marking shall be capable of withstanding the same environmental tests required of the part and any other tests specified for the marking itself. When possible, letters, numerals and other characters shall be of such size as to be clearly legible.

8.16. NATO Codification of Items

- 8.16.1. In addition to the terms of the Clause 32 of the NATO Communications and Information Agency (NCI Agency) General Provisions, titled "NATO Codification" the Contractor shall support the codification of all equipment/spares to be delivered.
- 8.16.2. The Contractor shall guarantee that any subcontract entered into as a result of this Contract shall contain the standard NATO codification clause as above to provide NATO Stock Numbers (NSN) as follows:
 - a. All LRU(s);
 - b. All items shown in the RSPL, RCIL and RTTL;
 - c. All additional items selected at the Provisioning Conference;
 - d. Equipment/spare parts affected by Equipment Design Change Notices (EDCN) (s);
 - e. Those items substituted due to a Spare Parts Design Change Notice (SPDCN);
- 8.16.3. The Contractor shall commence the codification action whenever the Purchaser has approved any of the items listed above for procurement.

8.17. Parts Obsolescence Management Plan (POMP)

- 8.17.1. The Contractor shall establish and document a Parts Obsolescence Management Plan (POMP) included in the ILSP.
- 8.17.2. The Contractor shall keep the NATO Contracting Authority informed on the potential Diminishing Manufacturing Sources (DMS) problems or risks and the mitigation strategies through a DMS Report included in the Programme Reviews.
 - a. In the event that the designation of a replacement item becomes necessary due to discontinuance of support, the Contractor shall recommend a replacement if available.
 - b. In order to avoid development costs, OTS hardware, software and infrastructure replacement items with similar form, fit and function will be given first preference.

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- c. In the event the recommended OTS item is not fully compliant with the Contract Requirements, the Contractor shall, as part of the DMS Report, provide a recommendation either to implement the OTS solution and modify the requirement accordingly or redesign a suitable alternative. In the event that there is no OTS item available, the Contractor shall recommend a redesign of a suitable alternative.
- d. Implementation of the above recommendations shall be in accordance with ECPs.

8.18. Packaging, Handling, Storage and Transportation (PHST)

- 8.18.1. The Contractor shall establish and maintain a Packaging, Handling, Storage and Transportation (PHST) Programme.
- 8.18.2. The Contractor shall identify all items which will be stored at the site or at the Contractor's repair facility and/or which may need transportation between the site and the Contractor's or vendor's repair facilities or depot. For these items, the Contractor shall identify the PHST and shall enter this PHST data into the LSAR for reporting purposes.
- 8.18.3. The Contractor shall provide a PHST report based on LSAR data. The PHST report shall provide information critical to the PHST of spare parts and consumables. It shall include environmental and hazardous material information imperative for safe handling storage and transportation.
- 8.18.4. The Contractor shall provide a single Packaging and Transportation Plan, which shall include details of the Contractor's proposed bar-coding system and shall give consideration to transportability, special handling/storage requirements and other hazards associated with the national/international transportation of items.
- 8.18.5. The Contractor shall provide a bar-coding system, for all hardware, software, training and technical documentation, which shall be compliant with STANAG 4329. The Contractor shall produce and affix bar-code labels to equipment items, packaging, containers and documentation.
- 8.18.6. The Contractor shall pack all spares and Contractor-provided Support Equipment in reusable containers suitable for the return of unserviceable similar items. These containers shall meet the requirements of NATO packaging level 3 of STANAG 4280 and shall protect the packed equipment from the environmental conditions.
- 8.18.7. The Contractor shall provide any special packing instructions and shall also be responsible to provide any special-to-type container(s) for the shipment of repairable items, at no cost to the Purchaser. Marking (including bar coding) of packages and reusable containers will be in accordance with STANAG 4281 and STANAG 4329.

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- 8.18.8. The Contractor shall identify any special packing/removing requirements for equipment as required. The Contractor shall document these requirement data in the LSAR and include them in the PHST report.
- 8.18.9. The Contractor shall be responsible for Customs Clearance of all shipments into the destination countries. It is the Contractor's responsibility to take into account delays at customs. He shall therefore consider eventual delays and arrange for shipment in time. Under no circumstances can the purchaser be held responsible for delays incurred, even when utilising Purchaser provided Custom Forms 302
- 8.18.10. Notice of Shipment and Request for Custom Form 302. A customs declaration form 302 is required for all shipments entering into any EU state from a non-EU Nation. The Contractor shall conform to the requirements of Clause 20 of the Contract General Provisions entitled "Notice of Shipment and Delivery" prior to the shipping of any items under this Contract.
- 8.18.11. With the sole exception of items to be returned for repair/exchange from a site to The Contractor, all supplies covered under this Contract shall be transported through Contractor arrangements to the destination(s) detailed in the SSS at the expense of the Contractor (also during the warranty).
- 8.18.12. The Purchaser shall not be liable for any storage, damage, or any other charges involved in transporting of supplies prior to the actual acceptance of such supplies at the designated destinations. The Contractor shall deal with the insurance.
- 8.18.13. The Contractor shall, for the purpose of transportation, package, create, or otherwise prepare items in accordance with the best commercial practices for the types of supplies involved, giving due consideration to shipping and other hazards associated with the transportation of consignments overseas.
- 8.18.14. For items of supply such as spare parts, test equipment and tools etc, the Contractor shall preserve and package items to withstand the following:
- a. Long term storage for a minimum of five (5) years in a temperate climate and in permanent buildings, and temporary storage of up to six (6) months in enclosed transport vehicles;
 - b. Movement including road (truck), rail, air, and sea, and handling by any means;
 - c. HN POL will provide rooms for storage of the spare parts in permanent heated buildings/rooms. Spare parts shall be packed and prepared by the Contractor to be stored in such buildings. However, HN POL needs to know how much square meters Contractor will need to store spare parts.
- 8.18.15. Special care shall be taken to ensure that, in dealing with equipment destined for installation in "clean areas", that due account be taken of the necessity to preserve the environmental conditions during unpacking and installation.

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- 8.18.16. The Contractor shall provide any special packing/containers required for the shipment of repairable items at no extra cost to the Purchaser.
- 8.18.17. The Contractor shall establish the packing lists in such a way as to permit easy identification of the items to be delivered at the sites. These packing lists shall reflect the same wording and sequence as those used in the Contract schedule of supplies and in the invoices.
- 8.18.18. Packing lists shall accompany the shipment. Each individual container/box from a consignment must have one packing list in a weatherproof envelope affixed to the outside of each container/box, indicating exactly what is contained inside. One packing list shall be put inside each container/box.
- 8.18.19. The Contractor shall also furnish one copy of the packing list in the English language to the Purchaser and to the Freight Forwarder, the number of copies required by this Forwarder.
- 8.18.20. The packing lists shall contain the following information as a minimum:
- a. Shipping address;
 - b. Package number;
 - c. Contract number;
 - d. Contract item number;
 - e. Item description;
 - f. Part number;
 - g. NATO Stock number (if available);
 - h. Serial number (if available);
 - i. Quantity shipped;
 - j. Number of the corresponding Customs Form 302 (when required);
 - k. Shipping dimensions & weight per separately packaged item
- 8.18.21. Where manufacture is under Government Quality Assurance Authority (GQAA) surveillance, there is a requirement for Certificates of Conformance to be included with packing containers, three each per pack, one inside and two outside in a waterproof envelope.
- 8.18.22. The packages or containers in which supplies are transported shall, in addition to normal mercantile marking, be marked with the following data on a separate nameplate (or transfer or stamping if nameplate is not practical):
- a. System/sub-system denomination;
 - b. Purchaser Contract number;
 - c. Contract Item Number Manufacturer's name and address;

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d. Shipping address.

- 8.18.23. To enable boxes, crates and other containers to be identified easily and to ensure correct assignment of unique equipment to its appropriate site, a coding system shall be proposed by the Contractor for approval by the Purchaser.
- 8.18.24. The packing and transportation of cryptographic equipment and documentation shall comply with NATO rules and be accomplished in accordance with Allied Military Security Guidelines (AMSG) 293 and AMSG 505.

8.19. Technical Publications Development Plan (TPDP)

- 8.19.1. The Contractor shall deliver a Technical Publications Development Plan (TPDP) covering the Contractor planning and scheduling of the necessary activities for the development of the Technical Manuals in the form of Interactive Electronic Technical Publications (IETPs)
- 8.19.2. The Contractor shall deliver a Technical Publications Writing Style Guide (WSG) for the programme as part of the TPDP. This style guide shall identify programme style and format when generating Data Modules (DM), shall provide guidance on formatting, style and specification interpretation to ensure the content and style of all Data Modules (DM) in the Interactive Electronic Technical Publication (IETP) set is consistent. The WSG shall include illustrating guidance and a project Standard Numbering System (SNS) indicating the logistic breakdown and assigned SNS technical names.
- 8.19.3. The Contractor shall plan and conduct combined Validation/Verifications with the NATO Contracting Authority of Technical Manuals for new and modified document(s).
- 8.19.4. The Contractor shall coordinate with the NATO Contracting Authority to incorporate the NATO Contracting Authority provided Verification schedule. Upon completion of Verification:
 - a. A tabulation of deficiencies detected will be submitted to the Contractor by the NATO Contracting Authority.
 - b. A tabulation of actions taken to correct deficiencies shall be submitted to the NATO Contracting Authority together with a Verification Certificate for each O&M Technical Manual..
- 8.19.5. Errors and/or deficiencies detected shall be corrected by the Contractor prior to Final Review. Deficiencies identified during the combined validation/verification process and implemented Corrective Actions shall be captured and tracked within the draft Technical Manuals until they are accepted. Once corrected, the tracked Deficiencies and implemented Corrective Actions shall be deleted prior to final delivery. Final Version Technical Manuals shall be presented to the NATO Contracting Authority for Final Review and

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Acceptance. Each Technical Manual presented for Final Review shall be accompanied by a Certificate of Conformity

- 8.19.6. The Contractor shall provide structure, content and initial details for this plan in the proposal phase so to show the concept of the activity..

8.20. Technical Manuals (TMs)

- 8.20.1. The Contractor shall provide all TMs generated and assembled, based on a single and structured Interactive Electronic Technical Publications (IETP) data repository (CSDB – Common Source DataBase).
- 8.20.2. The Contractor shall provide all IETPs in ASD S1000D (last available issue) format. The data shall be delivered through agreed electronic distribution media (preferably via Data Exchange Sets (DEXs)).
- 8.20.3. The Contractor shall manage and deliver changes according to the ASD S1000D (last available issue).
- 8.20.4. The Contractor shall develop and issue SSSB-POL system User Manuals and Maintenance Manuals as per requirements of personnel operating and maintaining the SSSB-POL system and equipment in accordance with the Maintenance Concept.
- 8.20.5. The User Manuals shall addresses the operation of the SSSB-POL system as a single entity. The Manual shall describe operation, settings and fine tuning of the SSSB-POL system /Equipment to achieve maximum performance.
- 8.20.6. The Maintenance Manuals shall address the SSSB-POL system as a single entity, with appropriate drawings of the mechanical, electrical and electronic assemblies and sub-assemblies that comprise the SSSB-POL system /equipment in sufficient detail to allow technical staff to maintain the system at site level in accordance with the Maintenance Concept.
- 8.20.7. The Maintenance Manuals shall describe Preventive and Corrective Maintenance, Troubleshooting, Installation and dismantling of the SSSB-POL system/equipment, including repair and test procedures for HL3/SL3 NLM activities.
- 8.20.8. In addition, a single, comprehensive maintenance manual shall be provided for each individual Radio Site. These maintenance manuals shall also provide the maintenance schedule for each site, and associated procedures.
- 8.20.9. The as-built drawings (ABDs) shall provide full details of how all of the major assemblies of the supplied equipment have been physically installed and mechanically/electrically integrated. This shall also include, but not be limited to, drawings of intra-rack and inter-rack cabling, etc. These drawings shall comply with the standards described in SOW SECTION 13.

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8.20.10. In-depth specification and lower level repair and maintenance of sub-assemblies and major system components shall be addressed by the Original Equipment Manufacturer's (OEM) manuals unless it has been agreed that specific activities are NLM. Operations and maintenance of the integrated system shall be addressed in the SSSB-POL User and Maintenance Manuals.

8.20.11. The Contractor shall:

- a. Provide all of the necessary Laptops, hardware components and other peripherals required to accommodate the IETP and to share IETP data between all IETP user sites.
- b. Distribute IETP Data viewer software and associated licences
- c. Provide the IETP data repository.
- d. Incorporate into the IETP all information necessary for the operation and maintenance of the systems under contract.
- e. Provide product documentation for all item related activities which shall be adequate for the development, control, test, acceptance, use and maintenance of all applicable deliverables, (including optional items if any).
- f. Provide portable IETP Viewing Equipment

8.20.12. Until the expiration of the warranty, the Contractor shall remain responsible for any changes to the manuals required as a result of any omission or inaccuracy discovered in the use, or whenever changes/modifications in equipment or spare parts are made under the Contractor's responsibility. Changes to the final manual shall be done in accordance with changes procedure for IETPs.

8.21. Original Equipment Manufacturer (OEM) Technical Manuals

8.21.1. The Contractor shall provide Original Equipment Manufacturer (OEM) Technical Manuals for all assemblies, sub-assemblies, components and parts that the Contractor obtains from other manufacturers/vendors and incorporates into the SSSB-POL system and test equipment.

8.21.2. The OEM TMs shall provide detailed information necessary for the SSSB-POL system operators, to disassemble and assemble the units down to the lowest Line Replaceable Unit (LRU) level of maintenance. The manuals will also provide the necessary drawings/schematics, specifications, wiring diagrams, etc., to allow the operators to troubleshoot, and fully understand, the design and operation of the particular equipment.

8.21.3. The OEM TMs are to supplement the SSSB-POL Operators Manuals and thus be expected to be referenced in the latter as a way of providing specific details on a particular piece of equipment. The Contractor is required to

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provide the OEM Manuals on CD-ROM, and in hardcopy, with exactly the same number of copies of each to the HN sites together with the associated equipment

- 8.21.4. The OEM TMs shall be delivered in one of the other common use formats and integrated into the IETPs.

8.22. Contractor Logistics Support (CLS) Plan

A description of the Performance Based CLS Services to be delivered until the end of Warranty is provided in § 8.23.4, 8.23.5 and 8.24.

The Performance Based CLS Services after Warranty will be an option (§ 8.26); as alternative the Purchaser may decide to consider standard Post Warranty Service (§ 8.25) based on repairs on demand and interventions (§ 8.23.3) if the Contractor performance in delivering the CLS services up to the end of Warranty are not considered satisfactory or cost-effective by the Purchaser.

- 8.22.1. The Contractor shall provide a CLS Plan describing the basis execution of a prospective CLS Contract. This plan shall be detailed enough to form a comprehensive understanding of how he proposes to meet the logistic support requirements of this SOW for the maximum Support Period of the installed SSSB-POL System. This Plan shall detail the following:
- a. The Contractor shall demonstrate that the Contractor's proposed CLS Management Organisation and Structure, to carry out the CLS effort, have adequate experience in the maintenance and support of major RF defence systems. The experience described shall expand on the Corporate Experience descriptions to specifically highlight the Prime Contractor's and sub-contractors' contracted maintenance and supply efforts for a similar size RF defence systems concerning SSSB communications in HF (BLOS) radio systems and in UHF (LOS) in the Link-11 mode for data exchange concerning SSSB, over the last five (5) years. The description shall identify any similarities between CLS contracts previously delivered and the requirements under this SOW.

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- b. CLS Strategy, including intervention on each site, preventive and repair activities, spares replenishment plan and process, identifying the items of equipment (assemblies and sub/assemblies) that are to be repaired and services to be provided by the Prime Contractor with its internal "in-house" resources during the support period. The Contractor shall identify the location of the repair facilities that will be utilised, and/or the source within the corporate organization of the service and expertise required. The Contractor shall identify additional resources not under the direct control of the CLS PM that may be accessed during periods of "surge" demand. The Contractor shall provide the Corporate Structure of the Prime Contractor and the administration of the prospective CLS project within the overall corporate structure.
 - c. Description of proposed method to meet intervention response and repair times if site or mission critical support availability is endangered;
 - d. Description of how CLS shall be fulfilled during times of crisis and conflict;
 - e. Method for site personnel to inform CLS Contractor when spares have been used and when assistance is needed;
 - f. Method of recording and proposed measurable criteria for evaluating the Contractor's performance during CLS;
 - g. Description of the strategy for replacing hardware that can no longer be economically supported by the Contractor or sub-contractors.
- 8.22.2. The Contractor shall provide a description of how its proposed CM procedures shall continue to be implemented on the hardware and software/firmware during the CLS periods.
- 8.22.3. The Contractor shall provide a description of the proposed logistic and maintenance information processes. This description shall detail how the information from sites and the Contractor's maintenance facilities will be collected, stored and made available for evaluation.
- 8.22.4. The Contractor shall identify its major proposed sub-contractors for the CLS Contract. The Contractor shall identify the firm, the nation of origin, the major items (assemblies, sub-assemblies) or services that the proposed sub-contractor shall be required to furnish, repair, modify and perform. The Contractor shall include a letter of intent from the proposed sub-contractor that details its willingness to enter into a sub-contract with the Contractor, if the CLS Contract would be awarded.
- 8.22.5. The Contractor shall provide a description of how the QA/QC Programme of the Prime Contractor and sub-contractors providing CLS services shall meet

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the provisions of this Contract. The Contractor shall include applicable certificates (issued by National Governments or International Organisations, such as ISO) that demonstrate that the sub-contractors Quality Programme conforms to the requirement of the Prospective CLS Contract. The Contractor shall also demonstrate how the provisions of the Prospective CLS Contract regarding QA/QC shall be inserted in all subcontracts and enforced by the Prime Contractor

8.23. Responsibilities during Implementation and from PSA to FSA

- 8.23.1. During the implementation phase of the SSSB system (ending at PSA) the Contractor shall provide his own resources (spare parts, tools and test equipment, skills) to maintain the System
- 8.23.2. Throughout the implementation phase of the SSSB system, the Contractor shall maintain comprehensive repair records to enable detailed fault analysis, and early detection of failures/maintenance trends. Periodically, the Contractor will be required to forward the results of these analyses for review by the Purchaser.
- 8.23.3. The Contractor shall provide quotation for LRU repair providing a Repair Price List valid during post Warranty if a Performance Based Logistic CLS contract is not activated.
- 8.23.4. From the PSA until FSA, the Contractor is responsible for the execution of all the Support Activities/Services beyond NLM at no additional cost for the Purchaser: this support shall be structured and delivered in the form of a Performance Based (PB) Contractor Logistic Support (CLS): This includes but it is not limited to:
 - a. Corrective and preventive maintenance beyond NLM, including replenishment of local stocks, spare parts provision and repair and calibration of RTTEL, if any
 - b. Provision of Spare Parts, facilities and Tools beyond NLM.
 - c. On-site interventions beyond NLM
 - d. IETPs and LSAR updating
 - e. Design and implementation of updates/upgrades of the SSSB System to meet and continue to fulfill both functional and non-functional Contractual requirement, including resolution of obsolescences that might arise in the period.
- 8.23.5. In the period from PSA to FSA the System will be operated and maintained (up to NLM) by NATO/HN personnel. The Purchaser will monitor both System performance and CLS performance in order to collect enough information to decide to continue with PBL CLS after the end of the warranty.

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8.24. Contractor Logistics Support (CLS) during Warranty

- 8.24.1. The Contractor's maintenance of the System during the Warranty period shall be at no additional cost to the Purchaser. Warranty period starts with the successful completion of FSA and lasts twelve (12) months.
- 8.24.2. During the Warranty period of the Contract, the Contractor shall deliver maintenance and engineering Support/Activities services in line with the PBL CLS activities listed in 8.23.4.
- 8.24.3. Starting at Final System Acceptance (FSA) and during the Contract Warranty period, the Contractor shall maintain the System to the contractually required performance level.
- 8.24.4. In the event Major deficiencies⁴ occurring in the warranty period with downtime induced or required for their correction and relevant solution implementation, the warranty period shall be extended for all sites by the amount of downtime that was required for the correction and implementation.
- 8.24.5. Throughout the Warranty period of the Contract, the Contractor shall maintain comprehensive repair records to enable detailed fault analysis, and early detection of failures/maintenance trends. Periodically, the Contractor will be required to forward the results of these analyses for review by the Purchaser.
- 8.24.6. The maximum repair Turn Around Time (TAT) shall not exceed ten (10) days for any unit after the equipment has been received at the Contractors Plant. This shall include in-processing, trouble shooting, repair and check-out and release to the Site or Depot.
- 8.24.7. The Contractor shall permit the Purchaser access to the TDP. The Purchaser shall be informed of changes and updates to the TDP on a quarterly basis and be able to view TDP data as required.
- 8.24.8. The LSAR will be in the custody of the Contractor who shall maintain and update the LSAR as required and provide access to the Purchaser. The Contractor shall analyse the effects of modifications, fielded system behaviour, etc and provide changes to the LSAR as part of In-Service LSA. The Purchaser must be able to view, review and extract/process/transform data of the LSAR (processing and transforming will be limited to copies of the original data).
- 8.24.9. The Contractor shall employ an information process which shall provide the Purchaser with any technical documentation changes or updates to existing technical documentation (LSAR, TMs, configuration data, and IETM related) required as a result of the modification or exchange of existing equipment.

⁴ Major deficiencies are any malfunction, error, anomaly, deviation etc. preventing the Systems to meet the original contract performance requirements, including RAMT and CLS

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8.24.10. During CLS periods, maintenance of the IETM, based on updates from the CLS Contractor, and production and distribution of the IETM to users will be the Purchaser's responsibility.

8.25. Standard Post Warranty Services (PWS): Repair On Need (Option to this contract)

8.25.1. The PWS contract shall be based on Repair On Need (RON) type agreement framework, as per repair prices provided in accordance with the requirement set in § 8.23.3.

8.25.2. The PWS contract can be renewed, upon Purchaser decision, every one (1) year and prices are to remain valid for that period. At the expiration of each maintenance period and with a three (3) months' notice, the Contractor is authorised to request a price revision. The price revisions are to be limited to the amounts reflected for each period in a governmentally approved inflationary index of the producing country.

8.25.3. The Contractor shall be responsible for maintaining all stocks of spares, test and other maintenance equipment, Automated Test Equipment (ATE) facilities, and all repair documentation including Manual etc., to support a PWS Contract throughout its life, at no additional cost to the Purchaser or Nation beyond that negotiated in accordance for a total period of nine (9) years, starting at the end of the Warranty period.

8.25.4. The Contractor shall make available an Helpdesk Facility/Service Charges on an hourly basis if/as required etc. during normal working hours.

8.25.5. The Contractor shall be available for on-site intervention. Charges on a daily basis during normal working hours, excluding transportation.

8.26. Performance Based Contractor Logistics Support (CLS) Services after Warranty (Option to this Contract)

8.26.1. The Contractor shall develop, manage and execute this Option to the Contract under Firm Fixed Price conditions.

8.26.2. The Optional CLS Contract shall be based on Performance Based Services for 3rd and 4th line maintenance (under the conditions stated in section 8.26.1), including but not limited to:

a. Repair on site or in factory of all faulty items of the SSSB Systems Removed and Replaced on site by Purchaser/HN personnel (NLM).

b. Repair on site or in factory of any failure occurring on the SSSB Systems beyond NLM, through a combination of Spares, Interventions, remote support and or design services.

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- c. Replenishment of the local stocks upon use of one of the spare parts for NLM activities or provision of spares not held on site (this includes, LRUs, consumables, TTE etc.)
 - d. On site interventions and/or remote support for all issues arising on the SSSB System beyond the expertise of NATO personnel (beyond NLM).
 - e. Post Design Services (PDS) including redesign, recoding, rebuilding part of the system in case of Supportability Problems or in case of poor performance (including functional characteristics and non functional figures such as RAMT).
 - f. Update of IETMs, LSAR, Configuration and Technical Documentation if and when required.
- 8.26.3. The CLS contract would be renewed every three (3) years, and prices are to remain valid for that period. At the expiration of each maintenance period and with a six (6) months' notice, the Contractor is authorised to request a price revision. The price revisions are to be limited to the amounts reflected for each period in a governmentally approved inflationary index of the producing country.
- 8.26.4. The Contractor shall guarantee the provision of Performance Based Services throughout the stipulated period of twelve (12) years. If at any time the Contractor wishes to withdraw these replacement/repair services, he shall transfer to Purchaser/Host Nation at no additional cost, all requisite fault diagnostic and repair expertise and instructions, documentation, etc., and special-to-type software and hardware including test equipment, mock-ups etc., to enable such repair at a National Facility.
- 8.26.5. Alternatively, and again at no additional cost, the Contractor may transfer to the Purchaser/Nation sufficient spare sub-assemblies, modules, circuit card assemblies etc. to support a discard maintenance concept for the remaining operational life of the equipment.
- 8.26.6. The Contractor shall be responsible for maintaining all stocks of spares, test and other maintenance equipment, Automated Test Equipment (ATE) facilities, and all repair documentation including Manual etc., to support a CLS throughout its life, at no additional cost to the Purchaser or HN beyond that negotiated in accordance for a total period of twelve (12) years, starting at the end of the Warranty period.
- 8.26.7. The Contractor shall be responsible for Obsolescence Management and Solution from monitoring, reporting, ECP activities up to on site implementation of the solution agreed with the Purchaser at no additional cost for the Purchaser.
- 8.26.8. The Contractor shall maintain comprehensive repair records to enable detailed fault analysis, and early detection of failures/maintenance trends.

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This process is known as Fairure Reporting Analysis and Corrective Action System (FRACAS).

- 8.26.9. The Contractor shall periodically forward the results of detailed fault analysis, and early detection of failures/maintenance trends for review by the Purchaser.
- 8.26.10. The maximum repair Turn Around Time (TAT) shall not exceed ten (10) days for any unit after the equipment has been received at the Contractors Plant. This shall include in-processing, trouble shooting, repair and check-out and release to the Site or Depot.
- 8.26.11. The Contractor shall at all times also be responsible for the maintenance of items such as Mock-ups, Test jigs, Tools etc., to ensure that the response times can be met.
- 8.26.12. The Contractor shall permit the Purchaser access to the TDP. The Purchaser shall be informed of changes and updates to the TDP on a quarterly basis and be able to view TDP data as required.
- 8.26.13. The LSAR will be in the custody of the Contractor who shall maintain and update the LSAR as required and provide access to the Purchaser. The Contractor shall analyse the effects of modifications, fielded system behaviour, etc and provide changes to the LSAR as part of the LSA for the post warranty. The Purchaser must be able to view, review and extract/process/transform data of the LSAR (processing and transforming will be limited to copies of the original data).
- 8.26.14. The Contractor shall employ an information process which shall provide the Purchaser with any technical documentation changes or updates to existing technical documentation (LSAR, IETM, configuration data) required as a result of the modification or exchange of existing equipment. This process is known as Data Reporting Analysis and Corrective Action System (DRACAS).

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SECTION 9 RELIABILITY, AVAILABILITY, MAINTAINABILITY AND TESTABILITY (RAMT)

9.1. RAMT Programme Plan

- 9.1.1. The Contractor shall conduct an effective RAMT programme. This programme shall be planned, integrated, and developed in conjunction with system and equipment design, fabrication, installation and test activities to ensure the achievement of the overall programme objectives inherent in the Reliability, Availability and Maintainability (RAM) criteria specified below. RAMT program shall identify the specific configuration items at the system and sub-system level that are subject to tests.
- 9.1.2. The Contractor shall document the RAMT Programme Plan as part of the ILS Plan.
- 9.1.3. The RAMT Programme Plan will describe the strategies, processes, resources, and organization to achieve the RAMT requirements and in particular how the results of the RAMT analyses required in this SOW will be integrated in the Systems Engineering process to build the required RAMT into the system.
- 9.1.4. The Contractor shall apply as reference the documentation mentioned in this section.

9.2. RAMT Case Report

- 9.2.1. The Contractor shall progressively document a RAMT Case containing the necessary reporting elements to provide evidence to the NATO Contracting Authority that the mission reliability and availability requirements can be achieved.
- 9.2.2. The Contractor shall submit to the NATO Contracting Authority RM&T Case Reports showing the results and conclusions of the RM&T analysis as the design evolves at Design Reviews.
- 9.2.3. The Contractor shall develop and maintain a RAMT case report in which all RAMT activities shall be documented. The RAMT case shall include:
 - a. all COTS equipment data sheets and references, clearly indicating the COTS equipment's reliability and maintainability characteristics used as data input to any of the RAMT activities;
 - b. the complete set of Reliability Block Diagrammes (RBDs), including reliability, maintainability and intrinsic availability allocations per block, per aggregated block, per sub-system, per location, and for the entire system;

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- c. all intermediate and final calculations on intrinsic availability, reliability, maintainability and percentage coverage of failure modes by BIT equipment.
- 9.2.4. The RAMT case report shall form a body of evidence, providing sufficient credibility that all RAMT requirements have been met and providing credibility to the data used and the results achieved in all calculations and models. The RAMT case shall provide rationale and justifications for all data and formulas used in any of the calculations and models.

9.3. Failure Modes Effects and Criticality Analysis (FMECA) Report

- 9.3.1. The Contractor shall perform a FMECA down to the hardware LRU and software CSCI level. Where catastrophic and/or safety critical failures have been identified through the FMECA, the Contractor shall perform a FTA down to the SRU or CSC level as appropriate for development items.
- 9.3.2. The Contractor shall perform a FMECA in accordance with MIL-STD-1629A.
- 9.3.3. If any the Contractor shall perform a FTA in accordance with MIL-HDBK-338B.
- 9.3.4. The Contractor shall submit to the NATO Contracting Authority FMECA Reports showing the results and conclusions of the FMECA as the design evolves at Design Reviews.
- 9.3.5. The Contractor shall provide functional descriptions for the systems and allocated to the subsystems, covering all operational modes and mission phases.
- 9.3.6. The Contractor shall perform a functional FMECA considering the effects of failure of hardware LRU and software CSCI level directly to the functions that shall be lost or degraded.
- 9.3.7. The Contractor shall identify critical items as the items (hardware LRU and software CSCI) whose failure induce loss of critical function.

9.4. Reliability requirements

- 9.4.1. Basic Reliability shall be expressed as Mean Time Between Failures (MTBF), where 'failure' is understood to mean any condition in which an item, assembly, sub-system or the entire system is not operating according to specification. The MTBF of the system shall not be less than 350 hours.
- 9.4.2. Mission Reliability shall be expressed as Mean Time Between Critical Failures (MTBCF), where 'critical failure' is understood to mean any condition in which the entire system is not operating according to specification. The MTBCF of the system shall not be less than 1000 hours.

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- 9.4.3. The Contractor shall develop and maintain a Reliability Block Diagramme (RBD) of the entire system, relating all items (i.e. hardware down to LRU level and all software modules) based on failure dependencies, and explaining how the reliability of each item contributes to the success or failure of the entire system. Firmware shall be treated as being part of the pertinent LRU.
- 9.4.4. The RBD shall clearly capture and display the MTBF, MTTR and Ai characteristics of each item, assembly, sub-system, and the entire system. The results from the RBD shall be used to calculate and predict system Reliability, Maintainability, and Intrinsic Availability.
- 9.4.5. A professional tool shall be used to develop and analyse RBDs. A general purpose tool such as Microsoft Excel shall not be used as the main tool. The tool shall be capable of exporting and reporting data and results in electronic formats compatible with MS Office 2013 format. All data and results pertaining to the development and analysis of RBDs in this tool shall be made available to the Purchaser at the request of the Purchaser.

9.5. Maintainability and Testability Requirements

- 9.5.1. Maintainability shall be expressed as Mean Time To Repair (MTTR) and Mean Time to Restore the System (MTTRS):
 - a. MTTR shall be calculated for all kind of failures (Critical and non critical) and shall include fault isolation, access, disassembly, remove and replace, reassembly, configuration, check-out and start-up, and to exclude administrative and logistics delay times.
 - b. MTTRS shall be calculated for critical failures only and shall include fault isolation, access, disassembly, remove and replace, reassembly, configuration, check-out and start-up, and to exclude administrative and logistics delay times.
- 9.5.2. The MTTR at Site Level shall not exceed 30 minutes and the TTRMax (95%) shall not exceed 60 minutes.
- 9.5.3. The MTTRs at Site Level shall not exceed 45 minutes.
- 9.5.4. The System shall be designed to include Built-In Test Equipment (BITE) capable of on-line detection of 95% of all failure modes (Fault Detection rate).
- 9.5.5. The System shall have a Built-In Test Equipment capable to isolate 80% of the detected failures to 1 LRU, 90% to no more than 2 LRUs, 95% to no more than 3 LRUs and 100% to no more than 5 LRUs (Fault Isolation rates).

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9.6. Availability requirements

- 9.6.1. Operational readiness is the measure of the degree to which an item is in an operable and ready-for-use state at the start of a mission or operation, when the mission or operation is called for at an unknown time.
- 9.6.2. The inherent availability of a system is driven by the reliability and maintainability of the Product. It is described as the probability that a system, when used under stated conditions in an ideal support environment (e.g., no lack of support resources) will operate sufficiently at any point in time. It excludes preventive maintenance, delay times.
- 9.6.3. Inherent availability (A_i) shall be calculated as $MTBCF / (MTBCF + MTTRS)$.
- 9.6.4. Inherent availability (A_i) shall be greater than 99.9 %.

9.7. RAMT Requirements Verification

- 9.7.1. The RAMT requirements of the system shall be verified with the following methods:
- 9.7.2. The Reliability and Availability aspects of the system shall be verified:
 - a. After SAT by inspection and analysis of RAMT predictions and relevant RBDs
 - b. After PSA and until the end of warranty, the reliability and availability of each Site and of the SSSB System as a whole shall be observed and, if deviations from the target Reliability and Availability figures are recorded, the Contractor shall provide a detailed report and an action plan to meet the contracted Reliability and Availability before warranty expiration.
- 9.7.3. The Maintainability requirement of the system shall be demonstrated by the Contractor according to MIL-STD-471A or equivalent. The demonstration shall be performed as part of the first RSAT. The results, conclusion and recommendations of the maintainability demonstration shall be captured in a maintainability demonstration report, to be included in the RAMT case report. The result of the demonstration shall be statistically analysed to verify MTTR requirement specified above is met.

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SECTION 10 TEST AND EVALUATION (T&E)

10.1. Introduction

This section outlines the testing requirements to be carried out during the implementation and acceptance of Contract deliverables.

10.2. General Principles

- 10.2.1. All deliverables to include hardware, software and firmware supplied by the Contractor under this Contract shall be tested to meet the requirements of this Contract.
- 10.2.2. Test shall be performed for each equipment/sub-system/system as per the following phases:
 - a. Phase 1 – Factory Acceptance Test(s) - FAT
 - b. Phase 2 – Radio Sites and System Acceptance Tests:
 - i) Phase 2a – Radio Site Acceptance Tests - RSAT
 - ii) Phase 2b – System Acceptance Test - SAT
- 10.2.3. Formal testing is initiated by a TRR (Test Readiness Review). The primary purpose of this review is to evaluate test progress and to verify that scheduled tests may begin. There is one (1) TRR per Test Phase, or Sub-phase. The Contractor shall prepare a TRR Report for each TRR.
- 10.2.4. System/sub-system tests shall be performed at the Contractor premises during Factory Acceptance Tests(s) (FAT), and at individual Sites as part of the Radio Site Acceptance Tests (RSATs).
- 10.2.5. The Contractor shall be responsible for integrating the PFE into his test programme to the extent that PFE is an integral part of the system, sub-system or network, as specified in SOW sections 3.4.2 and 3.4.3.
- 10.2.6. The FAT and the RSAT testing shall be the responsibility of the Contractor who shall provide all the personnel, documentation, equipment, test data and facilities required for installation, commissioning and execution of the tests. The Contractor shall be entirely responsible for the co-ordination and performance of the tests, and shall ensure that an adequate number of Contractor's engineers and technicians are present to ensure the timely completion of all tests. The Contractor shall provide the necessary duly calibrated test equipment, tools and any other items required for the satisfactory completion of the tests and the recording of their results. This shall include but not be limited to the following:
 - a. Performance Measurement instruments;
 - b. Protocol Analysers;

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- c. Installation tools;
 - d. Test Plans and Procedures;
 - e. Any transmission services/resources required to achieve test configuration.
- 10.2.7. For the two types of tests (FAT and RSAT) that are the responsibility of the Contractor, the Purchaser will provide Special Test Tools (including any support personnel) to generate and monitor Link-11 and Link-22 analogue signals. The Contractor shall describe in its test plan how the Purchaser-provided special test tools shall be integrated into the test procedures. The Purchaser will provide technical information on these special test tools at the request of the Contractor.
- 10.2.8. The SAT testing will be the responsibility of the Purchaser. It is the intention of the Purchaser to commence SAT testing within six (6) weeks of acceptance of the (last) RSAT. The Contractor shall support the Purchaser in his testing. This support shall include, but not be limited to:
- a. Personnel;
 - b. Protocol Analysers;
 - c. Installation tools;
 - d. Test Plans and Procedures;
 - e. Any transmission services/resources required to achieve test configuration.
- 10.2.9. The Contractor shall assign and provide a Test Director and Test Operators, and the Purchaser and/or his designated representative will attend and witness the testing.
- 10.2.10. The Purchaser shall have the right to demand repetition of tests, proof of the validity of the test equipment calibration, and performance of reasonable additional tests to clarify that in the Purchasers opinion are doubtful or marginal results. The Contractor shall make available to the Purchaser, all facilities, information and assistance necessary to permit a valid interpretation of the test results.
- 10.2.11. Prior to the commencement of the tests, the test environment shall be baselined and no changes to hardware, software, firmware and/or configuration shall be introduced by the Contractor unless explicitly authorised in writing by the Purchaser. Failure to do so by the Contractor shall render the complete testing null and void.

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10.3. Test Plan

- 10.3.1. The Contractor shall provide, as part of the PIP Section 6, a system Test and Evaluation Plan (TEP) describing all the activities necessary to complete the entire test programme as outlined below. The plan shall also indicate the stage at which FSA shall be held in accordance with SOW SECTION 11 below.
- 10.3.2. The Contractor shall describe in the Test Plan the global organisation, including relationships between the different actors involved (that shall cover all testing stages).
- 10.3.3. The Contractor shall provide a flow diagramme that identifies the overall sequence of tests, the location, and Contractor and Purchaser equipment and personnel involved in each test, and the relationship of test events to project milestones.
- 10.3.4. The Contractor shall describe the tasks that will permit to meet testing requirements.
- 10.3.5. The Contractor shall identify all CI(s) that are subject to the test programme and shall indicate by which method the items will be evaluated.
- 10.3.6. The Contractor shall identify (in a Traceability Matrix) each requirement, derived business use case or derived system use case, and the proposed methodology of validation where testing is proposed for each of the associated test case(s).
- 10.3.7. The Contractor shall identify the tests associated with each testing stage and identify any tests that can only be performed at the Purchaser's facility (in particular tests of interfaces requirements).
- 10.3.8. The Contractor shall identify the Contractor's requirements for configuration and support of the Purchaser's test facility.
- 10.3.9. The Contractor shall include in the Test Plan as annexes, templates for:
 - a. Test Case description (business test cases and system test cases);
 - b. Test procedure description;
 - c. Test waiver request;
 - d. Test results sheet;
 - e. Test report template.

10.4. Testing

- 10.4.1. Test Procedures Definitions

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- a. Analysis/Certification (A/C): Test by A/C consists of design documentation/calculation or certification of recognised third party government laboratory or Manufacturer documentation and/or CoC based mainly on Test Results etc. that can prove that the requirement is met without performing the test. An example is the reliability analysis.
- b. Demonstration: Demonstration is defined as the determination by actual operation and/or adjustments as to whether or not an item has the capability of performing its specific function(s) in accordance with the conditions and the requirements of the performance specifications. This verification method consists essentially in a functional/ operational test.
- c. Testing: Testing is defined as the determination by comparison of the results of qualitative and/or quantitative data collected by appropriate instrumentation during the systematic exercising of an item to the stated requirements of the performance specification that the item exhibits conformity. Tests shall be carried out whenever a) or b) above do not cover the requirements.
- d. Inspection: Inspection is defined as the determination by simply visual inspection as to whether or not an item conforms to the performance specification.

10.4.2. Test Procedures (FAT and RSAT)

- a. Before each major test (FAT and RSAT), a Test Readiness Review (TRR) shall be conducted by the Contractor with the participation of the Purchaser and the Contractor. The Contractor shall not proceed to a formal test until authorised by the Purchaser.
- b. The Contractor shall submit the draft test procedures for FAT and RSAT to the Purchaser for approval before the TRR and no later than three (3) months prior to the execution of the tests. The FAT procedures of the operational use of the radio equipment and RSAT procedures shall be developed in coordination with the Purchaser.
- c. Following approval by the Purchaser, printed copies of the co-ordinated and approved test procedures (Final) shall be issued and distributed one (1) week prior to the first application of the test. Approval of the Test Procedure by the Purchaser will be for the application of the tests only and shall not represent an agreement that the test documents supersede the requirements of the Contract.
- d. The Contractor shall ensure that four (4) hard copies of the relevant Test Procedure are made available at each site for Purchaser's use.
- e. Each test procedure shall include, as a minimum, but not limited to the following:
 - i. Scope;

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- ii. Approach;
 - iii. Testing Environment with a block diagramme of the test layout;
 - iv. List of all required test equipment;
 - v. A detailed step-by-step procedure written so that the procedure can be clearly understood and followed by the Test Group;
 - vi. Objectives and expected test results with permissible test limits;
 - vii. Test data sheet(s);
 - viii. Requirements Coverage and Test Matrix;
 - ix. Observations Sheets;
 - x. Signature Sheets.
- f. The Contractor shall provide the Purchaser with information and assistance as required during the review and evaluation of the test procedures.
- g. Modification of inaccurate or inadequate test procedure and any subsequent work arising there from shall be carried out at the Contractor's expense, including re-testing due to deficiencies identified by the Purchaser.

10.4.3. Test Readiness Review (TRR) Meetings

- a. TRR Meetings (if required) shall be conducted by the Contractor before each test stage to determine whether the Contractor is in fact ready to begin testing. A TRR will also be conducted by the Purchaser with the Contractor's participation before the SAT.
- b. TRRs shall be conducted, as required, for each CI to confirm completeness of test procedures, to assure that the CI is ready for testing, and to assure that the performing activity is prepared for formal testing. TRR shall confirm that:
 - i. Test procedures comply with test plans and descriptions, demonstrate adequacy to accomplish test requirements, and satisfy CI specification requirements for verifications.
 - ii. Pre-test predictions and informal test results indicate testing will confirm necessary performance. Should these not be available then the Contractor shall justify the lack thereof.

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- iii. Required operation and support documents are complete and accurate.
- c. The Contractor shall conduct TRRs at various stages of system development including but not limited to the following:
 - i. Prior to initiation of any Contractor formal testing;
 - ii. Prior to Phase 1 Factory Acceptance Test (FAT);
 - iii. Prior to Phase 2a Radio Site Acceptance Tests (RSAT) or any part thereof.
- d. The outcome of TRR is the decision to proceed or not with test execution in accordance with the entry criteria required by the TRR checklist approved by the Purchaser. There is one TRR per test event. The decision to proceed is formalised by the Test Order sign-off.
- e. The Contractor shall present the following for review (this will compose in more detail the TRR checklist):
 - i. Requirements changes: Requirements Specs that have been approved since SRR that impact Testing;
 - ii. Design changes: Any changes on the design that have been made since PDR/CDR that impact testing (ECPs);
 - iii. Description of Configuration items under test (HW/SW/Licenses);
 - iv. Test environment (test tools);
 - v. Resources;
 - vi. Problems;
 - vii. Test limitations;
 - viii. Schedules.

10.4.4. Test Readiness Review (TRR) Report

- a. For each formal test event, the Contractor shall prepare a TRR Report for each separate TRR.

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10.5. Installation Checkout

- a. HW Installation Checkouts consist of a visual inspection of installation workmanship, installed equipment's in accordance with the drawings & as-designed lists, cabling, equipment/cables labelling on the basis of a checklist.
- b. Contractor and their sub-contractors perform their HW Pre-Checkouts in advance using the checklist.
- c. Results of Contractor HW Pre-Checkouts are recorded in checkout booklets per cabinet and for other installed equipment.
- d. When Contractor HW Pre-Checkouts are completed the Contractor shall state to the Purchaser their readiness for HW Installation Checkouts.
- e. HW Installation Checkouts are conducted with the participation of NCIA/HN and Contractor/SubContractors.
- f. During HW Checkout findings/results/action items are recorded in the Checkout Checklists and will be corrected/completed by the Contractor/sub-contractors.
- g. The corrections will be checked at the next hardware checkout depending on the deadline.
- h. The Contractor will need to provide the following required documentation (10 days in advance of the Installation Checkout Meeting):
 - i. Checkout Checklists
 - ii. Cabinet Drawings
 - iii. Work Station Drawings
 - iv. Operations and Technical Room Layout Drawings
 - v. PDP Drawings
 - vi. Interconnection Drawings
 - vii. Cable Data Sheets
 - viii. Equipment Certificate of Conformities (CoCs)
 - ix. As-Designed Configuration Index
 - x. Draft As-Built Drawings (ABDs)
 - xi. Other as required for the this specific project like Antennas

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- i. At the end of the meeting, MoM shall be recorded with all the findings and Action Items (AIs)
- j. AIs shall be solved before declaring the installation to be completed.
- k. Installation Check-Out shall be part of the Site Installation Acceptance.

10.6. Requirements Coverage and Test Matrix

10.6.1. The Contractor shall develop and provide as part of the Test and Acceptance Plan the Requirements Coverage and Test Cases Cross Reference (TCCR) Matrix. The matrix shall provide the mapping of the requirements into individual test cases and shall identify Test Case group (i.e. System, Sub-system etc.) and numbers. In some cases additional specific detailed requirements might be present in their respective sections, but these requirements are always related to the same overall requirement and shall thus be reflected in the details of the Test Steps to be included in the related Test Case. The matrix shall contain but not be limited to:

- a. Contract Reference
- b. Requirement Definition
- c. Related Test Case Reference
- d. Related Test Procedure Overview

10.7. Factory Acceptance Test (FAT)

10.7.1. A representative scaled down system shall be assembled and installed at Contractor's facilities at first to perform the FAT. These tests shall demonstrate the functionality of TX and RX systems and shall include at least one (1) test case for each module/function. The main installation activities for FAT shall include:

- a. The installation material at the Contractor's Facilities shall represent (up to a reasonable and to be agreed extent) the system intended to be installed on site;
- b. The connection/integration of the sub-systems:
 - i. Transmitting (HF-TX/UHF) Site Equipment,
 - ii. Receiving (HF-RX) Site Equipment
- c. System Configuration;
- d. The site installation, inspection and pre-testing.

10.7.2. The FAT shall include:

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- a. Radio communications equipment (Transmitters and Receivers) functional tests (on the Test Bed);
- b. SSSB Radio operational test using Special Test Equipment (STE) provided by the Purchaser;
- c. Open System Communication Control (OSCC) (PFE) remote supervision and control integration tests;
- d. Data Terminal Set (DTS) (PFE);
- e. Versatile Link Interface/Remote (VLI/R) (PFE).

10.7.3. Entry/Exit conditions

- a. Entry conditions as defined by FAT TRR
 - i. Sites Survey conducted and reports delivered to Purchaser
 - ii. PIP delivered to Purchaser, reviewed and accepted by the Purchaser
 - iii. RSPL delivered to reviewed and accepted by the Purchaser.
 - iv. RTTL delivered to, reviewed and accepted by the Purchaser.
 - v. Site Installation Specifications delivered, reviewed and approved by to Purchaser.
 - vi. FAT procedures, reviewed, accepted and approved by the Purchaser.
 - vii. PDR and CDR were completed
- b. Exit conditions
 - i. All test criteria shall be passed successfully.
 - ii. Recorded deficiencies that the Purchaser classifies as mandatory shall be cleared.
 - iii. Acceptance of the FAT Report by the Purchaser.

10.7.4. The Purchaser acceptance of the FAT Test Report shall grant permission to the Contractor to proceed with the delivery and installation of the SSSB systems at sites.

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10.8. Radio Site Acceptance Test (RSAT)

- 10.8.1. After installation and integration, RSATs shall be performed with the following objectives:
- a. To verify the functionality of the contractual item HW, FW and SW of SSSB equipment as individual sub-systems, per each Radio Site.
 - b. To demonstrate that the sub-systems are fully functional.
- 10.8.2. During this phase RSAT functional tests shall take place to verify that SSSB system equipment and sub-systems, after installation and interconnections, are fault-free, working properly and meet the relevant design specifications.
- 10.8.3. The testing will include:
- a. Equipment functional tests.
 - b. Sub-systems functional tests.
 - c. Site system tests: including and not limited to testing of the system security, complete power supply, power load tests, switching between Main Power Supply System and SB and NB PSS, redundancy of power supplies, testing of electrical safety (RCD), Air conditioning units, Aircraft Warning Lights, etc.
 - d. Conformity of Sub-systems to the corresponding Detailed Design Specification at sub-system level.
- 10.8.4. Entry/Exit conditions
- a. Entry conditions:
 - i. TRR and Completion of Radio Site Installation report(s) accepted.
 - ii. RSAT procedures, reviewed, accepted, and approved by the Purchaser.
 - iii. Site Installation Specifications (Final), reviewed, accepted, and approved by the Purchaser.
 - iv. Successful completion of training of the test personnel if required.
 - b. Exit conditions:
 - i. All test criteria shall be passed successfully.
 - ii. Recorded deficiencies which the Purchaser classifies as mandatory have been cleared.

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- iii. Delivery, review and acceptance of the RSAT Report(s) by the Purchaser
- 10.8.5. The Purchaser acceptance of all RSAT Test Reports shall allow the System Acceptance Test (SAT) to commence.

10.9. System Acceptance Test (SAT)

- 10.9.1. After RSAT, a SAT shall be performed with the following objectives:
- a. To verify the integration of the system.
 - b. To demonstrate that the system is fully functional (i.e. each main function of the system shall be tested under real operational conditions).
 - c. To demonstrate that the SSSB system is able to remote control the individual two Radio Sites from the MOC Gdynia, and that the system is fully functional.
- 10.9.2. During this phase, functional tests shall take place to verify that;
- a. The system equipment and sub-systems/system after integration, are fault-free, working properly and meet the relevant design specifications.
 - b. The SSSB-POL system is able to fully meet all the operational objectives and requirements as set forth in SOW paragraph 3.2 above.
- 10.9.3. The testing will include:
- a. System Functional Integration tests;
 - b. Conformity of System to the corresponding Detailed Design Specification at system level;
 - c. Operational tests to verify that the system fully meets the operational requirements as stated in SOW paragraph 3.2 above.
- 10.9.4. Entry/Exit conditions as per SAT TRR as follows:
- a. Entry conditions:
 - i. SAT procedures co-ordinated with the Contractor;
 - ii. Individual Radio Sites Report(s) delivered, reviewed and accepted.
 - b. Exit conditions:
 - i. All test criteria shall be passed successfully;
 - ii. Recorded deficiencies are cleared;

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- iii. Acceptance of the SAT Report by the HN.

10.10. Test Reports

The Contractor shall supply the completed test reports for FAT and RSAT that fully document the outcome of the tests within two (2) weeks of completion of the respective tests procedures, for Purchaser review and acceptance.

10.11. Test Data Sheets (TDS) and Test Results

10.11.1. Test results shall be recorded on Test Data Sheets (TDS). The Test Procedures that are issued and submitted to the Purchasers for approval shall include blank TDS's that specify the data to be collected and the method of use for recording the results of the tests. The test data sheets shall contain, as a minimum, space for insertion of:

- a. Test location and date.
- b. Name and Organisation details for Test Director, Contractor and Purchaser Representative.
- c. Equipment type and serial number(s).
- d. Test procedure reference number and issue number.
- e. Type and serial numbers of test equipment employed.
- f. Test results.
- g. Observations.
- h. Comments.
- i. Signature of the official representatives of the Contractor and the Purchasers representative.

10.11.2. One (1) copy of the test data sheets shall be provided to the Purchaser at the completion of testing. Where appropriate, back-up information such as photographs and graphic information used during testing shall be appended to the test data sheets.

10.11.3. Draft Test Reports may be submitted with hand-written entries in the Test Result Fields, in the Test Data Sheets and in the Observation sheets.

10.12. Test Failure Procedure

10.12.1. If the tests to be performed do not provide result in accordance with the completion criteria relevant to the test being performed (i.e. failures), the subject test(s) will be withdrawn from the testing suite and a preliminary investigation into the cause of the failure shall be carried out and an observation report shall be provided by the Contractor.

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- 10.12.2. Testing may resume with the next test after the withdrawal of the failed tests, if the successful termination of the withdrawn tests is not a pre-requisite to the following tests. This shall be subject to the approval of the Purchaser.
- 10.12.3. The point at which testing of the withdrawn test(s) is to recommence will be proposed by the Contractor who shall provide the reasons for his proposal and details of remedial action taken in a written reply to the observation(s) raised. Either at that time, or subsequently, it shall be subject to the endorsement by the Purchaser.
- 10.12.4. The procedure shall permit other test series to be carried out should the Contractor propose that it is practical to continue testing, while a particular test has been withdrawn for investigation.
- 10.12.5. In the event that a particular series of tests meet the criteria after more than one attempt at any test, the Purchaser may request the repeat of the test(s) relating to that specification paragraph.
- 10.12.6. All tests shall be done to verify that the equipment provided under this Contract meets the specified requirements; their results shall be recorded and any failure to complete a test successfully shall be recorded as deficiency.

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SECTION 11 PROVISIONAL SYSTEM ACCEPTANCE (PSA) AND FINAL SYSTEM ACCEPTANCE (FSA)

11.1. Introduction

- 11.1.1. This section outlines the Provisional System Acceptance (PSA) and Final System Acceptance (FSA) procedures, by which the deliverable items and services, for which the Contractor is responsible under this Contract, will be respectively provisionally and finally accepted by the Purchaser.
- 11.1.2. The procedure and documentation necessary at each stage of acceptance are defined to ensure that all contractual requirements are completed and that all deliverables are supplied to the Purchaser.
- 11.1.3. The Contractor shall address the PSA/FSA Procedure as part of the PIP Section 8.

11.2. PSA – Provisional System Acceptance

- 11.2.1. The Provisional System Acceptance (PSA) is the act by which the Purchaser provisionally accepts all supplies and services provided by the Contractor.
- 11.2.2. The PSA is the act by which the Purchaser acknowledges that the Contractor has met all those obligations required in the Contract, which enables a provisional operational use of the Contract deliverable(s) by the Purchaser. At PSA a list is agreed by the Contractor and the Purchaser showing all deficiencies and their mutually acceptable clearance dates.
- 11.2.3. The system shall receive provisional acceptance (PSA completion) after the successful completion of the following phases:
 - a. Successful provision and installation of all supplies and services in accordance with the PSA section of the SSS (excluding options) at sites and other designated locations.
 - b. Satisfactory completion of applicable (hardware and software) Factory Acceptance Tests (FAT) and System Acceptance Tests (RSAT & SAT).
 - c. Successful completion of any retrofit activity and/or regression testing resulting from previous testing activities with resolution of all deficiencies.
 - d. Successful provision and delivery of consumables, spare parts, COTS and other software licences, passwords and documentation.
 - e. Successful completion of the Training (see SECTION 14) and all Contract requirements, except warranty.

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- f. Successful completion of Provisional System Acceptance (PSA) activities with closure of all observations and deficiencies (see section 11.4 below).
- g. The PSA shall be the milestone by which the system security accreditation activities by the HN POL will be initiated (not before), and finalised at the FSA milestone.
- h. The PSA shall be deemed a payment milestone upon successful delivery and acceptance by the Purchaser.

11.3. PSA Entry Conditions

11.3.1. The Contractor shall satisfy all the following PSA entry condition:

- a. All hardware and software deliverables and installation works (incl. documentation, test equipment, spares, licences, etc.), for which the Contractor is responsible under the terms of the Contract have been supplied and provisionally accepted by the Purchaser.
- b. An initial Operational Unit Inventory (OUI) has been provided that details all the deliverables supplied under the terms of the Contract.
- c. The SIS documentation has been supplied with updates to accurately reflect the "As Built" configuration (ABDs) at the time of PSA, and verification of the accuracy of the documentation has taken place.
- d. CoC(s) has been supplied that the equipment conforms to the contractual standards and applicable manufacturing standards.
- e. All observations and deficiencies have been resolved by the Contractor.
- f. SAT Reports have been submitted by the Contractor and accepted by the Purchaser.
- g. A QA Report has been supplied by the Contractor's QA organisation.
- h. A complete list of keys and any passwords and/or codes necessary for the Purchaser to operate the system day to day has been supplied to the Purchaser.
- i. Successful completion of the Training and all Contract requirements, except warranty.

11.3.2. The Purchaser will provide the confirmation that the Contractor has fulfilled all requirements to allow HN POL to initiate the system security accreditation activities.

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11.4. Deficiencies

- 11.4.1. A deficiency is a formal record of any aspect that could jeopardise successful completion of the Contract.
- 11.4.2. A deficiency is cleared when the Purchaser has endorsed that the corrective action taken in respect of the Deficiency has been completed to the Purchaser's satisfaction.
- 11.4.3. Deficiency classification is the classification that the Purchaser assigns to a deficiency. The categories for classification are defined as:
 - a. Critical: Departure from the specification that must be rectified prior to the completion of SAT as applicable and before PSA can take place. The date by which this must be completed shall be agreed.
 - b. Deferment: Departure from the specification that may be rectified before or after the Test Procedure; the date by which this must be completed shall be agreed. Deferments that are not completed by the due date shall become critical for PSA unless the due date is modified by agreement.
 - c. Omission: A departure from the specification where it is agreed that no remedial action is necessary.
- 11.4.4. Deficiencies shall be handled in accordance with the following procedures:
- 11.4.5. The Contractor shall submit all deficiencies to the Purchaser for endorsement of the clearance action taken.
- 11.4.6. A deficiency shall be recorded when recognising any aspect that could damage successful completion of the Contract. These aspects shall include but not be limited to:
 - a. A design shortage or deficiency revealed in any design, implementation or test specification.
 - b. Any shortage or deficiency revealed by inspection or application of testing procedures.
 - c. Any comment raised by the Contractor concerning any aspect of the Contract.
 - d. Any comment raised by the Purchaser or his designated representative concerning any aspect of the Contract.
- 11.4.7. Deficiency sheets shall be maintained by the Contractor and shall record the following information:
 - a. The serial number of the deficiency sheet.
 - b. The deficiency.

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- c. Sufficient information to define the context of the deficiency in terms of the articles to which it applies, the state of articles (including any appropriate environmental details, as applicable), and the date of the deficiency.
- d. The authorised personnel endorsing the deficiency.
- e. Any clearance action taken, such as repair and testing, a specification modification, receipt of a written reply from the Contractor etc., as applicable.
- f. The authorised personnel endorsing the clearance and the date of clearance.

11.5. PSA Report (PSAR)

11.5.1. The Contractor shall provide the Provisional System Acceptance Report (PSAR) prior to the PSA meeting.

11.5.2. The documents listed below shall comprise the PSAR that shall be prepared by the Contractor:

- a. PSAR cover document: To serve as an introductory document to summarise the content of the PSAR package and refer to, respectively include, the items here below.
- b. CoC: To confirm that the equipment offered conforms to the contractual standards and to National codes, laws, regulations, local rules and practices of the country of installation (Poland).
- c. Deficiency Summary Sheets: To list any outstanding deficiencies. A remarks column shall briefly record the technical or operational significance and a decision column shall record the policy decision taken in respect of each deficiency. A clearance date column and a signature column are also required.
- d. SAT Reports.
- e. An Operational Unit Inventory (OUI) of provided supplies that shall detail all the deliverables furnished by the Contractor to meet the terms of the Contract for the PSA. The inventory shall include all licences identifiers and keys.
- f. Status of codification action.
- g. Status of training provision.
- h. Final versions of SIS and SPDP documentation, with updates, to accurately reflect the "As Built" configuration, as well as Final site logbooks.
- i. Acknowledgement of COTS and other software licences delivery.

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- j. A QA Report provided by the Contractor's QA Organisation.
- k. Acknowledgement by MOD POL and NCI Agency that all keys and password lists have been received.

11.6. PSA Meeting

- 11.6.1. When there are no deficiencies open from the SAT Report, regardless of classification type, then the PSA meeting may be requested to be scheduled within four (4) weeks.
- 11.6.2. The PSA meeting shall be convened and chaired by the Purchaser when he considers that all the deliverables are ready for PSA. The Contractor shall arrange the taking, typing and distribution of Minutes of Meeting of the PSA meeting.
- 11.6.3. PSA shall be granted by written confirmation from the Purchaser by means of a formal PSA Acceptance letter.

11.7. Operational Evaluation Period (OEP)

- 11.7.1. The Operational Evaluation Period (OEP) is a period in which the Purchaser may perform an operational assessment of installed components of the SSSB System before its Final System Acceptance.
- 11.7.2. The OEP shall commence after the SSSB System has successfully passed its Provisional System Acceptance (PSA) and it will terminate before the Final System Acceptance (FSA). The nominal duration of the OEP shall be eight (8) weeks in total, in one single consecutive period, with the exact start date and end date to be agreed between Contractor and Purchaser not later than at PSA.
- 11.7.3. The primary purpose of the OEP is to evaluate the reliability and maintainability performance of installed components of the SSSB System and the SSSB System as a whole, and to detect any deficiencies that may have not been discovered until the PSA. Any potential deficiencies discovered during OEP shall be recorded by the Contractor and addressed before FSA.
- 11.7.4. Within the OEP the Contractor shall support and maintain the installed SSSB System. Further, the Contractor shall provide technical advice and guidance to site technicians of HN POL in the isolation and elimination of faults at levels HL1/2 and SL1/2, as well as assist HN's personnel to complete warranty claim forms and to provide on-the-job training as required.

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11.8. FSA – Final System Acceptance

- 11.8.1. The Final System Acceptance (FSA) is defined as the act by which the Purchaser accepts the final and complete system provided by the Contractor.
- 11.8.2. The FSA is the act by which the Purchaser has evaluated the delivered and installed systems of the SSSB-POL system as a whole and determined that there are no non-conformities that would prevent full operational use of the system by the Host Nation personnel. At FSA there shall be no outstanding deficiencies present.
- 11.8.3. The system shall receive final acceptance (FSA completion) after the successful completion of the following phases:
- a. Successful completion of the PSA as per section 11.2 above, incl. successful completion of all PSA-related requirements listed in that PSA section of the SOW.
 - b. Successful completion of the SSSB System-level Operational Evaluation Period (see section 11.7 above). Any potential deficiencies discovered during OEP shall be addressed by the Contractor.
 - c. Successful provision and installation of all supplies and services in accordance with the SSS (excluding options) at sites and other designated locations.
 - d. Successful completion of any final retrofit activity and/or regression testing resulting from previous phases, including the OEP, with resolution of all potentially remaining deficiencies.
 - e. Successful provision and delivery of consumables, spare parts, COTS and other software licences, passwords and documentation (in addition to any items already delivered at PSA).
 - f. Successful security accreditation (Approval To Operate, ATO) granted by the relevant authorities of HN POL.
 - g. The FSA shall be deemed a payment milestone upon successful delivery and acceptance by the Purchaser.

11.9. FSA Entry Conditions

- 11.9.1. FSA will nominally start six (6) months after the conclusion of the PSA. During the period between PSA and FSA the relevant authorities of HN POL will carry out relevant security accreditation activities and ultimately provide Approval To Operate (ATO).

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- 11.9.2. Within the period between PSA and FSA, HN POL will also conduct an Operational Evaluation Period (OEP). The OEP is defined in section 11.7 above.
- 11.9.3. The Contractor shall satisfy all the following FSA entry condition:
- a. All hardware and software deliverables and installation works (incl. documentation, test equipment, spares, licences, etc.), for which the Contractor is responsible under the the terms of the Contract have been supplied and provisionally accepted by the Purchaser.
 - b. If applicable, an update of the Operational Unit Inventory (OUI) has been provided that details all the deliverables to be supplied under the terms of the Contract.
 - c. If applicable, an update to the SIS documentation has been supplied, including any updates to accurately reflect the “As Built” configuration (ABDs) at the time of FSA, and verification of the accuracy of the documentation has taken place.
 - d. If applicable, an update to the CoC(s) has been supplied that the equipment conforms to the contractual standards and applicable manufacturing standards.
 - e. All remaining observations and deficiencies have been resolved by the Contractor.
 - f. If applicable, an update to the QA Report has been supplied by the Contractor's QA Organisation.
 - g. If applicable, an update to the complete list of keys and any passwords and/or codes necessary for the Purchaser to operate the system day to day has been supplied to the Purchaser.

11.10. FSA Report (FSAR)

- 11.10.1. The Contractor shall provide the Final System Acceptance Report (FSAR) prior to the FSA meeting.
- 11.10.2. The FSAT document shall refer to, respectively include, any updates to the documentation already provided with the PSAR. For details see 11.5 above.

11.11. FSA Meeting

- 11.11.1. The FSA meeting shall be convened and chaired by the Purchaser when he considers that all the deliverables are ready for FSA. The Contractor shall arrange the taking, typing and distribution of Minutes of Meeting of the FSA meeting.

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11.11.2. FSA shall be granted by written confirmation from the Purchaser by means of a formal FSA Acceptance letter.

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**SECTION 12 SITE PREPARATION AND INSTALLATION REQUIREMENTS/
CIVIL WORKS**

12.1. General

- 12.1.1. The purpose of this section is to define the Civil Works (CW) scope and directly associated activities (including but not limited to obtaining building permit and disposal of hazardous material) to be implemented by the Contractor. The requirements defined herein shall be met to enable site and facilities preparation for installation and proper functioning of the SSSB-POL system.
- 12.1.2. The Civil Works element consists of complete preparation of antenna farms (including but not limited to site preparation, antenna foundations, associated ducting, internal roadworks and warning signs, etc.).
- 12.1.3. Complete preparation of antenna farms (both design and implementation phase) is sole responsibility of the Contractor. Details of this requirement are provided further in SOW Annex A.
- 12.1.4. The majority of works concerning provision of facilities with utilities to house the technical equipment of the SSSB-POL system has been implemented already by HN (under separate Contract). However, the Contractor shall be responsible for the design and implementation of the final Civil Works at the two Radio Sites to support the Electronic Portion (EP) of the SSSB-POL system, and will include some minor adaptations where required (PDPs, electrical installations or modifications, etc.). Details of this requirement are provided further in SOW Annex A.
- 12.1.5. Applied technologies and equipment provided by the Contractor shall be modern, reliable and represent current state of art. At the same time they shall enable Operation and Maintenance (O&M) cost lowering to the maximum possible/practicable extend throughout their life cycle.
- 12.1.6. The material and equipment installed shall be produced by entities recognized as reputable and experienced in their designated fields of production. Typical and Commercial of the Shelf (COTS) material and equipment shall be used to the maximum possible extend assuring that spare parts and consumables will be available throughout the life cycle of respective elements, devices and equipment.
- 12.1.7. Void.
- 12.1.8. All the warning signs and warning labels installed by the Contractor shall be provided in both English and Polish languages. They shall be of sufficient quality and durability to withstand local weather conditions (including solar radiation) and assure at least seven (7) years of operation without substantial degradation.

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- 12.1.9. All the works listed herein shall be planned, designed and implemented according to respective Polish legislation and Polish Health and Safety (H&S) regulations, including, but not limited to, the Construction Law, Law on Environmental Protection and the Security regulations of HN POL. The Contractor shall be aware of any HN national or local permit/regulation requirements that would be required as part of any Civil Works, and if not implemented would have a detrimental effect on delivery. The design and implementation of the works listed herein shall also be compliant with respective HN regulations addressing local seismic conditions (including introduction of technical and structural measures to create safe environment for personnel and protection for all of the constructions and equipment provided and installed by the Contractor).
- 12.1.10. HN POL will provide the sites incorporating all existing facilities and interfaces as per SOW Annex B and as defined in the SOW paragraph 3.4.above (PFE and PFP). Furtheron, the Contractor shall become acquainted with the particularities and details of the two radio sites, by performing the Site Survey activities as outlined in SOW section 3.6.
- 12.1.11. The Contractor shall install the SSSB-POL system equipment in the equipment area of buildings that are provided by the HN. This equipment area will allow installation of either free-standing equipment or equipment racks.
- 12.1.12. The Contractor shall notify the Purchaser thirty (30) working days ahead of his intention to start his installation activities at a particular site. The notification shall include names, passport numbers and security clearances of the installation team (this to ease the proper registration of Contractor personnel working at the site, see also SOW section 5.6.2)
- 12.1.13. The Contractor shall take into account, working and implementation environment and any constraints as defined in the SOW Annex B, and as identified during the Site Survey activities.

12.2. Co-ordination between the Contractor and the Purchaser

- 12.2.1. In view of reducing the interface problems, the Purchaser, during conduction of this Contract, will promote and co-ordinate the exchange of information between the HN and the Contractor.
- 12.2.2. Any requirements put forward by the Contractor to the HN shall only be taken into account after consultation with the Purchaser.
- 12.2.3. Any change that may affect the scope of this Contract shall be processed through the Purchaser (see also SOW section 7.11).

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12.3. Liaison with the Host Nation

- 12.3.1. Within four (4) months after signature of the Contract, the Contractor shall provide to the Purchaser, a detailed Site Preparation Data Package (SPDP) for both sites. Upon revision of the SPDP, the Purchaser will coordinate a meeting in HN POL between the Contractor, the Purchaser and HN to finalise the site facilities requirements and to achieve the approval of SPDP by the Purchaser. Planned Beneficial Occupancy Date (BOD), representing the date when the Contractor can start any site preparation works on site(s), will be recorded at the meeting.
- 12.3.2. As referred below, the SPDP shall also include the conditions that must exist before BOD. On completion of the site preparation related responsibilities and PFE delivery by the HN as defined in SOW sections 3.4.2 and 3.4.3 before BOD, a Preliminary Acceptance Inspection (PAI) to the sites shall be conducted with the participation of the Contractor, HN and the Purchaser. The purpose of PAI is to verify that the sites meet the requirements in the SPDP and are ready for installation of the equipment (to meet the entry condition before BOD).
- 12.3.3. The Contractor shall not start any works on sites of the SSSB-POL system before receiving a Site Readiness Statement and approval confirming the BOD date from the Purchaser.
- 12.3.4. The Contractor shall, in co-ordination with the Purchaser and the HN, conduct site visits to ensure that the site preparations are in line with the requirements specified in the SOW. It is the Contractor's responsibility to identify errors and/or omissions prior to the Site Readiness Statement. The Contractor shall plan for, as a minimum, joint (HN, Purchaser and Contractor) site visits at each site as follows:
 - a. The Contractor's Site Survey (4 weeks after EDC) conducted in order to collect necessary information for the SPDP preparation;
 - b. SPDP co-ordination meeting with the HN per SOW paragraph 12.3.1 above;
 - c. One (or more) independent site visit(s) during the construction works; the most convenient time is to be co-ordinated between the HN and the Contractor;
 - d. Preliminary Acceptance Inspection (PAI).
- 12.3.5. All visits to a site shall be planned in co-ordination with the Purchaser or delegated HN representative(s).
- 12.3.6. It is the Contractor's responsibility to assure protection of the equipment and materials delivered by the Contractor under this Contract during the installation time.

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- 12.3.7. Costs of utilities consumed by the Contractor (such as power, water, heating, etc.) shall be at Contractor's expenses from the Start of Installation (SOI) date until Final System Acceptance (FSA) by the Purchaser. The Contractor shall agree before SOI with the HN on how to measure and account for the cost of utilities.

12.4. Access to the sites and use of existing facilities and utilities

- 12.4.1. Vehicle access to the sites will be possible. There are no terrain or man-made obstacles present. There will be possibilities for outdoor non-secure storage (the Contractor is required to coordinate storage issues with HN). The storage area preparation may require some site adjustment works (levelling, vegetation removal, etc.) and fencing (temporary, and only if it is the Contractor's intent to have storage areas protected by a fence). Preparation of the storage area is the Contractor's responsibility. HN is not obliged to provide any outdoor or indoor secured storage facilities on the sites.
- 12.4.2. It is possible to connect to existing electrical power at the sites, or to water supply. The utilities cost, equivalent to respective average costs applied in POL at any given month, is the Contractor's responsibility (see also 12.3.7 above). In case any special installation/device is required (e.g. temporary PDP, water taps, etc.) it is the Contractor's responsibility to provide that installation/ device. HN, upon request, will assist in obtaining required information and permissions.
- 12.4.3. HN will provide, upon request, information on the possibility and terms and conditions (if applicable) of Contractor access to facilities such as office space, communication devices (to include internet access), workshops, storage, sanatoria, rest area, etc. at its sites. However, HN will not be able to guarantee access to any communication and/or IT services including internet. It is the Contractor's responsibility to organise his own means of communications that he requires.

12.5. Health and Safety (H&S) obligations, building permit and other associated licenses

- 12.5.1. Appointment of a Health and Safety (H&S) Coordinator / Inspector and Site Supervisor is the Contractor's responsibility. Both of the mentioned above officials shall be either EU or POL accredited.
- 12.5.2. The H&S Coordinator/Inspector shall be an independent role from the Site Supervisor and cannot be executed by the same person.
- 12.5.3. Development and implementation of the H&S Plan at any given stage of the project is the Contractor's responsibility.

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- 12.5.4. The Contractor is responsible for obtaining all of the required building, environmental permits and related documents (such as tree felling permits, e.g.) in accordance with POL Law.
- 12.5.5. HN is ready, upon request, to advise the Contractor, and where possible and necessary to assist, in the process of obtaining building permits, tree felling permits and other related national and local authorisations.
- 12.5.6. The Contractor shall prepare all necessary applications for building permit, and any other necessary permits, according to Host Nation legislation. A non-exhaustive list of required documents is listed below:
- a. Design/ description of demolition works (in preparation for masts and antennas installation, internal roads construction, cable ducting, levelling etc.);
 - b. Building design with the technical solution for antenna masts, antenna foundations, power supply, and other Civil Works planned for each site respectively, checked by Polish technical authorities for the essential requirements;
 - c. Environmental impact report (not only limited to human, but also visual and nature impacts);
 - d. Designer's Professional Certificate(s)/Qualifications;
 - e. Document(s) confirming the designer's professional membership in the relevant Chamber of Engineers;
 - f. Technical documentation for site organisation and preparation; this documentation shall meet the requirements as stipulated by the HN and shall present, amongst other, the following information: all preparation works for construction execution including materials/equipment storage sites, temporary connections to utilities, temporary fences for site protection, access to the sites, and provisional constructions erected by the Contractor.
- 12.5.7. It is the Contractor's responsibility to fulfil environmental obligations after the works are finished, if and when applicable (e.g., replanting of trees, clean-up and restoration of the construction area, etc.). This requirement shall be met according to respective POL Law and regulations.
- 12.5.8. It is the Contractor's responsibility to obtain any necessary Permits for Use according to Polish Construction Law.
- 12.5.9. Masts and equipment shall be supplied with all required homologation, certifications, operational and maintenance manuals both in English and Polish languages. These manuals/documentation are required as early as possible during the technical design preparation stage. It is the Contractor's responsibility to provide the above mentioned documents.

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12.5.10. For further requirements on the Contractor, see also Book II, Part II, Section 1 of the Prospective Contract: Special Provisions 31 and 32.

12.6. Site Preparation Data Package (SPDP)

12.6.1. The Contractor shall provide the SPDP documentation that shall include, but not be limited, to the following detailed information in a form of narrative text supported by illustrations:

- a. Specific implementation structure, responsibilities, lines of control and sub-contractor management structure in connection to CW preparations and the subsequent implementation of the sites;
- b. Listing of the existing equipment and structures to be dismantled/demolished, clearly indicating the ones that are to be re-used, disposed of by the Contractor or re-installed;
- c. Listing and status/working conditions of non-project related equipment that has to be temporarily dismantled to allow works to continue by the Contractor;
- d. Listing of equipment to be installed including functional description of each component, as well as general equipment specifications, to include the following:
 - i. Physical specifications - height, length, width, and weight (floor loading) of each equipment rack, cabinet and console;
 - ii. Equipment rack, cabinet and console templates;
 - iii. Manufacturer's specific machine configuration and space requirements;
 - iv. Maintenance access requirements for each equipment rack, cabinet and console;
- e. Equipment layout, including consideration of space between power and communication lines, as stipulated in the references listed in SOW section 4.1.1 above (specifically references g and h in that section);
- f. Special requirement for movement of equipment on site;
- g. List of companies and names of the Contractor's / sub-contractors personnel working at the sites during installation;
- h. Site facilities and utilities requirements (electricity, water, etc.) during installation time;

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- i. Site layout plan, including detailed layouts (placement) of all equipment racks, cabinets and consoles, showing equipment racks, transmitters, antennas, cable and other ducts, No-Break (NB), Power Supply sub-System (UPS), etc., as and if applicable, including the specific equipment layout;
- j. Equipment specifications to include dimensions and weight (floor loading);
- k. Maintenance accesses requirements for the equipment;
- l. Any additional action that the Contractor might need, such as provisional dismantling of electrical/electronic equipment, during installation of the antennas or CIS equipment under this Contract.
- m. Heat load budget and Heating, Ventilating and Air Conditioning (HVAC) interface requirements for the SSSB-POL system equipment that shall contain and not be limited to:
 - i. Heat load calculation;
 - ii. Operating and non-operating environment conditions (temperature range, relative humidity range, atmospheric pressure, ingress protection (IP rating));
 - iii. Pressure and any special heating/cooling capacity requirements.
- n. A complete power budget of the SSSB system at each respective radio site, and equipment power interface requirements.
- o. Electrical diagrammes including location and description of Electrical Power Distribution Panels (EPDPs), NB PSS elements (UPS), integration and interface with SB PSS and Prime Power Supply System provided by HN, electrical power utilisation plan, including but not limited to:
 - i. Location and description of power supply panel;
 - ii. Input voltages, frequency, and tolerances;
 - iii. Safety and secure grounding ⁵;

⁵ *Ground, Safety: Ground to protect personnel and equipment from electric shock and damage in the case of faults occurring in the equipment. The safety ground may be considered a secure ground if it is contained within an inspectable space.*

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- iv. Electrical power (in kVA) required for each equipment rack, cabinet and console and the type of termination to HN's power supply, cable connections, terminal strip, etc.;
 - v. Phasing number and colour code of conductors per cabinet/rack;
 - vi. Location of power and signal entry points through walls, incl. their approximate hole sizes;
 - vii. Inter-unit cabling, ducting and connection;
- p. No-break PSS (UPS); if existing NB (UPS) appliances require replacement of currently installed battery pack(s), e.g. due to expired lifetime of the batteries, or damage, then the Contractor, upon approval by the Purchaser, shall provide such replacement battery pack(s); if additional NB (UPS) capacity is required, then the Contractor, upon approval by the Purchaser, shall provide such additional UPS appliances in addition to the existing capacity.
- q. Antenna Civil Works requirements, with regard to the supporting structure and foundations.
- r. Other CW requirements that are the Contractor's responsibility as stipulated in section 12.13.
- s. A lighting plan to include general and special lighting requirements.
- t. A cooling plan showing equipment air conditioning requirements, and any other special cooling requirements. This data shall include:
- i. Operating area environment (temperature range, relative humidity range, atmospheric pressure).
 - ii. Equipment air conditioning requirements (equipment heat output, location for each equipment rack, cabinet and console, equipment operating and non-operating environmental conditions, e.g. temperature, atmospheric pressure and relative humidity).
- u. Any additional action that the Contractor might need to undertake, such as provisional dismantling of electrical/electronic equipment during installation of the antennas or CIS equipment under this Contract.
- v. Shipping requirements and related information will need to include:
- i. Engineering Implementation Schedule including milestone date of delivery of Contractor and Purchaser Furnished Equipment.

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- ii. The time and real estate required by Contractor Personnel at the installation sites in order to ascertain delivery routes and perform equipment installations.
 - iii. Special requirement for movement of equipment on-site and within the allocated facility (e.g. the use of cranes, etc.).
- 12.6.2. In the SPDP, as defined and listed in the SOW paragraph 12.6.1 above, the Contractor shall thoroughly describe the Civil Works, power and site preparation requirements, that must be accomplished prior to the start of the installation of the delivered SSSB-POL System as set forth in SECTION 12 of the Contract.
- 12.6.3. If the Contractor identifies any additional requirements not covered under the HN responsibilities listed in SOW paragraph 3.4 at the time of or after SPDP submission, the Contractor shall pay the additional costs to fulfil such requirements.
- 12.6.4. Requirements such as HVAC and PSS installation requirements, etc., shall be indicated in the SPDP in order to quantify the magnitude of total Civil Works that must be accomplished on-site prior to arrival of the equipment for installation.
- 12.6.5. Additional Facility's adaptation works (including complete package of Civil Works) at sites.
- 12.6.6. Those works described above as necessary prior to the installation of the delivered SSSB-POL System, shall be included in the deliverable "Preparation of Site".
- 12.6.7. The SPDP shall be provided in quantities as specified in the SSS and in a format as specified in SOW SECTION 13, as necessary.

12.7. Recording of on Site Activities

- 12.7.1. Throughout the implementation of the project, the Contractor shall maintain at each site a logbook, in which every incident, event and major activity shall be recorded on a daily basis.
- 12.7.2. Incidents or events should include, but not be limited to: Equipment failure, personnel incidents or accidents, registration of visitors, power failures, lightning strike affecting the site, etc.
- 12.7.3. Major activities include, but are not limited to: earth works, concrete pouring, antenna assembly, etc.
- 12.7.4. Additionally, the following information (non-exhaustive list) shall be recorded in the logbook: Quantity and quality of material and equipment delivered to the sites (including remarks on rejected material/equipment due to non-compliance with required specifications or/and quality standards), number of

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personnel and names of team leaders conducting major activities, weather and environmental conditions affecting conducted works.

- 12.7.5. When no incident happened, and no major activities were conducted, the words “No significant event to report” shall be noted in the logbook. The logbook records shall be reviewed, approved and signed by the site supervisor on daily basis. The logbook shall be delivered to the Purchaser as a part of the PSA documentation (and any updates to the logbooks as part of FSA documentation). Nevertheless, the Purchaser reserves the right to review the logbook at any given time during the project implementation. The logbook shall be presented for review either during site visits or sent to the Purchaser via email as a scanned copy. The logbook shall also meet all requirements stipulated in section 13.10 of this SOW.

12.8. Disposal of Non-Reused Equipment and Structures

- 12.8.1. The Contractor shall be responsible for dismantling of all radio and computer equipment, if any, that will not be re-used for the SSSB-POL system, as described and approved in the SPDP.
- 12.8.2. The Contractor shall not dismantle any existing equipment on sites not related to the SSSB-POL equipment and its installation (e.g. fences, any surveillance systems, etc. such as the CCTV system). Further, the continued operation of such systems shall not be interrupted by the works executed by the Contractor or its sub-contractors.
- 12.8.3. If any non-project related equipment has to be temporarily dismantled (or services interrupted) in order to allow the works to be performed by the Contractor or its sub-contractors, it shall only be dismantled (interrupted) if strictly necessary for the purpose of this project, and after agreement with HN POL. Once temporary works have been completed, the equipment shall be re-installed (services restored) by the Contractor and shall be in the same working conditions prior to being dismantled (interrupted).
- 12.8.4. The Contractor shall move all non re-used equipment and material (including but not limited to buried cables and ducts) that has been dismantled and all structures demolished by the Contractor to a location within the respective site premises for temporary storage, as required. Such temporary storage area shall be appointed/approved by the HN. Subsequent responsibility for the disposal and transport to designated disposal facilities, of equipment and demolished structures that are identified in the SPDP as requiring to be disposed of will lie with the Contractor.
- 12.8.5. It is the Contractor’s responsibility to calculate, obtain respective data and make assumptions reference disposal costs (to include hazardous material). It is also the Contractor’s responsibility to obtain information concerning the distances from individual sites to facilities / areas where material can be disposed of (to include hazardous material). HN may only advise on request

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if time and circumstances allow. For information on example disposal locations closest to the sites and associated approx. disposal costs, please consult SOW Annex B.

12.9. Hazardous material disposal

- 12.9.1. There is a very low risk of any unexploded munitions or ordnance being found, or other explosive remnants from military and/or non-military activities. However, in the event this occurs, the Contractor will be legally bound to report that fact to the local HN POL authorities at the earliest opportunity. Subsequent disposal, once the site has been secured in line with national safety protocols and procedures, will be conducted by HN POL Explosive Ordnance Disposal (EOD) personnel.
- 12.9.2. Disposal of any material containing Asbestos is HN POL's responsibility.

12.10. Equipment Installation

- 12.10.1. The equipment shall be installed and integrated by the Contractor at the two radio site locations where the equipment will have been delivered according to the SSS and Annex A of this SOW.

12.11. Interfaces

- 12.11.1. The Contractor shall provide the detailed equipment power budget and interface requirements in the SPDP (see SOW section 12.6 above) and define the appropriate power supply and interface requirements.
- 12.11.2. The Contractor shall specify the equipment heat load in the SPDP (SOW paragraph 12.6 above) and define the appropriate cooling capacity required for cooling of the equipment area, comparing that to the existing HVAC capacity as present on the sites.

12.12. Installation Workmanship / Techniques

- 12.12.1. It is the Contractor's responsibility to properly connect equipment, provided under this Contract, to ground and earth systems installed either by the Contractor or by HN. The grounding and earthing connections shall be executed in accordance with HN safety regulations and respective NATO CIS Security Requirements.
- 12.12.2. The Contractor shall supply all the necessary material, labour and support equipment required to meet the specifications in the Contract.
- 12.12.3. All materials and equipment supplied by the Contractor shall be installed in strict conformity with the manufacturer's instructions and as specified by the relevant drawings and specifications.

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- 12.12.4. The installation work is to be carried out by personnel specifically qualified for this kind of work.
- 12.12.5. The Contractor shall comply with all local installation guidance and safety regulations. Especially, all the electrical works that have been performed by the Contractor shall be compliant with requirements set forth in IEC-60364, Part 4, Chapter 41 (“Electrical installations of buildings, Protection for safety, Protection against electric shock”).
- 12.12.6. Cables shall be segregated according to the signals being transferred (e.g. power cables shall be separated from signal cables). Power and signal cables connected to the equipment that may process any classified data shall be isolated in accordance with the requirements stipulated in the documents referred to in SOW SECTION 4 (paragraph 4.1.1, specif. references g and h).
- 12.12.7. In order to minimize emission of fume and/or acid gas in case of fire, use of Low Smoke and Fume (LS0H-low smoke halogen free) cables is required (IEC 332, IEC 1034 and ASTM E 662 apply).

12.13. Civil Works at Radio Sites

- 12.13.1. Antenna Field preparation and installation of HF, UHF and LOS antennas shall be in accordance with the requirements laid out in SOW Annex A, section 4.6.

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SECTION 13 DOCUMENTATION

13.1. General

- 13.1.1. The Contractor shall provide programme and technical documentation as covered in the various Sections of this SOW. The Purchaser will review the documentation and will provide comments to the Contractor generally within 30 working days after receiving the documents (unless specified otherwise in this SOW, or agreed between Purchaser and Contractor).
- 13.1.2. The documentation consists of, but not limited to, the following main functional groups:
- a. Project Management Documentation (as per SECTION 2);
 - b. System Design and Engineering Documentation (as per SECTION 4) including System Acceptance Documentation (as per SECTION 11) and Civil Works (CW) Documentation (as per SECTION 12);
 - c. System Security Documentation (as per SECTION 5);
 - d. Quality Assurance Documentation (as per SECTION 6);
 - e. Configuration Management Documentation (as per SECTION 7);
 - f. Logistics Documentation and Technical Manuals (as per SECTION 8 and SECTION 9);
 - g. Training Documentation (as per SECTION 14).

13.2. Liability and Amendments

- 13.2.1. The Contractor shall be the responsible authority for the issue, control, and distribution of amendments to delivered documentation in the format provided for the associated equipment or system until expiration of the warranty period.
- 13.2.2. The Contractor shall prepare and submit a draft for each programme and technical documentation for the Purchaser's approval.
- 13.2.3. The Contractor shall apply as reference the documentation mentioned in this SOW for each relevant delivery.
- 13.2.4. Two (2) weeks after receipt of the Purchaser's comments, the Contractor shall answer and propose solution to the comment issues for Purchaser's agreement. The final version of the relevant delivery shall incorporate all Purchaser amended comments as per agreement.
- 13.2.5. The Contractor shall propose the status of Purchaser's comments. The status of Purchaser's comments will be:
- a. Open: the Contractor has received the comment;

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- b. In work: the Contractor is asked to work or re-work the Purchaser's comments;
- c. Request for closure: the Contractor proposes solution to the comment issue;
- d. Closed: the Purchaser accept the proposed solution to comment issue.

13.2.6. The Contractor shall be the liable for the data coherence provided through all media (hard copy format and soft copy format) and standards required (e.g.: S1000D, S2000M, S3000L) until expiration of the warranty period.

13.3. Documentation Submission Plan

13.3.1. The Contractor shall prepare and maintain a complete record of all documentation required under this Contract. The document record will be required to be submitted as part of the documentation and shall be continuously updated throughout the life of the Contract to reflect the current status of all documents.

13.3.2. The Contractor shall also maintain version control of all documentation submitted throughout the project life cycle.

13.3.3. The Contractor shall deliver contractual documentation according to the (Contract Data Requirements List, CDRL) as specified in below table, and in the SSS. This list does not waive the Contractor from delivering any of the documentation items specifically covered by the Contract and Purchaser-approved PIP.

Document	SOW Reference	SSS Reference (CLIN)	Delivery Timelines (EDC +)		
			Draft	Final Draft	Final
Project Implementation Plan (PIP)	SOW 2.3	3.3	6 Weeks		10 Weeks
Site Preparation Data Package (SPDP)	SOW 12.6	7.3, 7.10	16 Weeks		35 Weeks
Engineering Data	SOW 4.7.7	7.2, 7.9			35 Weeks
Interface Control and Management Documents	SOW 4.7.3	4.5			21 Weeks
As-Build Drawings	SOW 13	13.1, 13.2	44 Weeks		48 Weeks
Project Reports					
Project Checkpoint Reports	SOW 2.4	1.1			Every 2 Months

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<i>Document</i>	<i>SOW Reference</i>	<i>SSS Reference (CLIN)</i>	<i>Delivery Timelines (EDC +)</i>		
			<i>Draft</i>	<i>Final Draft</i>	<i>Final</i>
Project Progress Reports	SOW 2.5	1.2			1 Week prior to PPM
Site Survey Reports	SOW 3.6	2.2, 2.4	2 Weeks After Survey		1 Weeks after Purchasers comments
Installation Checkout Reports	SOW 10.5	8.3, 8.6			41 Weeks
Logistic Deliveries					
Reliability Availability Maintainability Testability (RAMT) Case Report	SOW 9.2	9.2	SSR – 4w	PDR – 4w	CDR – 4w
Failure Mode Effects and Criticality Analysis (FMECA)	SOW 9.3	9.3	SSR – 4w	PDR – 4w	CDR – 4w
Maintenance Task Analysis (MTA)	SOW 8.7, 8.18	9.4	PDR – 4w	CDR – 4w	FAT + 4w
Level Of Repair Analysis (LORA)	SOW 8.7	9.5	PDR – 4w	CDR – 4w	FAT + 4w
Recommended Spare Parts List (RSPL)	SOW 8.11, 8.12	9.7	CDR + 4w		FAT + 4w
Recommended Consumable Items List (RCIL)	SOW 8.11, 8.12	9.7	CDR + 4w		FAT + 4w
Recommended Tools and Test Equipment List (RTTL)	SOW 8.11, 8.12	9.7	CDR + 4w		FAT + 4w
Technical Manuals and Training					
Technical Publication Development Plan (TPDP)	SOW 8.19	10.1	16 Weeks		36 Weeks
Writing Style Guide (WSG)	SOW 8.19	10.1	16 Weeks		36 Weeks
User Manuals	SOW 8.20, 8.21	10.2	CDR – 4w		FAT + 4w
Maintenance Manuals	SOW 8.20, 8.21	10.3	CDR – 4w		FAT + 4w
Training Requirement Analysis (TRA)	SOW 14.2	9.1	12 Weeks	24 Weeks	4 Weeks before training
Training Plan	SOW 14.3	9.2	12 Weeks		4 Weeks before training
Training documentation	SOW 14.11	9.3	20 Weeks before training		4 Weeks before training

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<i>Document</i>	<i>SOW Reference</i>	<i>SSS Reference (CLIN)</i>	<i>Delivery Timelines (EDC +)</i>		
			<i>Draft</i>	<i>Final Draft</i>	<i>Final</i>
Training Reports	SOW 14.4	9.5, 9.6			4 Weeks after training
Design Reviews					
System Requirements Review Reports	SOW 4.7.2	4.2			16 Weeks
Technical Design Reports (Preliminary Design Review)	SOW 4.7.3	4.3			13 Weeks
Detailed Design Specifications	SOW 4.7.4	4.3, 4.5	13 Weeks	21 Weeks	26 Weeks
Technical Design Reports (Critical Design Review)	SOW 4.7.3	4.5			21 Weeks
Configuration Item (CI) specifications	SOW 4.7.3	4.6			29 Weeks
Test and Acceptance					
FAT Test Procedures	SOW 10.4	5.1	17 Weeks		27 Weeks
FAT Functional Configuration Audit	SOW 7.14	5.4			29 Weeks
FAT Test Reports	SOW 10.7	5.6			31 Weeks
Site Installation Specifications (SIS)	SOW 3.7	7.4, 7.11	28 Weeks	34 Weeks	40 Weeks
RSAT Test Procedures	SOW 10.4.2		3 Months prior to Test		1 Week prior to Test
RSAT Report(s)	SOW 10	12.4, 12.10			48 Weeks
Provisional System Acceptance Report (PSAR)	SOW 11.5	13.4			48 Weeks
Deficiency Summary sheets and Clearance Report	SOW 11.5.2	13.3			48 Weeks
Logbooks (part of PSA)	SOW 12.7.5	13.4			48 Weeks
Final System Acceptance Report (FSAR)	SOW 11.10	14.1			74 Weeks
Deficiency Summary sheets and Clearance Report (update)	SOW 11.10	14.2			74 Weeks

13.4. Civil Works (CW) Documentation

- 13.4.1. Whenever CW documentation is mentioned the definition shall also include documents concerning other devices, equipment and installation, provided by the Contractor as stipulated in SOW SECTION 12.

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- 13.4.2. The Contractor shall provide the various CW documentation as described in paragraphs mentioning CW in SECTION 8 above. The documentation format shall be as described in SOW sections from 13.2 thru 13.9 including, as applicable.
- 13.4.3. The CW documentation shall address and present graphically, in narrative form and in relevant tables, matrixes, part lists and calculations requirements as stipulated in the EN Eurocodes and other listed below references (as applicable, including but not limited to):
- a. Basis of structural design (EN 1990)
 - b. Actions on structure (EN 1991)
 - c. The design of concrete (EN 1992), steel (EN 1993), composite steel and concrete (EN1994), timber (EN 1995), masonry (EN 1996) and aluminium (EN 1999) structures
 - d. Geotechnical design (EN 1997)
 - e. The design, assessment and retrofitting of structures for earthquake resistance (EN 1998)
 - f. Construction Products Directive (COUNCIL DIRECTIVE 89/106/EEC), particularly Essential Requirement 1 "Mechanical resistance and stability" and Essential Requirement 2 "Safety in case of fire"
 - g. ISO Standards pertaining technical, construction and building drawings including relevant installations
 - h. ISO standards pertaining technical product documentation and document management
 - i. IEC 60617 – Graphical symbols for use in electro-technical diagrammes
 - j. IEC 60417 – Graphical Symbols for Use on Equipment
 - k. ISO 6790 – Equipment for fire protection and firefighting -- Graphical symbols for fire protection plans – Specification

13.5. As-Built Drawings

- 13.5.1. As-Built Drawings (ABDs) shall be self-sufficient and independent of any other documents.
- 13.5.2. There shall be a master list of As-Built Drawings provided for each site respectively.
- 13.5.3. The master list of As-Built Drawings shall contain at the minimum the following information: site identification and the master list title, issue of the

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master list, and following data references for every listed drawing (ie.ordinal number, number, title, issue, and number of sheets).

- 13.5.4. The As-Built Drawings shall be compiled in a drawing package for each site respectively. The compilation shall be done against the ordinal numbers assigned to every drawing in the respective master list.
- 13.5.5. The title of each drawing and each master list plus all included text and annotations shall be in English (UK English).
- 13.5.6. The number and scale of each drawing (where applicable) shall be clearly indicated, in addition to the issue number of each drawing.
- 13.5.7. Definition(s) may be given on the drawing, if used, or on a summary sheet(s) at the front of the document.
- 13.5.8. All drawings shall be to a scale of not less than 1:50.
- 13.5.9. As-Built Drawings shall cover the following where necessary:
 - a. Floor and wall plans to include the physical details of all installed equipment, apparatus and devices, plus CW modifications and new structures implemented by the Contractor.
 - b. The physical details of all installed equipment, apparatus, devices etc., if not visibly depicted due to the original scale of the drawing, shall be presented in an appropriate scale to enable clear identification as to their type and function. If applicable, narrative description are to be inserted.
 - c. All plans and drawings necessary to represent antenna farms, antennas, masts, theirs foundations, associated cabling, ducting (with connections to equipment and devices provided as PFE), roads and other CW implemented by the Contractor in a correct and complete format.
 - d. Location plan with complete details of all cross-connection frames and patch panels.
 - e. A plan showing the descriptions of all grounding and earthing conductors, electrodes and joints and where they are connected to any existing earthing system.
 - f. Physical details of all cable racking and cable numbers and cable functions to include as appropriate all connections, connectors and sockets.
 - g. Details covering all wiring termination points including wire numbers and colour coding, if applicable.
 - h. Ancillary equipment details to include, as appropriate, connection points and termination points.

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- i. The functions of all inter-connecting cables, with their codes, colour code and the function of each separate conductor.
- j. Drawings showing only an axonometric view of any given piece of equipment are not acceptable. The drawings shall depict all the necessary interconnections, including an inside view of installed equipment and dimensions.

13.5.10. A Purchaser approved "As-Built Product Drawings and Associated Equipment List" will be the basis upon which acceptance of site(s) installation and integration will be gauged.

13.6. Format for As-Built Drawings

13.6.1. The As-Built Drawings (ABDs) shall be provided in electronic format (Autocat and PDF). Final versions of the ABDs shall be printed on no larger than A1 sized sheets of paper, if required by the Purchaser.

13.6.2. A consistent numbering system for the ABDs shall be adopted that reflects the Contract, project, system, assembly and/or sub-assembly and sequence number.

13.6.3. The scale of all ABDs shall be quoted where applicable.

13.6.4. The appropriate NATO security handling classification shall be on the top and bottom of each drawing. In addition, each drawing shall also contain the security classification in the identification block of the drawing which is required to be located in the lower right hand corner.

13.7. Delivery and Verification of As-Built Drawings per Site

13.7.1. Before the SSSB-POL system is tendered for PSA, the Contractor shall deliver two complete sets of marked-up ABD packs.

13.7.2. A joint review of the ABD documentation shall be conducted between the Purchaser, HN and the Contractor.

13.7.3. Upon completion of the review the Contractor shall edit, produce and deliver the required number of copies of the final Draft version four (4) weeks prior to conducting the formal PSA activities. The Final version of the ABD documentation shall be delivered at PSA.

13.7.4. If changes to previously delivered documents have to be made, the Contractor shall deliver replacement drawings/schematic diagrams and/or aperture cards as appropriate.

13.7.5. The Final version of the overall SSSB-POL level ABD documentation will be required to be delivered at PSA as specified in the SSS, to each SSSB-POL Radio Site.

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13.8. Logbooks per Site

- 13.8.1. From the start of each type of integration activity of the SSSB-POL system, the Contractor shall keep a logbook of all events concerning that system through to FSA.
- 13.8.2. In particular the logbook shall record all Contractor activity and equipment performance.
- 13.8.3. All equipment failures, or parts replacements, shall be documented in the logbook with a traceable means to determine reasons for failure of the specific (serial numbered) equipment.
- 13.8.4. The logbook shall be used as an input to assess the reliability of the equipment.
- 13.8.5. All logbooks shall be periodically countersigned by the Purchaser's representative and a copy handed over to the Purchaser during FSA.
- 13.8.6. The Contractor may retain the original logbook but is not to maintain a parallel equipment-related activity logbook or similar record for company use only.
- 13.8.7. The Purchaser reserves the right to review the logbook at any given time during the project implementation. The logbook is to be presented for review, either during site visits, or sent to the Purchaser via email as a scanned PDF copy.

13.9. Hard Copy Format

- 13.9.1. Technical Manuals (TM) shall be also issued in hard copy format
- 13.9.2. Two releases of TM shall be issued for each equipment with a draft version first followed by the final version.
- 13.9.3. The Contractor shall submit draft copies of each manual (as specified in SSS) to the Purchaser for review no later than two (2) months prior to the delivery of the SSSB-POL system at the first site location. Any resulting recommended changes, corrections and/or additions submitted by the Purchaser shall be incorporated into the requisite number of copies of the final versions. The Contractor shall submit the final versions of the manuals within the time frame as specified in the SSS.
- 13.9.4. The Contractor shall deliver the final accepted copies of each manual at the time of FSA for all subsequent systems.
- 13.9.5. The Contractor shall deliver hard copies of the SSSB-POL Operators' Manuals as specified in the SSS separately for each SSSB Site.

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13.10. Soft Copy Format

- 13.10.1. Soft copies of all documentation, produced and compiled by the Contractor, shall be delivered in CD-ROM or DVD format to the Purchaser and HN and shall be compatible with the latest versions of the Microsoft Office ® software suite to ensure compatibility with previous versions. Microsoft Project and Adobe Portable Document Format (PDF) documents are to follow the basic naming convention of [SSSB-POL]-[title]-[date"yyyy.mm.dd"]-[version]-[originator].
- 13.10.2. As-Built Drawings (ABDs) are required to be delivered in the software format, most typically AutoCAD, Visio and/or PDF formats.
- 13.10.3. The physical support of the electronic, optical or soft copies shall display the highest level of the NATO security handling classification of its contents.
- 13.10.4. The header and/or title of the directory structure of the documentation provided in soft copies shall bear a reminder of the highest NATO security handling classification level of its contents.
- 13.10.5. For ease of handling, NATO unclassified documentation shall be separated from NATO classified documentation and provided on a separate CD-ROM or DVD, whenever possible.
- 13.10.6. The Contractor shall deliver soft copies of the SSSB-POL Operators' Manuals as specified in the SSS separately for each SSSB Site.

13.11. Language

- 13.11.1. The Contractor shall provide all deliverable documentation in the English (UK English) language.
- 13.11.2. The Contractor shall provide documentation affecting safety hazard and health protection matters in both English and HN language (Polish).

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SECTION 14 TRAINING

14.1. Training Programme

- 14.1.1. The Contractor shall develop all hardware and software training, organise and conduct training courses and provide training support in order to enable the Purchaser/HN Personnel to test, operate and maintain the SSSB-POL system and its support equipment.
- 14.1.2. The Contractor shall conduct a training programme within his area of responsibility in order to provide the training material necessary to ensure the Purchaser's/HN's personnel gain the necessary skills and knowledge to operate, maintain and repair the respective SSSB-POL system/equipment.
- 14.1.3. For the training purposes, student groups shall include the personnel assigned for the following functions in the SSSB System, of which definitions and tasks are set forth in Annex A of this SOW:

<i>Student Groups</i>	<i>Personnel</i>
SSSB Test Personnel (FAT and RSAT)	HN and Purchaser Personnel (Test Witnesses)
SSSB Operators	HN Personnel (System Operators)
SSSB Maintainers	HN Personnel (System Technicians)

- 14.1.4. The training programme shall consist of the appropriate courses and course modules, supporting the required levels of knowledge and quantities of students to be trained. It is the sole responsibility of the Contractor to assure that all training, provided at the different levels outlined herebelow, allows for control, operation and maintenance of the SSSB system in accordance with the expected operational requirements and maintenance concept:

<i>Required level of knowledge:</i>	<i>Test Personnel</i>	<i>Operators</i>	<i>Maintainers</i>
SSSB System Functionality	Y	Y	Y

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<i>Required level of knowledge:</i>	<i>Test Personnel</i>	<i>Operators</i>	<i>Maintainers</i>
SSSB System and Radio Maintenance	N	N	Y
SSSB System Operations	N	Y	N

<i>Total Students to be trained</i>	<i>Host Nation</i>	<i>Purchaser</i>
Instructors for Operator training	2	-
Instructors for Maintenance training	2	-
Test personnel	3	3
Operators	8	-
Maintainers	4	-

14.1.5. As a general rule, all Instructors (Instructors for Operator training, and Instructors for Maintenance training) participate in the normal training courses. In addition, the Instructors for Operators are expected to be System Administrators.

14.2. Training Requirements Analysis (TRA)

14.2.1. The Contractor shall complete Training Requirements Analysis (TRA) to determine the gap between the current and expected knowledge/qualifications of the nominated trainees for all courses except training for test personnel.

14.2.2. The TRA shall be conducted to identify the differences between the trainee's current skills and those required to operate and maintain the SSSB-POL system.

14.2.3. The TRA shall be based on a questionnaire submitted to the trainees by the Contractor.

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14.3. Training Plan

- 14.3.1. The Contractor shall develop a Training Plan based on the TRA. In addition, the Training Plan shall provide detailed proposals for all Contractor-provided training, including syllabuses, schedules, student prerequisites, evaluations and instructors. The Contractor's proposed format may be acceptable subject to approval by the Purchaser.
- 14.3.2. The Training Plan shall contain a training schedule that shall be in the form of a course block time table, showing the sequence of periods of instruction.
- 14.3.3. Each block shall show the lesson title and its assignment as: classroom, hands-on equipment and/or testing.
- 14.3.4. The Training Plan shall furthermore contain a course syllabus providing the following information:
 - a. Course title;
 - b. Security classification;
 - c. Total duration in hours;
 - d. Course objectives;
 - e. General course information;
 - f. Training equipment or special equipment/tools requirements including those support equipment to be provided by the HN (e.g. VGA projector and screen, white board, copy machine, etc.);
 - g. Maximum number of student working positions;
 - h. Classroom requirements.
- 14.3.5. The Training Plan shall provide information on the training to be provided to HN personnel. The training plan shall identify appropriate courses or course modules necessary to provide initial training for all initial site personnel and to meet specific training requirements to test personnel, HN instructors and software support site personnel. The Contractor will be required, if feasible, to consolidate instructors from all sites onto a single set of courses and provide options to consolidate system managers training. The Plan shall include the following information for each course:
 - a. Course description. This shall be a narrative explanation of the subject matter of the specific course. The course format, objectives, and training materials shall be described in sufficient detail to ensure the students will receive the required level of training. A proposed syllabus shall be included detailing the subject matter to be covered. Any breakdown into modules shall be described in detail.
 - b. Student prerequisites (if required).
 - c. Course length (including time devoted to each area of the course).

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- d. Method of presentation for each element of the syllabus (showing a breakdown of methods, i.e. lecture, demonstration, hands-on and directed study, etc.).
 - e. Method of evaluation. Establish minimum acceptable written and performance standards and a method of evaluation of directed study. A plan shall be included to verify that each student achieved at least the minimum course objectives through written and performance tests.
 - f. List of training materiel and training equipment required (Contractor-provided documents or materiel shall be included). This shall include the appropriate standards for electronic data.
 - g. Description of the minimum training equipment capability requirements together with the logistic support requirements associated with use of the training equipment.
 - h. Recommended maximum size of course. Recommended location of training and type of facility required (classrooms, auditorium, facilities, etc.).
 - i. List of measurable objectives (tasks) required by graduates to demonstrate successful completion of course.
 - j. Proposed training course schedules.
 - k. Inter-dependencies with other related programme milestones and to the test and evaluation schedules.
 - l. Number of hours of hands-on training to be provided to each student
- 14.3.6. Where commercial courses are proposed, the Training Plan shall include as much of the information required in previous paragraphs, together with a justification for the use of commercial courses.
- 14.3.7. In addition to the required information for each course, the Training Plan shall include the proposed training schedule for each site, indicating the courses or modules required for each trainee and optimising the trainees' learning and attendance requirements. The Plan shall also show the overall training schedule, and demonstrate that sufficient resources and redundancy (such as instructors, training facilities and training equipment) will be provided for each course.
- 14.3.8. The Training Plan shall contain the Curriculum Vitae (CV) of each proposed instructor.
- 14.3.9. The Final version of the Training Plan, as accepted by the Purchaser, shall be delivered at least one (1) month before start of any training, and shall be the official document against which the Contractor is expected to conduct the training.

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14.4. Training Courses

14.4.1. Training for Test Personnel:

- a. The test personnel are personnel designated by the HN or Purchaser.
- b. The Contractor shall provide training for the HN/Purchaser test personnel that will participate in the test and evaluation activities. The Contractor shall provide specific training for test personnel immediately before the start of tests (FAT and RSAT, see SOW SECTION 10). The training for test personnel shall cover test methods, test procedures and test equipment used during acceptance tests. This training shall provide the trainees with the skills needed to use the appropriate tools in all the tests involving Purchaser participation.
- c. Exact dates for the courses shall be mutually agreed by the parties and shall be consistent with the requirements for conducting tests as required either during the FAT, and RSAT.

14.4.2. Training for Operators:

- a. The Contractor shall conduct training for the SSSB Operator personnel. The related training material shall be delivered in accordance with the SSS of the SSSB-POL project.
- b. The training shall cover all aspects required to configure and operate radio communication equipment and software functionality within the SSSB System and any of its sub-systems. It shall include as necessary control aspects for all operational features of hardware, firmware and software of the system.
- c. After training, the Operators shall be able to operate the SSSB system at their locations within the HN.
- d. The Contractor is to recommend the number of courses required to be held for training of operator personnel. All training shall be held at locations within the HN as agreed with the Purchaser.
- e. Exact dates for the courses shall be mutually agreed by the parties and shall be consistent with the requirements of the SSS.

14.4.3. Training for Maintainers:

- a. The Contractor shall conduct training for the SSSB Maintenance personnel. The related training material shall be delivered in accordance with the SSS of the SSSB-POL project.
- b. The training shall cover all aspects required to configure, maintain and troubleshoot the system and any of its sub-systems. It shall include as necessary control aspects for all hardware, firmware and software maintenance aspects.

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- c. After the training, the maintainers shall be able to configure, maintain and troubleshoot the respective hardware, firmware and software of the system at the locations within the HN.
 - d. The Contractor is to recommend the number of courses required to be held for training of operator personnel. All training shall be held at locations within the HN as agreed with the Purchaser.
 - e. Exact dates for the courses shall be mutually agreed by the parties and shall be consistent with the requirements of the SSS.
- 14.4.4. HN will provide the necessary facilities (i.e. training room) and support equipment for training (i.e. a VGA Projector and screen, white board with white board markers and the availability of a photo copier machine) as stated in the approved Training Plan.

14.5. Instructor Training (Train the Trainer)

- 14.5.1. Instructors will be personnel designated by the HN.
- 14.5.2. For each course provided for Operators and Maintainers, the Contractor shall also provide equivalent training for Instructors designated by the HN. Additional course modules shall provide instructors with the necessary knowledge and skills to maintain the training material, and any updates to such material as provided by the Contractor.
- 14.5.3. The training shall cover all aspects required to operate and maintain the SSSB System.
- 14.5.4. The training shall include all the required control aspects as well as all operational, hardware and software maintenance aspects.
- 14.5.5. The Contractor shall certify that, after the training, instructors are able to perform the Operators and Maintainers training courses for personnel.

14.6. Duration and Schedule of Training courses

- 14.6.1. For all training courses, the Contractor shall recommend the course length in the submitted Training Plan which will be subject to Purchaser approval and acceptance.
- 14.6.2. The Contractor shall assume that the daily course instruction shall not exceed six (6) hours per day.
- 14.6.3. Courses shall only to be scheduled on normal working days and not on weekend or public holidays.

14.7. HN Personnel Qualifications

- 14.7.1. The HN Personnel will have the following qualifications:

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- a. Operators will have or will acquire knowledge of specific operating systems and tools (as required).
 - b. Maintainers will have or will acquire knowledge of digital Radio technology.
 - c. System Administrators will have or will acquire knowledge of specific Operating Systems and servers and will also be instructed in digital radio and transmission techniques.
- 14.7.2. It is the responsibility of the HN to assure that the students meet the requirements for training attendance.
- 14.7.3. The training for HN personnel shall be developed on the assumption that they are military operators with a minimum electronics and/or IT background.

14.8. Language Qualifications

- 14.8.1. It will be assumed that HN personnel selected to attend the courses will meet the minimum Standardised Language Proficiency (SLP) of 2222 in English corresponding to NATO STANAG 6001.

14.9. Contractor Instructors

- 14.9.1. The qualification of the Contractor Instructors shall be addressed separately from the confirmatory terms. Contractor Instructors shall be certified engineer/technicians, and thoroughly familiar with the subject matter. They shall have proven experience in preparing and conducting training. Experience of the selected Instructors shall be proven within the provided CVs, as per para. 14.3.11 above.
- 14.9.2. The Instructors shall meet a minimum of SLP 4444 in English corresponding to the NATO STANAG 6001. Because the students will be HN personnel, the Instructor shall be obliged to use easily understandable English.
- 14.9.3. All instructors shall have a security clearance of "NATO SECRET".

14.10. Training Documentation

- 14.10.1. The Contractor shall prepare and submit to the Purchaser in advance all material that will be used for the training. The Purchaser-approved training material shall be available before the courses start.
- 14.10.2. Training material is to be designed and developed in such a way to be suitable for use during the Contractor-conducted training and for the training of all categories of future replacement personnel by HN Instructors.
- 14.10.3. The package shall include the following capabilities as a minimum:
- a. Definition of the final training objectives;

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- b. Emulation of real equipment behaviour;
 - c. Choice between mandatory and optional lessons, steps and points as determined by course entrance tests;
 - d. Topics to be covered for each lesson, step and point;
 - e. For each topic, video clips, animation, still photos and tests as necessary for the full explanation of the topic;
 - f. Exercises for every lesson;
 - g. Test at the end of every lesson;
 - h. Results of the tests per lesson and per course;
 - i. Evaluation of the quality of the course by relating the test results to the course objectives through cumulative statistical analysis.
- 14.10.4. The Contractor shall make maximum use of available technical manuals for the preparation of training material.
- 14.10.5. Training material shall not duplicate any information readily available in other documents unless justified by specific training needs and shall adhere to documentation standards set out in SOW SECTION 13 above.
- 14.10.6. Training documentation will provide the minimum documentation required to conduct and maintain the training programme. Training documentation includes data in electronic media and hardcopy form, as appropriate.
- 14.10.7. The Contractor shall provide training handbooks for each training course.
- 14.10.8. The training handbook shall be used as the student's main working document.
- 14.10.9. The training handbook shall provide the student with the necessary information on all lesson objectives and contents, guidance for all course learning activities and cross-references to assist the students in achieving the course objectives.
- 14.10.10. An instructor guide shall be a complement to the training handbook.
- 14.10.11. The instructor guide shall contain all the necessary information to prepare, conduct and evaluate lessons, exercises and examinations. This shall include fault-finding or fault-isolation exercises and classroom or practical examinations with the associated answers.
- 14.10.12. The documentation shall contain sufficient instructions to guide students through all specified training. Existing manufacturer's training and service manuals, preferably in electronic format, can be used in so far as they meet the specified course requirements. The training documentation should be for students with the pre-requisite knowledge on similar equipment or relevant theory, use of general electronic test equipment and a basic knowledge of hand tools. Training documentation stored in an electronic database shall meet the requirements set forth in the Contract SOW and Procurement

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Specification(s), ensuring that the areas discussed below are accessible and completely detailed. Instructions shall be provided on how to electronically access database information.

- 14.10.13. Format: The Contractor's format will be accepted subject to Purchaser approval. The material for each course or module shall include a table of contents. This shall include a listing of all major subjects and the page number or image on which they appear, or instructions on how to electronically access the data.
- 14.10.14. For each course, the training documentation shall consist of course documentation for trainees and instructor material to support a training programme. The training documentation shall cover, as a minimum, all the topics identified in the course syllabuses included in the Training Plan.
- 14.10.15. All training material prepared and delivered under this Contract shall be subject to review and approval by the Purchaser.
- 14.10.16. The Contractor shall deliver the following documentation for each type of training to the Purchaser in advance and with sufficient time for review. This will allow for coordination and negotiation of any necessary changes in the early stages of development of the material:
 - a. A representative lesson plan from each of the proposed training handbooks;
 - b. The corresponding sections from the Instructor Guide;
 - c. Any proposed teaching aids.
- 14.10.17. The Contractor shall subsequently submit two complete sets of Draft training material within two (2) months of the start of the first training course to permit the Purchaser to review.
- 14.10.18. The Purchaser will review the material for not more than one (1) calendar month to complete and will provide to the Contractor comments and requests for amendments as appropriate.
- 14.10.19. The Contractor shall deliver the final version of the training material to the Purchaser not later than two (2) weeks prior to the start of the first training course.
- 14.10.20. The course material shall be designed to guide the students in obtaining the required skills through the training programme. The course material shall provide adequate information about the sections listed below. Relevant sections shall include a number of exercises to evaluate student understanding of information provided in that section. Each section may refer the student to other supplementary written and/or audio-visual material (e.g. charts, CD/DVD material, video, or other commercially available electronic media), which shall be included in the training package. Course material shall include the following sections, as appropriate.

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- a. Required Material. Data indicating all equipment and material required by the student, including test equipment, audio-visual material, tools, and supplies.
- b. General information about the system, software or equipment for which the training will be carried out.
- c. Installation and preparation instructions.
- d. Operating information, covering all personnel who interface with the system concerned, during all phases of its use.
- e. Technical description.
- f. Hardware Maintenance, covering routine inspections and adjustments, preventive maintenance and corrective maintenance (troubleshooting and repair) at relevant maintenance levels.
- g. Software Maintenance covering system recovery following software problems on-site and in-depth adaptive, perfective and corrective software maintenance at the responsible support site.
- h. System Management, including the system manager functions and all other specialised areas, such as security, database, network and communications management.
- i. Reference data.

14.10.21. Instructor Material: Guidance for Instructors shall be provided. The guidance shall include:

- a. Student exercises including all answers and other marking guidance.
- b. Descriptions of points where instructor involvement, observation, or action is necessary or recommended to ensure safety or verify student performance.
- c. Instructional system, module and equipment malfunctions to be introduced by the instructor and diagnosed and repaired by the student. A minimum of five (5) malfunctions is required for each separately identifiable system, module or circuit. The malfunctions should approximate as nearly as possible, problems likely to occur, and may consist of a combination of system maladjustments and bad components. The list of malfunctions are to include but not be limited to:
 - i. Actions required by instructors to install malfunctions and are to include exact components or modules to be replaced or adjusted.
 - ii. Description of symptoms caused by malfunctions.

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- iii. Test equipment and tools required to detect and isolate the malfunction, or procedures required to recover software functionality.
- iv. Suggested allowable time for students to diagnose malfunctions.

14.11. Trainer Presentation

- 14.11.1. The Contractor will be prepared to provide demonstration lessons, randomly selected by the Purchaser in order to provide evidence of the preparedness of the lessons and capabilities of the instructor.
- 14.11.2. The Purchaser can require this demonstration at a mutually agreed time and location prior to the commencement of any formal training.

14.12. Quantities

- 14.12.1. The Contractor is to deliver the following quantities of training documentation for each type of training. This is in supplement to what needs to be provided for each student (E= Electronic, P=Printed Version):

<i>Type</i>	<i>Draft Qty</i>	<i>Final Qty</i>
Instructor guide	2 E	1 E + 8 P
Student handbook	2 E	1 E + 8 P
Instructor guide for Train the Trainer	2 E	1 E + 8 P
Student handbook for Train the Trainer	2 E	1 E + 8 P

- 14.12.2. An additional copy of each type of training documentation is also to be provided in accordance with the provisions stated in SOW paragraph 13.12 above.

14.13. Training Management

- 14.13.1. At least two calendar weeks prior to the start of a course the Contractor is to provide a written certification that all required/agreed training staff, facilities, equipment and other resources are ready for the conduct of the training.
- 14.13.2. The Contractor is to submit to the Purchaser a course report written within two weeks after completion of the course. This report shall contain:
 - a. Course designator.
 - b. Course start date.
 - c. Course Completion date.
 - d. Names of attending students.
 - e. Student attendance and performance record.

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- f. Individual test results.
 - g. Student course critique.
 - h. Actions taken or recommended.
 - i. Problems encountered (if any).
- 14.13.3. The performance record is to be based on the results of regular test(s) performed by the trainees during/after the training lessons to evaluate their understanding of the taught subject matter.
- 14.13.4. The Contractor shall provide each graduate at the end of the courses with a personal certificate. One copy of each certificate is to be submitted to the Purchaser.
- 14.13.5. The Contractor is not to release students from the course without the prior approval of the HN's or Purchaser's representative.
- 14.13.6. The Contractor will accept that the Purchaser can nominate up to two (2) members of the Project Team, NCI Agency or HN, to attend each course in a monitoring role; such attendees will be in addition to the planned course size.
- 14.13.7. The training is to be assessed through threshold knowledge test(s) for nominated personal. If the total test results represent 50%, or more fail results, the Contractor is to report that fact to the Purchaser and HN and repeat the concerned lecture(s) at no additional costs.

14.14. Trainee and Training Course Completion Report and Certificates Of Training

- 14.14.1. Description Purpose: the Trainee and Training Course Completion Report provides the results and evaluation of training for presentation of each course carried out. Certificates of Training will be provided for each Trainee who completes the course satisfactorily.
- 14.14.2. Source documents: the applicable issue details of documents cited herein, including their approval dates and dates of any applicable amendments, notices and revisions are to be as specified in the Contract.
- 14.14.3. Format: The format of the completion report shall use Appendix C of MIL-STD-1379 as guidance.
- 14.14.4. Content: The Completion Report and Certificates of Training shall contain the following:
- 14.14.5. Front matter: Content of the front matter shall use Appendix C of MIL-STD-1379 as guidance.
- 14.14.6. Evaluation of Training: the Evaluation of Training shall consist of the following:

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- a. Name of Contractor. The name of Contractor shall be the complete name of the Contractor or sub-contractor conducting the course.
- b. Instructor in charge.
- c. Course information consisting of:
 - i. Course title.
 - ii. Location of the course.
 - iii. Duration and dates of the course.
 - iv. Course aims and objectives.
 - v. System/equipment/software covered by the course.
 - vi. Grading system for the course (e.g. pass levels, distinction levels).
 - vii. Total number of trainees.
 - viii. Number of trainees achieving each grade
- d. Trainee's information consisting of:
 - i. Name of each Trainee.
 - ii. Rank/grade of each Trainee.
 - iii. Branch of service/agency and parent unit of each Trainee.
 - iv. Attendance information for each Trainee.
 - v. Individual and cumulative total grade in quantitative terms for each Trainee.
 - vi. Instructor's evaluation of each Trainee.
 - vii. Any specific certification required following training (e.g. for test operators).
- e. Instructor evaluation of training consisting of:
 - i. Considerations regarding course material, course presentation, value of training aids, tools and equipment, remarks and recommendations of overall course.

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- ii. All problems encountered during the conduct of the course, such as students without agreed pre-requisites, deficient subject coverage, equipment failures and documentation deficiencies. Recommendations for any supplemental training that may be required shall also be included.
- f. A Certificate of Training shall be completed for each trainee who satisfactorily completes the course. The certificate shall contain, as a minimum, the following:
- i. Name of organisation conducting the training;
 - ii. Title of the course;
 - iii. Subject matter, if not apparent from the course content;
 - iv. Location where the course took place;
 - v. Dates of the course;
 - vi. Rank/grade of trainee;
 - vii. Parent unit of trainee;
 - viii. Statement of satisfactory (or better) completion of the course;
 - ix. Any specific certification resulting from the course;
 - x. Signature and name of responsible training officer.

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SECTION 15 ABBREVIATIONS

15.1. List of Abbreviations used in this SOW

A

"	inch
A/C	Analysis/Certication
ABD	As-Built Drawing
ACCS	Air Command and Control System
ACE	Allied Command Europe
ACMP	Allied Configuration Management Publication
ACP	Allied Communication Publishing
AD	Air Defence
ADLT	Average Delivery Lead Time
ADP	Automatic Data Processing
AECTP	Allied Environmental Conditions Testing Publication
AEW	Airborne Early Warning
AF&AD	Air Force and Air Defence
AFPL	Approved Fielded Products List
AI	Action Item
Ai	Inherent Availability
AIS	Automatic Identification System
ALDT	Administrative Logistics Delay Time
AMD	Amendment
AMDC2	Air and Missile Defense Command and Control
AMSG	Allied Military Security Guidelines
ANSI	American National Standards Institute
AOB	Any Other Business
AOR	Area of Responsibility
AP	Attaching Part
API	Application Programming Interface
AQAP	Allied Qiality Assurance Publication.
ASL	Above Sea Level
ATDS	Airborne Tactical Data System
ATE	Automatic Test Equipment
ATO	Approval To Operate
AWACS	Airborne Warning and Control system

B

BCC	Buffer Control Centre
BCST	Broadcast
BER	Bit Error Rate

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BIT	Built-In Test
BITE	Built-In Test Equipment
BLOS	Beyond Line-Of-Sight
BOD	Beneficial Occupancy Date
BOS	Buffer Operational Server
BSCC	Buffer System Control Centre
C	
C[G]	Generic Consumables
C[NT]	Non-Technical Consumables
C[T]	Technical Consumables
C2	Command and Control
CALS	Computer-aided Acquisition and Logistic Support
CAOC	Combined Air Operation Centre
CAT	Computer Aided/Assisted Training
CC	Configuration Control
CCA	Circuit Card Assemblies
CCTV	Closed Circuit Television
CDO	Closed Door Operations
CDR	Critical Design Review
CDRL	Contract Data Requirements List
CD-ROM	Compact Disc Read Only Memory
CE	Compromising Emanations
CEE	Central and Eastern Europe
CENELEC	European Committee for Electro-technical Standardization
CFE	Contractor Furnished Equipment
CHT	Common Hand Tool
CI	Configuration Item
CID	Configuration Identification and Documentation
CIS	Communications and Information Systems
CISS	Communication Interface and Switching System
CLC	CENELEC (in document references)
CLD	Central Logistics Depot
CLEW	Conventional Link Eleven Waveform
CLIN	Contract Line Item Number
CLS	Contractor Logistics Support
CM	Configuration Management
CMP	Configuration Management Plan
CO	Contracting Officer
CoC	Certificate of Conformity
COMSEC	Communication Security
COTS	Commercial Off-The-Shelf
CP	Capability Package

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CRC	Control and Reporting Centre
CSA	Configuration Status Accounting
CSCI	CS Configuration Item
CSDB	Common Source DataBase
CSE	Common Support Equipment
CSI	CRC System Interface
CSR	Configuration Status Report
CUN	Common User Network
CV	Curriculum Vitae
CW	Civil Works
D	
DDS	Detailed Design Specifications
DEX	Data Exchange Set
DHS	Delivery of Hardware on Site
DLE	Data Link Equipment
DLOS	Direct Line-Of-Sight
DM	Data Module
DMS	Diminishing Manufacturing Source
DRACAS	Data Reporting Analysis and Corrective Action System
DRD	Design Requirements Document
DREM	Distant REMote
DSA	Designated Security Authority
DSL	Digital Subscriber Line
DTE	Data Terminal Equipment
DTS	Data Terminal Set
DVD	Digital Versatile Disc
E	
E&M	RecEive and transMit (Ear and Mouth)
EC	European Community
ECIA	Electronic Components Industry Association
ECP	Engineering Change Proposal
EDC	Effective Date of Contract
EDCN	Equipment Design Change Notice
EDCN	Equipment Design Change Notice
EE	Environmental Engineering
EEA	European Economic Area
EEC	European Economic Community
EIA	Electronic Industries Alliance
EMC	ElectroMagnetic Compatibility
EMI	Electromagnetic Interference
EMI/EMC	Electromagnetic Interference and Compatibility
EN	European Norm

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EOD	Explosive Ordnance Disposal
EP	Electronic Portion
EPDP	Electrical Power Distribution Panels
ETSI	European Telecommunications Standards Institute
EU	European Union
F	
FAT	Factory Acceptance Test
FCA	Functional Configuration Audit
FDDI	Fiber Distributed Data Interface
FES	Fire Extinguishing System
FIP	Fleet Interface Point
FIS	Facility Security Clearance Information Sheet
FM	Frequency Modulation
FOCIS	Fiber Optic Connector Intermateability Standard
FRACAS	Fairure Reporting Analysis and Corrective Action System
FSA	Final System Acceptance
FSAR	Final System Acceptance Report
FSC	Facility Security Clearance
G	
GMT	Greenwich Mean Time
GPS	Global Positioning System
GQAA	Government Quality Assurance Authority
GRP	Glass-Reinforced Plastic
GSM	Global System for Mobile Communications
H	
H&S	Health and Safety
HCDR	High Capacity Data Radio
HF	High Frequency
HL	Hardware Maintenance Level
HMI	Human Machine Interface
HN	Host Nation
HN POL	Host Nation Poland
HQ	Head Quarters
hrs	hours
HVAC	Heating, Ventilating and Air Conditioning
HW	Hardware
I	
IAW	In Accordance With
ICAO	International Civil Aviation Organization
ICB	International Competitive Bidding
ICC	Integrated Command and Control
ICD	Interface Control Document

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IDU	In-Door Unit
IEC	International Electrotechnical Commission
IECEE	IEC system of conformity assessment schemes for Electro-technical Equipment and components
IEEE	Institute of Electrical and Electronics Engineers
IEP	Installation Engineering Plan
IETF	Internet Engineering Task Force
IETM	Interactive Electronic Technical Manual
IETP	Interactive Electronic Technical Publications
IFB	Invitation for Bid
II	Insurance Item
ILS	Integrated Logistics Support
ILSP	Integrated Logistics Support Plan
IMA	Issue Management
IMA	Inverse Multiplexing for ATM
IMT	Industry Maintenance Task
INFOSEC	Information Security
IP	Ingress Protection
IP	Internet Protocol
IPS	Ionospheric Prediction Software
IREM	Intermediate REMote
IRS	Interface Requirements Specification
IS	Inspectable Space
ISB	Independent Side Band
ISO	International Organization for Standardization
IT	Information Technology
ITU	International Telecommunication Union
ITU-R	ITU Radiocommunication Sector
ITU-T	ITU Telecommunication Sector
J	
JREAP	Joint Range Extension Application Protocol
JW	Jednostka Wojskowa (Military Site ID)
K	
KOM	Kick-Off Meeting
L	
LAN	Local Area Network
LC	Limited Competition
LCD	Liquid Crystal Display
LED	Light Emitting Diode
LL	Limited Life
LLC	Low-Level Controller
LORA	Level of Repair Analysis
LOS	Line-of-Sight

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LPS	Lightning Protection System
LRU	Line Replaceable Unit
LS	Statistical Life
LSA	Logistic Support Analysis
LSAR	Logistic Support Analysis Report
LSB	Lower Side Band
LSF	Low Smoke and Fume
LSZH	Low Smoke Zero Halogen
LT	Low Tension
M	
m/s	meter per second
MASE	Multi Aegis Site Emulator
Mbps	Megabit per second (Mbit/s)
M-BSSC	Main Buffer System Control Centre
MDF	Main Distribution Frame
MDI	Media Dependent Interface
MF	Medium Frequency
MFL	Multi Frequency Link
MIL	Military
MIL-STD	Military Standard
MMR	Minimum Military Requirement
MOC	Maritime Operations Center
MOD	Ministry of Defence
MoM	Minutes of Meeting
MPDB	Main Power Distribution Board
MPDP	Main Power Distribution Panel
MPS	Message Processing System
MRL	Maritime Rear Link
MS	Microsoft ®
MSI	Maintenance Significant Item
MTA	Maintenance Task Analysis
MTBCF	Mean Time Between Critical Failures
MTBF	Mean Time Between Failures
MTTR	Mean Time to Repair
MTTRS	Mean Time To Restore the System
N	
NA	Not Applicable
NADGE	NATO Air Defence Ground Environment
NAE	NATO Airworthiness Executive
NAEW	NATO Airborne Early Warning
NAMSA	NATO Maintenance and Supply Agency
NATINAMDS	NATO Integrated Air and Missile Defense System

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NATO	North Atlantic Treaty Organization
NAVAIR	U.S. NAVal AIR systems Command
NAVSEA	U.S. NAVal SEA systems Command
NB	No Break
NC	NATO CONFIDENTIAL
NCB	National Competitive Bidding
NCI Agency	NATO Communications and Information Agency
NDN	National Defence Network
NFPA	National Fire Protection Association
NGCS	NATO General Communication System
NICE	NATO Internet Crypto Equipment
NILE	NATO Improved Link Eleven
NLM	NATO Level of Maintenance
NLT	Not Later Than
NM	Nautical Mile(s)
NMT	NATO Maintenance Task
NPA/NPO	NATO Programme/Project Agency Office
NQAR	National Quality Assurance Representative
NR	NATO RESTRICTED
NS	NATO SECRET
NSA	NATO Standardization Agency
NSA	National Security Authority
NSA/DSA:	National Security Authority/Designated Security Authority
NSN	NATO Stock Number
NSWAN	NATO SECRET Wide Area Network
NTDS	Naval Tactical Data System
NU	NATO UNCLASSIFIED
O	
O&M	Operation and Maintenance
ODU	Out-Door Unit
OEM	Original Equipment Manufacturer
OEP	Operational Evaluation Period
OJT	On-the-Job Training
ORLA	Optimum Repair Level Analysis
OSCC	Open System Communication Control
OTS	Off The Shelf
OU	Operating Unit
P	
PABX	Private Automatic Branch eXchange
PAI	Preliminary Acceptance Inspection
PB	Performance Based
PB	Project Board

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PBL	Performance Based Contractor Logistic Support
PCM	Pulse Code Modulation
PCR	Project Checkpoint Report
PDF	Portable Document Format
PDH	Plesiochronous Digital Hierarchy
PDR	Preliminary Design Review
PDS	Post Design Services
PEL	Permissible Exposure Level
PEP	Peak Envelope Power
PERT	Programme Evaluation Review Technique
PFE	Purchaser Furnished Equipment
PFPP	Purchaser Furnished Property
PHST	Packaging, Handling, Storage and Transportation
PIP	Project Implementation Plan
PM	Project Manager
PMCP	Project Management and Control Plan
PMS	Project Master Schedule
POC	Point Of Contact
POL	Poland
POMP	Parts Obsolescence Management Plan
POTS	Plain Old Telephone Service
PPM	Progress Progress Meeting
PPR	Project Progress Report
PSA	Provisional System Acceptance
PSAR	Provisional System Acceptance Report
PSC	Personel Security Clearance
PSI	Project Security Instructions
PSS	Power Supply System
PSTN	Public Switching Telephone Network
PTO	Project Team Organisation
PTP	Precision Time Protocol
PTT	Push-To-Talk
PWBS	Project Work Breakdown Structure
Q	
QA	Quality Assurance
QAM	Quadrature Amplitude Modulation
QAR	QA Representative
QC	Quality Control
QoS	Quality of Service
QPSK	Quadrature Phase-Shift Keying
Qty	Quantity
R	

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RADAR	Radio Detection and Ranging
RAM	Reliability, Availability and Maintainability
RAMP	Risk Assessment and Management Plan
RAMT	Reliability, Availability, Maintainability and Testability
RAR	Requirements Analysis Report
RBD	Reliability Block Diagramme
R-BSCC	Remote Buffer System Control Centre
RCD	Residual Current Device
RCIL	Recommended Consumable Items List
RF	Radio Frequency
RFC	Request For Comments
RFP	Request For Proposals
RFV	Request For Visit
RMC	Radio Management Console
RMS	Round Mean Square
RMS	Radio Management System
RMSS	Radio Management Sub-System
RoIP	Radio over IP
RON	Repair On Need
RRS	Receiver Radio Site
RS	Radio Site
RSAT	Radio Site Acceptance Test
RSPL	Recommended Spare Parts List
RTTL	Recommended Tools and Test Equipment List
RX	Receiver
S	
SAA	Security Accreditation Authority
SAASM	Selective Availability Anti-spoofing Module
SAP	Security Accreditation Plan
SASP	Security Accreditation Support Package
SAT	System Acceptance Test
SB	Short Break
SBC	Single Board Computer
SDH	Synchronous Digital Hierarchy
SDIP	SECAN Doctrine Information and Publication
SEC	Security Evaluation and Certification
SECAN	NATO Security and Evaluation Agency
SEDP	System Engineering and Design Plan
SHEF	Safety, Health, Environmental and Fire
SIMPLE	Standard Interface for Multiple Platform Link Evaluation
SINAD	Signal to Noise And Distortion
SINCGARS	SINCG Channel Ground and Airborne Radio System

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SIS	Site Installation Specifications
SITP	Site Installation Transition Plan
SKW	Śłużba Kontrwywiadu Wojskowego (Polish Military Counter Intelligence Agency)
SL	Software Maintenance Level
SLEW	Single Tone Link Eleven Waveform
SLP	Standardised Language Proficiency
SM	Security Management
SNR	Signal to Noise Ratio
SNS	Standard Numbering System
SOC	Sector Operation Center
SOI	Start Of Installation
SOW	Statement Of Work
SPC	Signal Processing Controller
SPDCN	Spare Parts Design Change Notice
SPDCN	Spare Parts Design Change Notice
SPDP	Site Preparation Data Package
SRR	System Requirements Review
SRS	System Requirement Specifications
SRU	Shop Replaceable Unit
SSB	Single Side Band
SSEP	System Safety Engineering Plan
SSR	Site Survey Report
SSS	Schedule of Supplies and Services
SSS	SPC Serial Splitter
SSSB	Ship Shore Ship Buffer
STANAG	Standardization Agreement
STE	Special Test Equipment
STEP	Security Test and Evaluation Plan
SW	Software
SWA	Application Software
SWO	Software Operating System
T	
T&E	Test and Evaluation
TADIL	Tactical Digital Information Link
TAT	Turn Around Time
TBCE	Type "B" Cost Estimate
TCCR	Test Cases Cross Reference
TDL	Tactical Data Link
TDM	Time Division Multiplex
TDP	Technical Data Package
TDS	Tactical Data System
TDS	Test Data Sheet

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TEP	Test and Evaluation Plan
THN	Territorial Host Nation
TIA	Telecommunications Industry Association
TM	Technical Manual
TOD	Time of Day
TPDP	Technical Publications Development Plan
TR	Technical Report
TRA	Technical Requirement Analysis
TRR	Test Readiness Review
TRX	Transceiver
TTE	Tools and Test Equipment
TX	Transmitter
U	
UCCI	Universal Communication Controller Improved
UHF	Ultra High Frequency
UPS	Uninterruptible Power Supply
USB	Upper Side Band
USB	Universal Serial Bus
UT	Universal Time
UTP	Unshielded Twisted Pair
V	
VLI	Versatile Link Interface
VoIP	Voice over IP
VSWR	Voltage Standing Wave Ratio
W	
WAN	Wide Area Network
WBS	Work Breakdown Structure
WSG	Writing Style Guide
X	
Y	
Z	

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BOOK II

PART IV – STATEMENT OF WORK

SOW - ANNEX A

SYSTEM REQUIREMENT SPECIFICATIONS (SRS)

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SECTION 1 Introduction

1.1 Overview

1.1.1 The Ship-Shore-Ship-Buffer (SSSB) system is a real-time digital link buffer system supporting the exchange of tactical information between the NATO Air Defence Ground Environment (NADGE) system, Airborne Early Warning (AEW) systems and Naval Forces through the use of NATO data Link-1, Link-11, Link-11B and Link-22. This is illustrated in Figure 1:

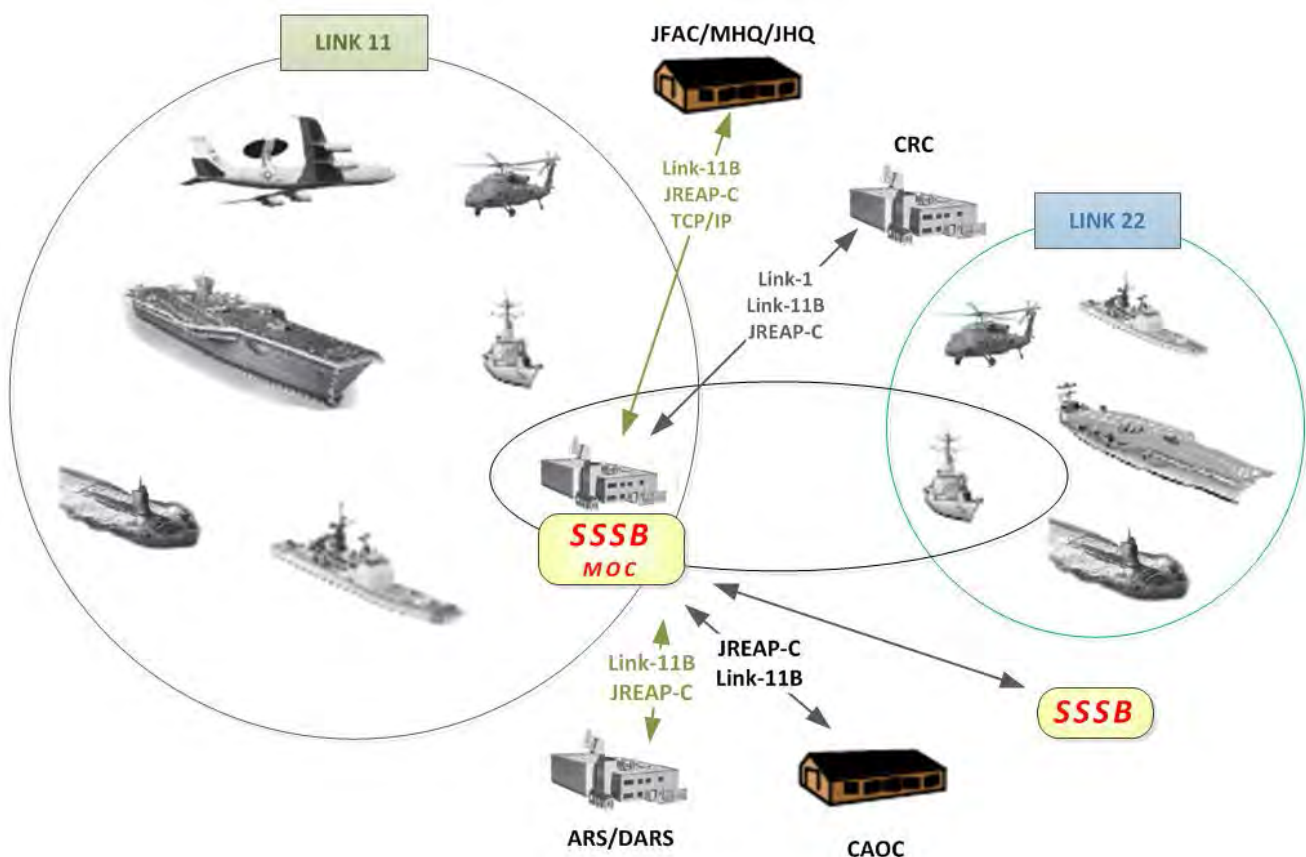


Figure 1: Tactical data exchange layout.

- 1.1.2 The SSSB system is organised in three sub-systems, see Figure 2:
- a. Radio Network Communication: Provided by several radio sites.
 - b. Command and Control:

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- i. Tactical Data Link Processing and Presentation, provided at the main and remote SSSB Control Centre.
 - ii. Distributed Control and Management of the communication equipment, provided at all sites.
- c. Signals Transport: Transport of digital and analogue signals between the sites.

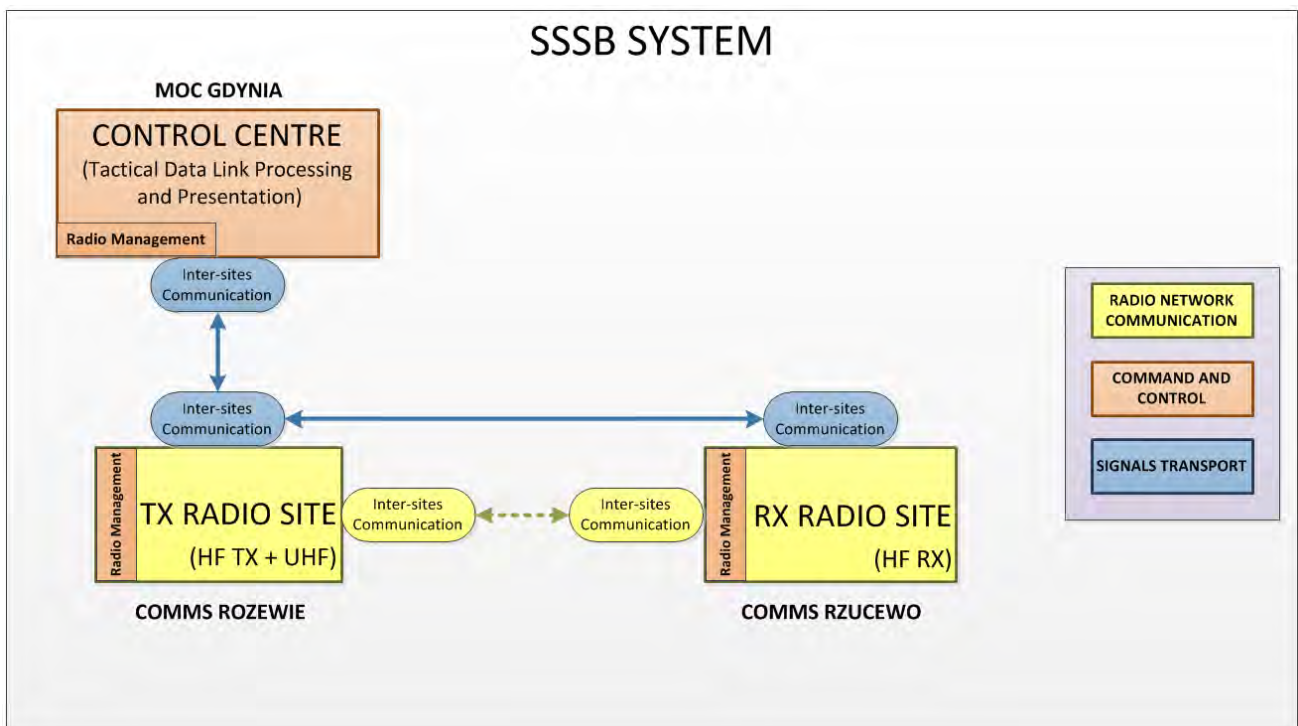


Figure 2: SSSB System, block diagram.

1.2 Purpose

- 1.2.1 The purpose of the SSSB system is to provide communication between Maritime and Airborne Early Warning (AEW) units and their Command and Control Centre, located at the Maritime Operations Centre (MOC).
- 1.2.2 The SSSB-POL project aims at providing the Host Nation Poland (HN POL) with a SSSB system that is planned to upgrade the existing POL NATINAMDS (NATO Integrated Air and Missile Defence System) within Poland.

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- 1.2.3 The purpose of this document is to specify the system requirements for the SSSB-POL System as depicted by Figure 2 above, and consisting of:
- a. Two SSSB Radio Sites, HF-TX/UHF Site at Rozewie and HF-RX Site at Rzucewo, connected to Maritime Operation Centre (MOC) in Gdynia, shall be implemented by the Contractor (see Figure 3 and Figure 4). The distances between the SSSB sites are shown in Figure 5 further below.
 - b. The Polish National Defence Network (NDN) for the transport of the signals between the MOC at Gdynia and the two Radios Sites located in Rozewie and Rzucewo.

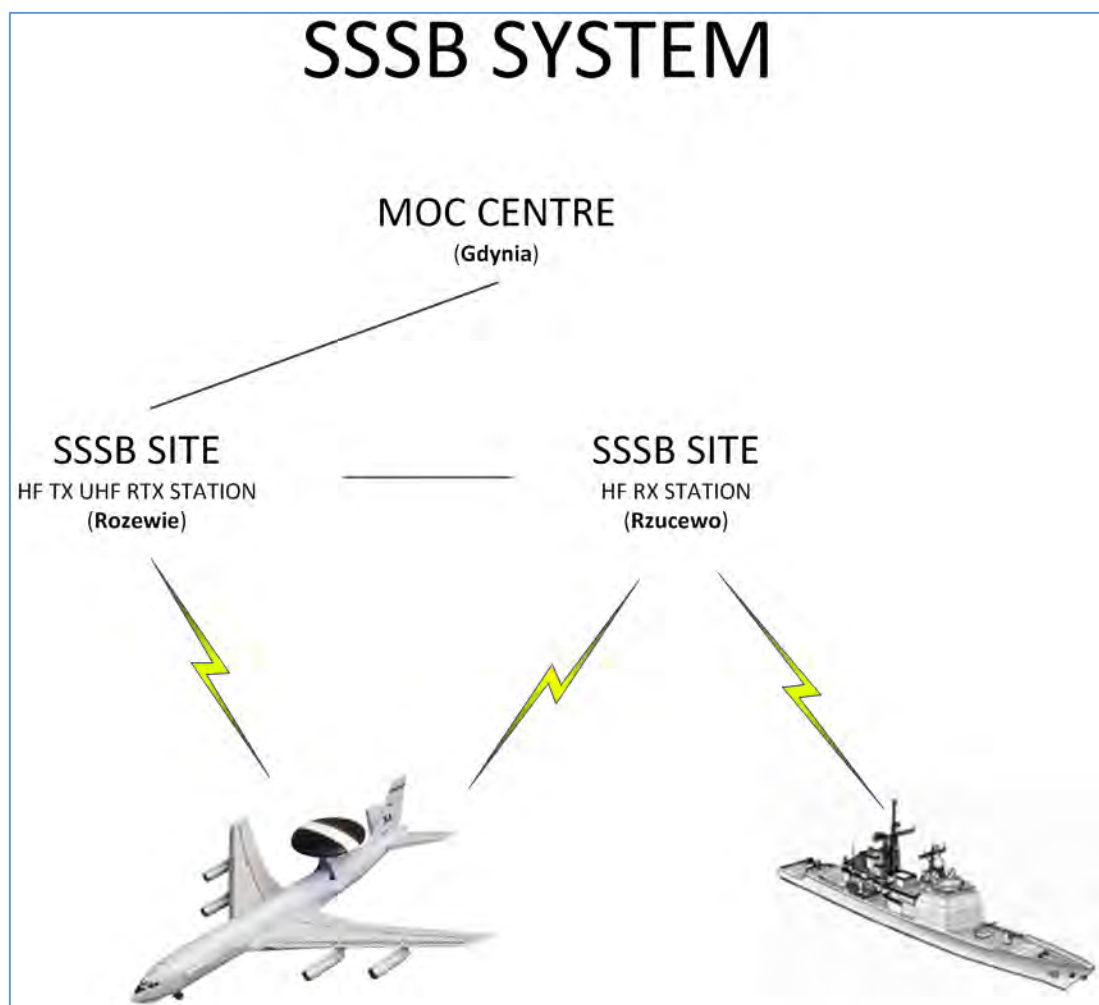


Figure 3: SSSB-POL MOC and TX/RX COMMS locations.

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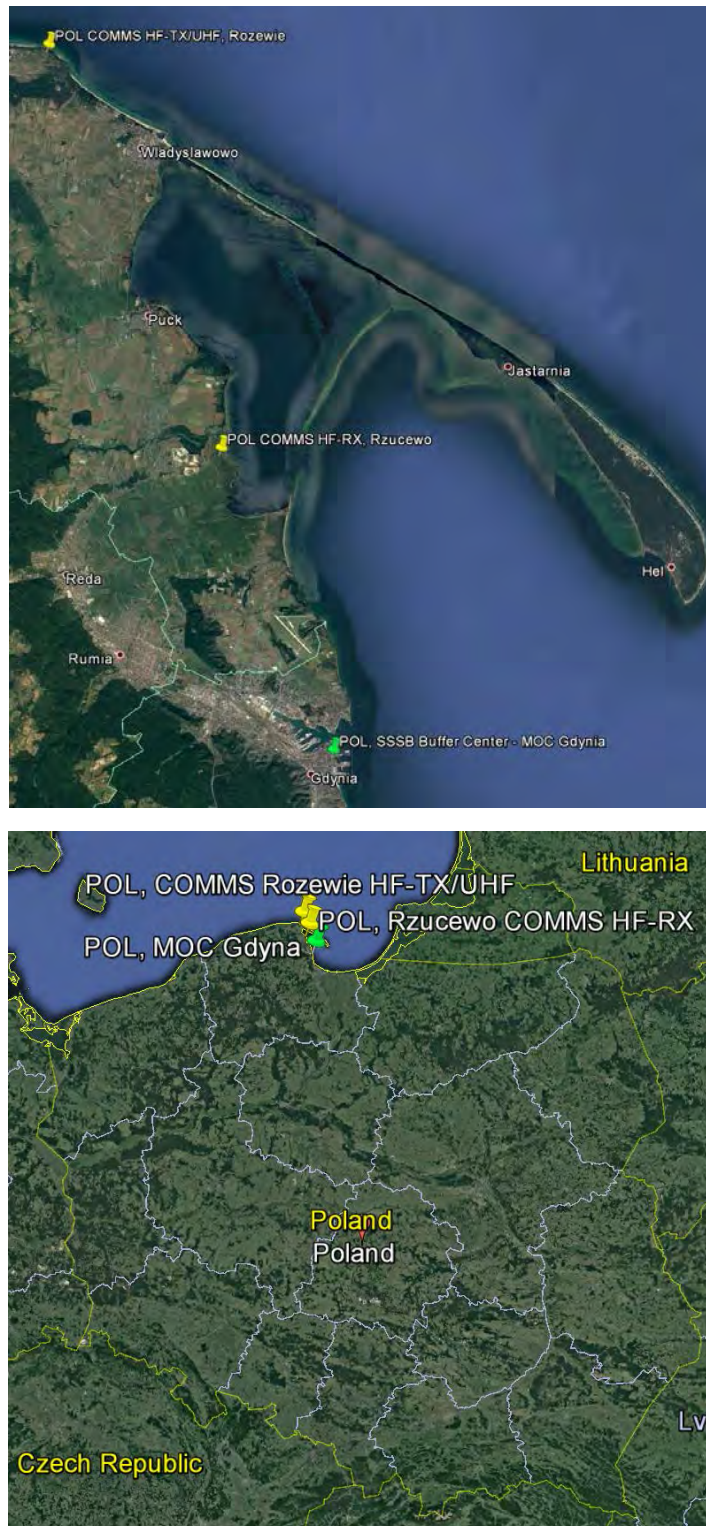


Figure 4: SSSB Site locations.

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LOS Distances Km			1	2	3	A
Elev (m)			Gdynia	Rozewie	Rzucewo	Warsaw
1	2	Gdynia	X	35	20	310
2	55	Rozewie	35	X	18	-
3	19	Rzucewo	20	18	X	-
A	-	Warsaw	310	-	-	X

Figure 5: Distances between SSSB Site locations (in *km*), and site elevations (in *m*).

1.2.4 Radio Sites will consist of:

- a. Radio Communication Equipment. To be installed at the Radio Site and dedicated to the Ship-Shore-Ship communication in HF (BLOS) and in UHF (LOS) in the Link-11 and Link-22 mode for the data exchange and in Voice mode for the operators' coordination.
- b. Radio Management (local) Equipment. Equipment consisting of computers and interface concentrators to provide control of communication devices as follows:
 - The Radio Sites include one Low-Level Controller computer (LLC), one serial line concentrator (multi-serial), one network switch and one network router; see Figure 7 and Figure 8 under paragraph 2.7.2.
 - The HF-TX/UHF Site includes also a Radio-Over-IP (RoIP) converter (Narrow-Band/Wide-Band Gateway) for secure and non-secure Voice Coordination functions; see Figure 7 under paragraph 2.7.2.
- c. Data Link Equipment. Equipment consisting of Data Terminal Set (DTS) / Signal Processing Controller (SPC), Remote Versatile Link Interface (VLI/R) to provide Link-11 signal interface, see Figure 7 and Figure 8 under paragraph 2.7.2.
- d. Automatic Identification System (AIS) receiver and a dedicated antenna for the reception of information.

1.2.5 Inter-site Communication:

- a. Distributed system dedicated to the connection between the TX and RX Radio sites and between the Radio sites and the MOC.

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- 1.2.6 The MOC Gdynia is dedicated to the two Radio Sites for:
- a. Translation of the Link-11 and Link-22 protocols into Link-1, Link-11B and JREAP-C in accordance with STANAG 5511, STANAG 5522, STANAG 5601, STANAG 5616, STANAG 5518 (latest revisions). Presentation of the Air, Surface and Subsurface tactical picture. Processing of the Automatic Identification System (AIS) Receive-Only information.
 - b. Radio Management (remote).
 - c. Management of the VOICE Co-ordination of the Link-11/Link-22 data links.
 - d. Providing secure data encryption of Link-11 (COMSEC).
 - e. Providing secure data encryption of Link-22 (COMSEC).
 - f. Providing secure voice encryption for HF (COMSEC).
 - g. Providing secure voice encryption for UHF (COMSEC).
 - h. Providing Link-22 ECM-resistant (EPM) capability.
 - i. Providing ECM-resistant communications for UHF Voice (EPM Functionality).
 - j. Monitoring of the status operations of infrastructure and equipment.
- 1.2.7 The overall responsibility of the implementation of the SSSB-POL system lays with the NCI Agency (the Purchaser), but the implementation of the three sub-systems is delegated to:
- a. The Contractor for the implementation of the two Radio Sites including their DLOS microwave inter-site communication.
 - b. The HN POL for the provision of the inter-connection land lines between the MOC and the Radio Sites (via the NDN).
 - c. The NCI Agency for the implementation of the SSSB Buffer Control Centre (BCC) at the MOC.

1.3 Scope

- 1.3.1 The overall SSSB project consists of the following phases:
- a. Phase 1:

General Civil Works, by the HN, for the Radio Sites, including buildings, electrical power supplies, HVAC, etc. Phase 1 has been already completed and is not scope of this Contract.

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- b. Phase 2:
- A: Radio Communications and over-the-air inter-sites communications, including associated equipment and civil works, by the Contractor, within scope of this Contract
 - B: Land Inter-sites Communications, by the HN POL
 - C: Command and Control system at the SSSB BCC (MOC), by the NCI Agency
- 1.3.2 Phase 1 is predecessor to Phase 2 and has been already completed under separate Contract.
- 1.3.3 Phase's 2.A, 2.B and 2.C execution shall be co-ordinated, between the Contractor, the HN POL and the Purchaser, respectively NCI Agency. Phase 2 is within the scope of this Contract.
- 1.3.4 The Contractor shall implement the Radio Communications portion of the SSSB POL project with the installation of the HF-TX/UHF Radio Site (in Rozewie) and the HF-RX Radio Site (in Rzucewo), within Phase 2.A.
- 1.3.5 In addition, the Contractor shall provide technical support to the HN and the Purchaser for phases 2.B and 2.C.
- 1.3.6 The technical support, to be provided by the Contractor, is to consist of, but not be limited to:
- a. Assisting the HN and the Purchaser in the final identification of the number and characteristics of signals to be transported between the Sites;
 - b. Assisting the HN and the Purchaser in the integration and testing phases by generating the signals to be transported between the Sites;
 - c. Assisting the HN and the Purchaser in the overall system integration and testing phases. In the operation of the Radio Management System (RMS) when used from the MOC, verification of the correct transport of the signals between the sites.

1.4 Purchaser Furnished Equipment (PFE)

To allow the Contractor to complete the implementation of the Radio Sites a number of equipment is provided as PFE, as specified in Book II – Part IV – SOW – Section 3.4.

- 1.4.1 The PFE equipment/system provided for the technical integration of the SSSB is:
- a. Radio Management Equipment, see 1.5.1
 - b. Data Link Equipment, see 1.5.2

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- c. Narrowband/ Wideband Voice over IP Gateway, see 1.5.3

1.5 PFE Specifications

The PFE specifications and characteristics are described in the following paragraphs:

1.5.1 Radio Management

- I. Radio Management Console (RMC)
- a. The RMC is the operator's interface to the Radio Management Sub-system (RMSS) and it is part of the RMSS
 - b. Provided to the Contractor as PFE
 - c. Operational requirements:
 - The RMC is implemented at both Radio Sites.
 - The RMC is mainly operated from the MOC, but can also be operated locally at the radio sites, to allow COMMS management, maintenance and site monitoring of all modalities, including Link-11/Link-22 Data.
 - d. Operational functions:
 - Local and remote control of the installed equipment for:
 - Power up/down
 - Mode selection
 - Frequency selection
 - Power level selection, where applicable
 - BITE
 - Status monitor
 - Services – Equipment allocation
 - Access to the Local and Long Haul Networks for telephone communication between the Sites and the MOC.
 - PSTN (Public Switching Telephone Network) access
 - Etc.

1.5.2 Data Link Equipment

- I. DTS/SPC:
- a. DTS Conforming standards:
 - MIL-STD-188-203A,

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- MIL-STD-1397,
 - STANAG 5511,
 - EIA RS-232-C
- b. Provided to the Contractor as PFE
- c. SPC Conforming standards:
- NILE Interface Requirements Specification
 - NILE Communication Media Segment Specification
 - STANAG 4205, 4372, 4539 Annex D
- d. The purpose of the DTS/SPC is to provide the modem functions and control of the TADIL-A/Link-11/Link-22 network in radio communication HF-UHF-SATLINK
- e. The SPC is intended to support the following configurations:
- LOCAL
 - SPC Serial Splitter (SSS)
- f. Single Tone and Multi Tone Link-11 Waveforms are implemented in the DTS
- g. Standard, Long Range and High Throughput Link-22 Waveforms are implemented in the SPC
- h. DTS/SPC supports the following control Interface: serial and/or Ethernet
- II. Versatile Link Interface/Remote (VLI/R)
- a. The Versatile Link Interface is a media converted between NTDS/ATDS interfaces to IP interface in accordance with:
- MIL-STD-1397
 - ISO-8877
- b. Provided to the Contractor as PFE
- III. Automatic Identification System - AIS Receiver
- a. The AIS Receiver is a VHF receive only unit with a dedicated VHF antenna with the following basic features:
- Channel A: 161.975 MHz
 - Channel B: 162.025 MHz
 - ITU/ NMEA 0183
- b. Provided to the Contractor as PFE

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- c. The purpose of the AIS Receiver is to provide the local AIS traffic to the SSSB System for processing.

1.5.3 Narrowband/ Wideband Voice over IP Gateway

I. NB/WB Gateway:

- a. The NB/WB Gateway provides signaling information transport for unsecured voice and secure voice via IP between the SSSB Radio sites and the MOC SSSB Operator position.
- b. The NB/WB Gateway can:
 - Transport analog Secure Voice via IP (bi-directional)
 - Transport analog Unsecure Voice via IP (bi-directional)
 - Transport radio PTT signal via IP
 - Handle digital signals
 - Handle analogue signals
 - Handle VoIP streams
 - Provide low latency, low delay performance
 - Provides standard serial and IP interface for radios

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SECTION 2 SSSB System Requirements

2.1 Operational Dependence

2.1.1 The SSSB System is operationally dependent on the MOC site at Gdynia.

2.2 Connectivity

2.2.1 The inter-site connections between the MOC and the two Radio Sites shall be implemented via the Polish National Defence Network (NDN).

- a. There shall be a main connection between the MOC and the TX/UHF radio site, via the NDN.
- b. There shall be a secondary (backup) connection between the HF-TX/UHF and the HF-RX Radio Sites. This secondary connection may be used as a backup line when the microwave DLOS connection would fail.

2.2.2 The connections between the two Radio Sites shall be implemented via microwave DLOS links (to be provided under the scope of this Contract).

2.3 Standardization

2.3.1 In order to allow interoperability of the HF/UHF radio elements the Contractor shall respect the technical prescriptions contained in the following NATO and Military Standards:

- a. STANAG 5511, "TACTICAL DATA EXCHANGE - Link-11/Link-11B", edition 9, March 2013, NATO UNCLASSIFIED
- b. STANAG 5501, "Digital Data Link – Link 1 (Point-to-Point)", edition 7, February 2013, NATO UNCLASSIFIED
- c. STANAG 5601, "Standards for Interface of NATO Data – Links 1, 11, 11B and 14 Through a Buffer", edition 7, January 2014, NATO UNCLASSIFIED
- d. MIL-STD-188-203-1A, "Interoperability and Performance Standards for Tactical Digital Information Link (TADIL) A", 8 January 1988, UNCLASSIFIED.
- e. MIL-STD-1397C(SH), "INPUT / OUTPUT INTERFACES, STANDARD DIGITAL DATA,NAW SYSTEMS", 1 June 1995, UNCLASSIFIED.
- f. STANAG 5522, "TACTICAL DATA LINK – Link-22", edition 2, 31 August 2006, NATO UNCLASSIFIED.
- g. STANAG 5616, "Standards for data forwarding between TDS employing Link-11/11B, Link 16 and Link-22", Edition 3, 9 March 2006, NATO UNCLASSIFIED.
- h. STANAG 5618, "Joint Range Extension Application Protocol (JREAP)", Edition 3, October 2015 NATO UNCLASSIFIED.
- i. STANAG 4372 (SATURN)

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- j. STANAG 4246 (Have Quick II)
- 2.3.2 The Contractor shall implement the Radio Communications System (RCS) and associated equipment and Civil Works in compliance with the governing Polish electrical standards.
- 2.3.3 The Contractor shall implement the RCS and associated equipment and Civil Works in compliance with the Low Voltage Directive 2006/95/EC.

2.4 Design requirements

- 2.4.1 In order to remove the impact of long haul lines delay in the Link-11 “DTS Split” configuration, the Contractor shall implement Link-11 using “Local DTS” configuration at the Radio Site (RS) and the NATO Versatile Link Interface (VLI) architecture between the MOC Control Centre and the Receiver Radio Site (RRS) see paragraph 5.1
- 2.4.2 The Contractor shall dimension the system to allow implementation of the Tactical Data Link-22 service. The Link-22 service will use the existing Link-22 radios via the Link-22 modem (SPC).
- 2.4.3 The Contractor is to design the system in order to allow remote control of operational commands and manual control of maintenance commands. In the design and implementation of the automation and the remote control systems the following criteria shall be used:
 - a. The Transmitter Radio Site (HF-TX/UHF site Rozewie) will not be manned.
 - b. The Receiving Radio Site (HF-RX site Rzucewo) will be manned.
- 2.4.4 For the PFE sub-system for control and management of the communication equipment the Contractor shall provide the technical documentation and support to the purchaser in the configuration and customisation of the sub-system in relation to the communication equipment delivered by the Contractor.
- 2.4.5 The Data Link Equipment (DLE) and the RMSS will be provided to the Contractor as PFE at the Factory Acceptance Test (FAT), which is the last stage before commencing the on-site implementation activities, this in order to allow the Contractor to be autonomous and independent in the implementation of the two Radio Sites.
- 2.4.6 It is the Contractor’s responsibility to test the integration of the Contractor-provided equipment with relevant equipment, elements and systems provided as PFE and demonstrate that both the Contractor’s equipment and PFE are compatible and function correctly as stipulated SOW Section 3.

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2.4.7 The Contractor is also required to provide all the necessary support to the Purchaser and the HN for system integration and testing.

2.5 Operational Requirements

2.5.1 The fundamental requirement of the SSSB system is to implement a data exchange for:

- a. Network Link-11 – TADIL A without degradation of the information content, as specified in MIL-STD-188-203-1A and in STANAG 5511.
- b. Network Link-22 – NILE without degradation of the information content as specified in STANAG 5522.

2.5.2 The integration of the Radio Sites with the SSSB BCC (at the MOC) shall allow air and naval surveillance of the Baltic Sea: in the HF frequency range with data Link-11/Link-22 mode and VOICE mode, up to 300 NM¹, and in the UHF spectrum up to 150 NM. Monitoring and control of communication resources will be delegated to the MOC Gdynia.

2.6 Configuration of the SSSB System

2.6.1 The principle SSSB-POL system sites are:

- a. Maritime Operations Centre (MOC), location Gdynia, will be implemented by NATO NCI Agency.
- b. HF-TX/UHF Radio Site, location Rozewie, shall be implemented by the Contractor.
- c. HF-RX Radio Site, location Rzucewo, shall be implemented by the Contractor.

2.7 Radio Communication Sub-system

2.7.1 The Contractor shall:

- a. Install and integrate CIS and the PFE equipment at the radio sites, including supporting sub-systems (e.g. UPS, alarm control, monitoring, etc.)
- b. Implement necessary Civil Works related directly to CIS equipment provided by the Contractor and any additional necessary Civil Works outside the main Civil Works, which were already contracted by the HN under a separate Contract.
- c. Test, monitor and control the needed equipment including Aerials, Antennae, Radio equipment, etc.

¹ LINK-22 will also be supporting the Long Range waveform for distances up to 1000 NM.

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- 2.7.2 Block diagrams showing the components related to the HF-TX/UHF and HF-RX Radio Communication sites are described in Figures 6 and 7. The Contractor shall provide the “yellow” colored components and integrate the others, under the scope of this Contract.
- a. HF-TX/UHF Site Rozewie:
 - i. HF-TX radio component
 - ii. UHF radio component
 - iii. Radio management, Link-11 DTS, Link-22 SPC, TOD and VLI/R
 - i. AIS reception component
 - iv. DLOS communication to the HF-RX radio site.
 - v. Local Network communication land line to the HF-RX radio site as a backup link (NFE)
 - vi. Long distance comms land line to MOC Gdynia (NFE).

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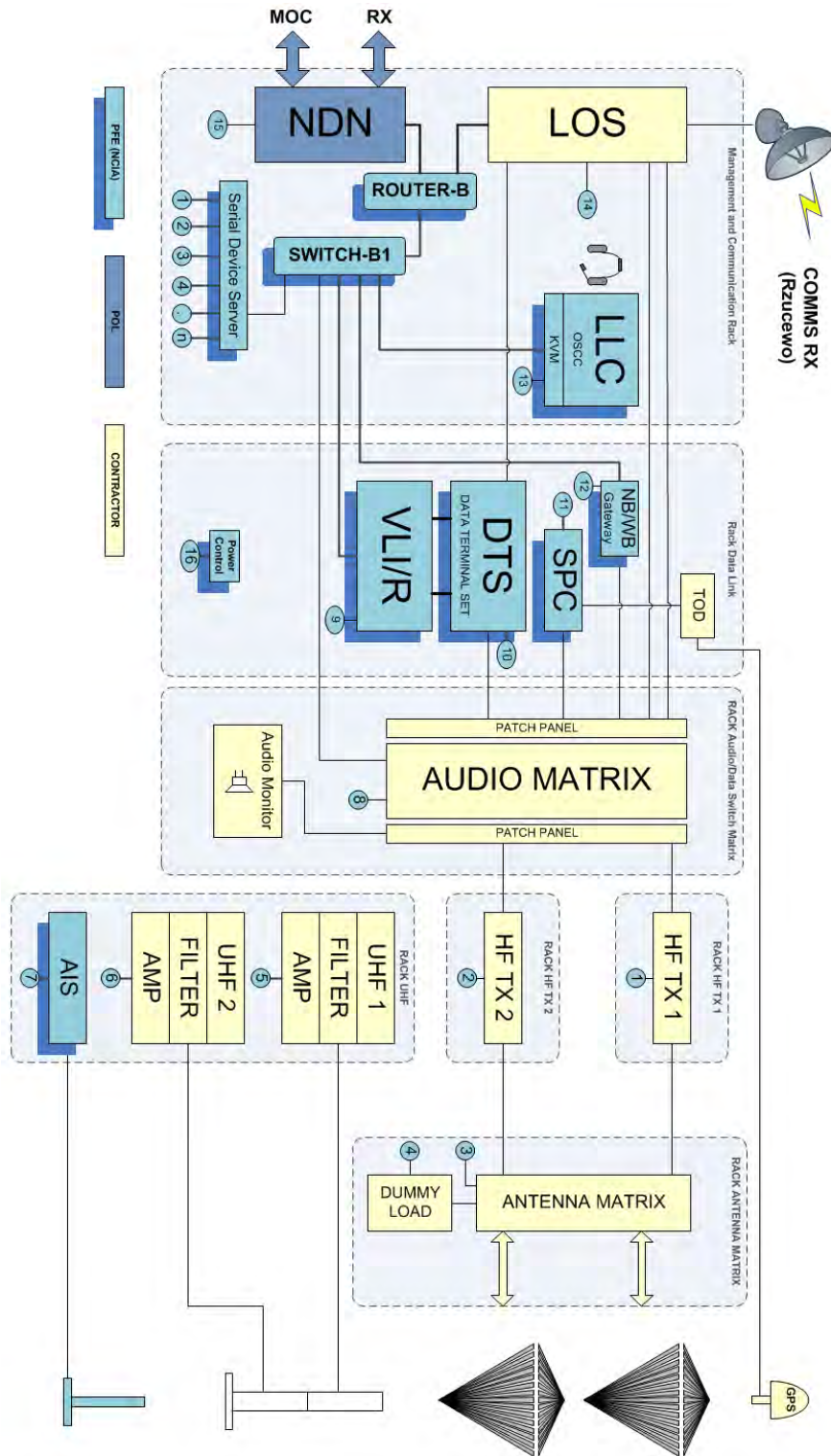


Figure 6: HF-TX/UHF Radio site Rozewie block diagram

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- b.* HF-RX Site Rzucewo:
 - ii. HF-RX radio component
 - iii. Radio management, Link-22 SPC, TOD
 - iv. AIS reception component
 - v. DLOS communication to the HF-TX radio site
 - vi. Local Network comms land line to the HF-TX radio site (NFE)

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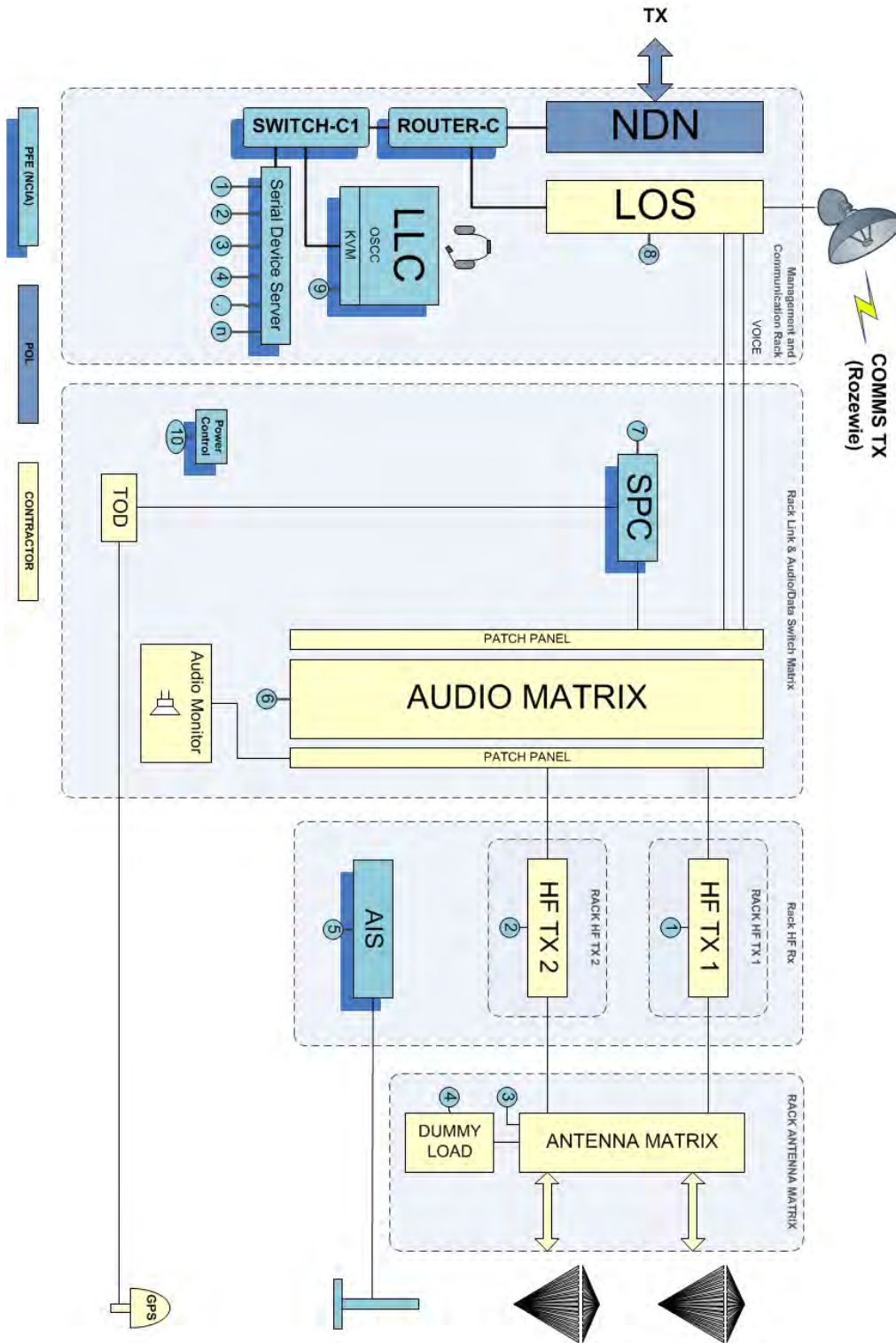


Figure 7: HF-RX Radio site Rzucewo block diagram

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2.7.3 The Contractor is to provide, but not limited to, the following equipment for the radio components, less any equipment listed as PFE::

- a. HF-TX Antenna field
 - i. Qty 2 Wide band monocone antennas, vertical polarization for SSSB,
 - ii. RF cabling (incl. trenching)
- b. UHF Antennas
 - i. Qty 1 Co-linear antenna with two channels
 - iii. RF cabling (incl. trenching)
- c. HF Transmitters, UHF RX/TX component
 - ii. Qty 2 HF Solid State Radio Transmitters 5 kW for SSSB
 - iii. Qty 2 HF Transmitter cooling/ventilation systems
 - iv. Qty 1 Antenna matrix for HF-TX antennas
 - v. Qty 1 Dummy load 5 kW
 - vi. Qty 2 100 W UHF radio transceivers upgradable to support Link 22 EPM and Voice SATURN and Have Quick II
 - vii. Qty 1 AIS receiver with antenna (PFE)
 - viii. Qty 1 Audio data/voice switch matrix with patch panels
 - ix. Qty 1 Audio Monitor
 - x. Qty 1 TOD-HQ, GPS, military grade, SAASM, incl. antenna (PFE)
 - xi. Qty 1 DTS (PFE)
 - xii. Qty 1 SPC (PFE)

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- xiii. Qty 1 VLI/R (PFE)
 - xiv. Qty 1 Radio Management Equipment Set (PFE)
 - xv. Narrow-Band/Wide-Band Gateway (secure and unsecure voice)
 - xvi. Power switch with remote control capability.
 - xvii. All racks with accessories, internal and cabling
- d. HF-RX Antenna field
- i. Qty 1 Wide band antenna, vertical polarization for SSSB,
 - ii. RF cabling
- e. HF Receivers component
- xviii. Qty 2 HF Receivers for SSSB with preselectors
 - xix. Qty 1 HF multi-coupler or antenna matrix
 - xx. Qty 1 AIS receiver with antenna (PFE)
 - xxi. Qty 1 Audio data/voice switch matrix with patch panels
 - xxii. Qty 1 Audio Monitor
 - xxiii. Qty 1 TOD-HQ, GPS, military grade, SAASM, with antenna (PFE)
 - xxiv. Qty 1 SPC (PFE)
 - xxv. Qty 1 Radio Management Equipment Set (PFE)
 - xxvi. Power switch with remote control capability.
 - xxvii. All racks with accessories, internal and cabling
- 2.7.4 The civil works to be implemented by The Contractor shall include but not limited to the implementation of Antenna fields including RF cables, ducting and DLOS tower for the Radio Communication Sub-system.
- 2.7.5 Other CW requirements that are Contractor responsibility are specified in SOW Section 12.

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2.8 Inter-Sites Communication Sub-system

2.8.1 The inter-sites Communication, provided by the HN via the NDN network, will provide all the necessary channels to allow the exchange of data, voice and control signals between the Control Centre (MOC) and the HF-TX/UHF Radio Site. HN will also provide a backup communication line between the HF-TX/UHF and the HF-RX Radio Sites; the primary communication between those Radio Sites however shall be realised by means of a microwave DLOS link that shall be provided by the Contractor in the scope of this Contract. The following list enumerates the type and minimum number of required channels:

- a. HF-TX/UHF Site to/from the MOC
 - i. Qty 1 IP line with a constant minimum no less than 4 Mbps for the following:
 - 1. Qty 1 Link-11 monitoring, VoIP, total 64 kb/s
 - 2. Qty 1 Link-22 monitoring, VoIP, total 64 kb/s
 - 3. Qty 1 Link-11 VOICE line, RoIP, total 64 kb/s
 - 4. Qty 1 Link-22 VOICE line, RoIP, total 64 kb/s
 - 5. Qty 2 UHF Voice (NB and WB) lines, RoIP, total 128 kb/s
 - 6. Qty 4 intercom line, RoIP, total 128 kb/s
 - 7. Qty 1 Link-11 Data Line, IP, total 128 kb/s
 - 8. Qty 4 Link-22 Data Lines, IP, total 256 kb/s
 - 9. Qty 4 AIS Data Lines, IP, total 256 kb/s
 - 10. Qty 1 Control & Monitoring, IP, total 2048 kb/s

2.8.2 The inter-sites communication, provided by the Contractor via the DLOS microwave link, will provide all the necessary channels to allow the exchange of data, voice and control signals between the two Radio Sites.

- b. These channels shall be interfaced to the communication devices, local RMSS and to the NDN Network.

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- c. The Contractor shall provide support to the HN and the Purchaser in the integration and testing of the inter-sites communication sub-system between the Radio Site and the MOC.
- d. The delay, jitter, throughput of the inter-sites communication sub-system has to fulfill the requirements for Link-11, Link-22 and voice specifications.

2.9 Radio Management and Command and Control Sub-system

- 2.9.1 The SSSB Command and Control system is a product consisting of hardware and software elements developed by the NCI Agency SSSB Section. The Command and Control Centre/MOC (see Figure 9: SSSB BC at Maritime Operation Center (MOC) block diagramme) will be integrated and tested by the Purchaser.
- 2.9.2 The radio management system, delivered as PFE, is a product consisting of hardware and software elements developed by the NCI Agency SSSB Section. Before delivery the product has to be configured and customized by the purchaser in order to operate with the communication equipment used at the radio sites.
- 2.9.3 Technical characteristics, documentation and technical support, related to the control of the communication equipment delivered by the Contractor, is to be provided by the Contractor to the purchaser with the system design at PDR and CDR in accordance with SOW Section 4, in preparation of the delivery of the PFE RMS.
- 2.9.4 The technical documentation is to be provided in Interface Control Document (ICD) format describing the format of the messages and the protocol.

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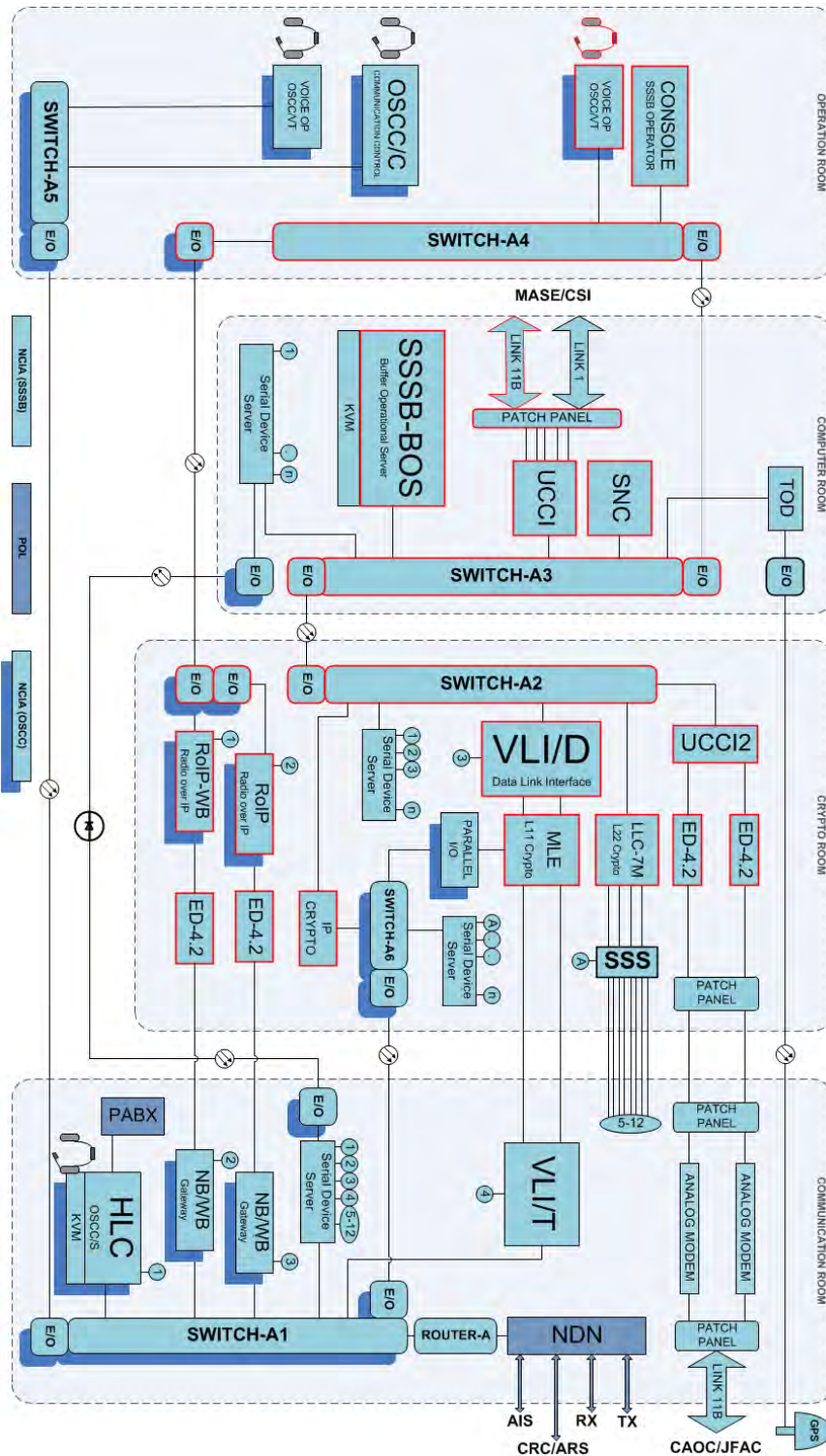


Figure 8: SSSB BC at Maritime Operation Center (MOC) block diagramme

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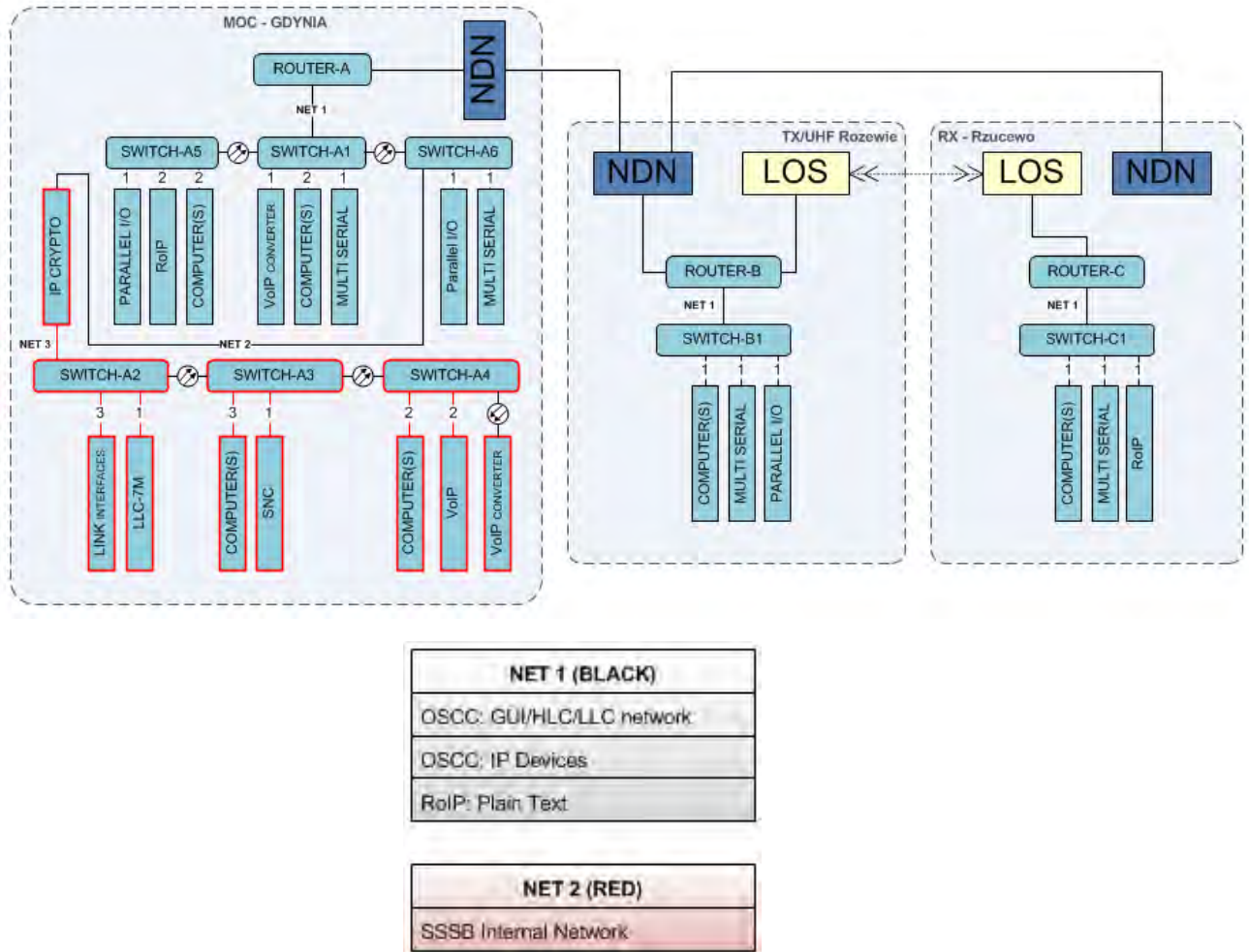


Figure 9: SSSB Brief Network Overview

2.10 System Integration and Testing

2.10.1 The Contractor shall be responsible to perform the testing activities as specified in SOW Section 10.

2.11 Summary of Responsibilities

This paragraph provides a summary of the areas of responsibilities of the Contractor, as illustrated in Figure 11:

2.11.1 The Contractor shall be responsible for the:

- i. Implementation of the 2 (two) Radio Sites, including integration of the PFE elements.

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- ii. Implementation of DLOS microwave inter-site communication between the TX/UHF radio site (in Rozewie) and the RX radio site (in Rzucewo).
- iii. Delivery of racks for inter-site communication equipped with power distribution and accessories including racks for NDN equipment.
- iv. Support to Purchaser/HN for Radio Sites and MOC for integration and testing of inter-site communication.
- v. Provision of the required information to the Purchaser in the customization and configuration of the radio management PFE elements.
- vi. Support to Purchaser for overall integration and testing of the complete SSSB system.

2.11.2 The Purchaser (NCI Agency) will be responsible for the:

- i. Implementation of the MOC in Gdynia.
- ii. Delivery of the PFE elements to the Contractor for radio site installation, integration and testing.
- iii. Overall authority over the integration and testing of the complete SSSB system.

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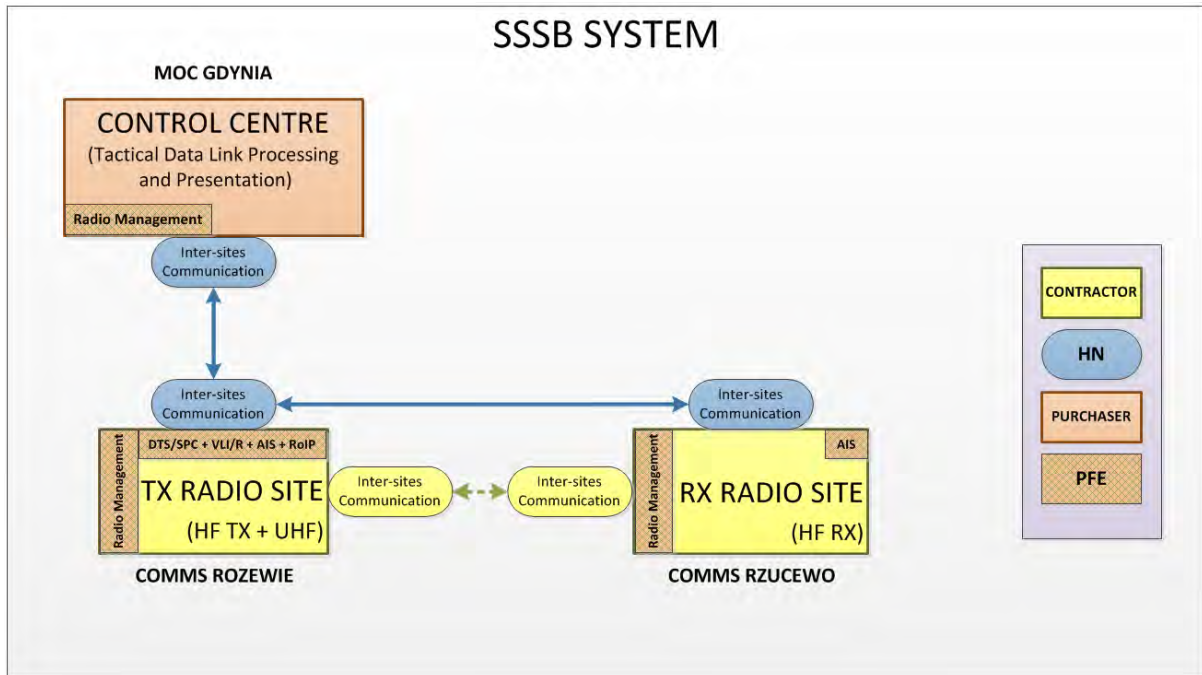


Figure 10: Areas of responsibilities among Contractor, Purchaser and HN.

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SECTION 3 Technical Requirements: Equipment and Antennas

The following specifications are to be understood as minimal project requirements and NATO MMR criteria for the SSSB HW equipment.

3.1 General requirements

- 3.1.1 In accordance with NATO requirements, the Contractor is to assemble the site equipment with racks of standard dimensions, 19 inch standard, in order to achieve:
- a. Uniform implementation in terms of colour, height, depth and accessories.
 - b. Simplified assembly and acceptance.
 - c. Simplified installation.
- 3.1.2 Void;
- 3.1.3 The Contractor shall provide a 20% of growth capacity in terms of space in the racks, power and power socket requirements.
- 3.1.4 Installation of Equipment:
- a. The Contractor shall install equipment racks, miscellaneous devices and antennas, inclusive of materials, cables and all the necessary accessories until finalisation and acceptance by the Purchaser.
 - b. Any additional minor equipment or communications devices (e.g. modems), not encompassed in the present or following sections, shall be delivered and installed by the Contractor at the sites in case they are required for the proper functioning of the system.
- 3.1.5 Furniture:
- a. The Contractor shall provide the necessary furniture for each site (e.g. tables, cabinets, chairs, trolleys, office furniture and workbench).
 - b. A list of the furniture shall be proposed by the Contractor in the bidding offer.

3.2 Rack Transmitter HF/SSB – 5 kW

- 3.2.1 The Contractor shall supply, integrate and test HF transmitter equipment of “Solid State” technology.

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- 3.2.2 A typical configuration of the transmitter rack 5 kW, which has the dimension of a standard rack, includes the control circuits, low level RF, power amplifier and power supply.
- 3.2.3 The Contractor shall supply, integrate and test rack transmitter in accordance with the typical configuration as stated before and shall provide forced air circuit cooling system for the HF Tx or, in case equipment cooling use room ambient air and the available A/C is not adequate then the Contractor shall upgrade or improve the A/C system to the needed level..
- 3.2.4 The equipment of the rack transmitter component shall meet the following minimum requirements:
- a. Frequency range: 2 ÷ 29,9999 MHz.
 - b. Frequency tuning steps: 10 Hz.
 - c. Tuning time (max): 10 s.
 - d. Frequency stability (max).
 - ± 1 part in 10^7 after 30 minute warm up period.
 - ± 1 part in 10^8 for any period of 24 hours after a warm up period of 4 hours under any combination of specified service conditions.
 - e. RF output power: 5 kW nominal PEP and mean, into a 50 ohm impedance unbalanced to ground and with VSWR up to 1.3:1².
 - f. Power steps: 1/1, 1/2, 1/4 and 1/8 of maximum output power. Other values of power steps are acceptable as long as they will be within 25% range from the required ones.
 - g. Modes of operation:
 - AM (A3E, R3E, H3E and J3E classes of emission³) including Upper sideband (USB) and lower sideband (LSB) simultaneously or independently⁴

² Above VSWR 1.3:1 the transmitter should de-rate the output power according to MIL-STD 188-141C.

³ Respectively: double-sideband, single-sideband reduced (or variable) level carrier, single-sideband full carrier and single-sideband suppressed carrier for single channel analogue telephony (see ITU "Radio regulations – Appendices").

⁴ Independent Side Band (ISB).

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- CW (A1A class of emission⁵)
 - Link-11 and Link-22
- h.* Duty cycle: 100 % under all applicable service conditions.
- i.* Audio inputs 28: 0 ± 3 dBm and 10.3 dB PEP/avg on balanced ungrounded lines with 600 ohm terminations.
- j.* PTT input.
- k.* Sidetone: to be provided at the HF audio outputs (both USB and LSB).
- l.* Time delay (max): 3.5 ms (for any single frequency over the range $500 \div 3.050$ Hz) (design objective 2.5 ms).
- m.* Group (or differential) delay (max): 500 μ s (within the frequency range $815 \div 3.050$ Hz).
- n.* Frequency response: 2.5 dB passband $f_c +415 \div f_c +3.050$ Hz for the USB and $f_c -415 \div f_c -3.050$ Hz for the LSB (max); 3 dB at 300 Hz (max with respect to the peak response between $450 \div 3.050$ Hz); 60 dB at $f_c +5.000$ and $f_c -1.500$ Hz for the USB; 60 dB at $f_c -5.000$ and $f_c +1.500$ Hz for the LSB.
- o.* Phase jitter (max): 2.5 degrees (rms value) and the probability of a shift greater than 30 degrees shall be 0.01 % when measured at the signal output terminals⁶.
- p.* Sideband attenuation: 60 dB below PEP.
- q.* Carrier suppression (where applicable): 50 dB below PEP.
- r.* Harmonic attenuation: 45 dB below PEP.
- s.* Spurious attenuation: 45 dBc.
- t.* In-band intermodulation distortion (IMD): 35 dB below PEP (with reference to IMD products generated by two equal level in-band audio tones spaced 440 Hz).
- u.* In-band noise: 50 dB below PEP (in each sideband when measured in a 3 kHz bandwidth).
- v.* Out-of-band noise (max):

⁵ Double-sideband without the use of a modulating sub-carrier for single channel keyed telegraphy.

⁶ Measurements shall be performed over a sufficient number of adjacent frame pairs to establish the specified probability with a confidence of 95%; measured values shall be the average phase in an averaging time of 9,09 ms or 18.18 ms for frame lengths of 13,3 ms or 22 ms, respectively.

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- 10 μ V (at any frequency between 2 ÷ 24 MHz, with the exception of $f_c \pm 15\%$ and HF oscillator frequency, when measured in a 3 kHz bandwidth using a two-tone test signal input).
 - 2 μ V (at any frequency between 2 ÷ 24 MHz, with the exception of $f_c \pm 15\%$ and HF oscillator frequency, when measured in a 3 kHz bandwidth with the audio signal inputs terminated in 600 ohm dummy loads).
 - 10 μ V (at any frequency between 2 ÷ 24 MHz, within $f_c \pm 15\%$ but with the exception of $f_c \pm 3$ kHz, when measured in a 3 kHz bandwidth with the audio signal inputs terminated in 600 ohm dummy loads).
 - 1 μ V (with the transmitter in the off keyed condition, at any frequency between 2 ÷ 24 MHz when measured in a 3 kHz bandwidth).
- w. Attack-time delay (max): 7 ms (to reach 90 % of rated power output).
- x. Release-time delay (max): 10 ms.
- y. Built-In Test Equipment (BITE): embedded.
- z. Programmed channels: 99.
- aa. Monitor: hours of operation, number of failures, tuning numbers, forward and reflected power.
- bb. Remote control: frequency, mode, power level, BITE.
- cc. Remote control interfaces: EIA RS 232 (or, equivalently, 422 or 485) and/or 10Base-T IEEE 802.3 (Ethernet).
- dd. Power supply: 400 Vac $\pm 10\%$ three phases @ 45 ÷ 65 Hz.
- ee. Power consumption (max): 20 kW.
- ff. Size (max): 1200 x 900 x 2100 mm (W x D x H).
- gg. Weight (max): 750 kg.
- hh. Operating temperature: 0 ÷ +40 °C.
- ii. Relative humidity: 90 % at +40 °C without condensation.
- jj. Cooling`/ventilation system: forced air.

In the event of a power outage, the status of the transmitter is to be kept to avoid reconfiguring the exciter portion when the power comes back This shall be obtained by hardware capacity through the

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transmitter rack itself (e.g. through non-volatile memory) or by the use of a small-size UPS circuit dedicated to the HF transmitter assembly except the amplifier portion.

kk. Transmission exchange time: conforming Link-11 DATA mode

From MIL-STD 188-203 1A:

5.1.7 Switching time. A time period shall be allocated to allow for the switching between the transmit state and receive states. This switching shall be automatic and shall conform to the timing diagram illustrated in FIGURE 5.

a. Receive-to-transmit switching occurs when the picket recognizes its address code, the DNCS recognizes a picket stop code, or the DNCS detects loss of signal presence. When switching from the receive state to transmit state, a silent period of 10 milliseconds shall be required during which the audio output from the DTS to the transmitter shall be inhibited. The audio composite signal shall be applied to the transmitter by the DTS within three frame intervals of the beginning of the silent period. The DTS shall apply the radio keyline a minimum of 7 milliseconds and a maximum of one frame interval prior to the application of the audio composite signal. After application of the audio composite signal and radio set keyline, the transmitter RF output shall reach at least 90 percent of its rated power within 7.0 milliseconds.

b. Transmit-to-receive switching occurs at the end of the transmission, that is, the picket stop code or address code. When switching from the transmit to receive state, the transmitter RF output shall be reduced to the quiescent noise level of 0.1 microvolt (μV) or less in a 6 kHz bandwidth centered on the nominal carrier frequency, and the receiver shall be capable of maximum receive sensitivity within 23 milliseconds or less after reset of the radio set keyline.

3.3 UHF Transceivers Assembly

3.3.1 Rack mountable UHF transceiver compliant to Link-11/22 standard and equipped with RF filter automatic tuning and amplifier. UHF transceiver have to be upgradeable for Link-22 EPM, voice HAVE QUICK II and SATURN capability. Minimum requirements will be:

- a. Frequency range: 225 ÷ 400 MHz.
- b. Frequency tuning steps: 25 kHz.
- c. Tuning time (max): 7.5 ms.
- d. Frequency stability (max):

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- $\pm 0.0005\%$ of the selected f_c after 5 minutes warm up period.
 - ± 5 parts in 10^6 for any period of 6 months after a warm up period of 30 minutes under any combination of specified service conditions.
- e. Modes of operation:
- FM (F3E class of emission) inclusive of Link-11 data as per STANAG 5511.
 - AM (A3E, classes of emission⁷).
- f. IF selectivity: 6 dB bandwidth of at least 50 kHz (with a peak-to-peak ripple over 90 % of the bandwidth not exceeding 3 dB) and 60 dB bandwidth of maximum 200 kHz.
- g. Audio inputs⁸: nominal 0 ± 3 dBm and 10.3 dB PEP/avg on balanced ungrounded lines with 600 ohm terminations.
- h. Audio outputs: nominal 0 ± 3 dBm (adjustable) and 10,3 dB PEP/avg on balanced ungrounded lines with 600 ohm terminations.
- i. PTT/Mute input.
- j. Phase jitter (max): 2.5 degrees (rms value) and the probability of a shift greater than 30 degrees shall be 0,01 % when measured at the signal output terminals of the transmitter or receiver⁹.
- k. Time delay (max): 2.5 ms.
- l. Group (or differential) delay (max): 500 μ s (within the frequency range 815 \div 3.050 Hz).
- m. BITE: embedded.
- n. Programmed channels: 99.
- o. Remote control: frequency, mode, power level, BITE.

⁷ Respectively: double-sideband, single-sideband reduced (or variable) level carrier, single-sideband full carrier and single-sideband suppressed carrier for single channel analogue telephony

⁸ Inclusive of keyline simplex method.

⁹ Measurements shall be performed over a sufficient number of adjacent frame pairs to establish the specified probability with a confidence of 95%; measured values shall be the average phase in an averaging time of 9.09 ms and 18.18 ms for frame lengths of 13.3 ms and 22 ms, respectively.

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- p.* Remote control interfaces: EIA RS 232 (or, equivalently, 422 or 485) and/or 10Base-T IEEE 802.3 (Ethernet).
- q.* Power supply: 230 Vac \pm 10 % single phase @ 45 \div 65 Hz.
- r.* Power consumption (max): 700 W.
- s.* Rack mountable with size (max): 19" x 580 mm x 3U (W x D x H).
- t.* Weight (max): 35 kg.
- u.* Operating temperature: 0 \div +40 °C.
- v.* Relative humidity: 90% at +40 °C without condensation.

3.3.2 Transmitter section.

- a.* RF output power: nominal 100 W PEP and 25 W carrier at $m = 100\%$ into a 50 ohm impedance unbalanced to ground and with VSWR not exceeding 3:1 over the defined frequency range.
- b.* Power steps: 1/1, 1/2 and 1/4 of maximum output power. Other values of power steps are acceptable as long as they will be within 25% range from the required ones.
- c.* Duty cycle: 100% under all applicable service conditions.
- d.* Attack-time delay (max): 7 ms (within ± 1 dB of its steady state output from the receipt of a keying signal).
- e.* Sidetone: to be provided at the UHF receiver audio output.
- f.* Frequency modulation deviation: ± 20 kHz when produced by a +10 dBm signal at the audio input.
- g.* Frequency response (max): 2 dB between 450 \div 3.050 Hz and 3 dB at 300 Hz.
- h.* Harmonic attenuation: 70 dBc.
- i.* Spurious attenuation: 70 dBc at $f_c \pm 10$ MHz.
- j.* In-band IMD: 35 dB below a two-tone test level (935 and 1.045 Hz) for a frequency deviation of ± 20 kHz (measurements to be performed on the demodulated transmitter output).
- k.* In-band noise: the audio output detected in a nominal 50 Hz audio bandwidth by a test receiver shall be at least 50 dB below the audio output detected when a carrier at the same RF power level deviated ± 20 kHz at a 1 kHz rate is applied to the test receiver RF input (with the transmitter at full rated RF power output and with the audio input terminated with a 600-ohm resistor).

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3.3.3 Receiver section:

- l.* RF input: 50 ohm impedance unbalanced to ground.
- m.* Audio frequency response (max at the receiver output and relative to the peak response between 450 ÷ 3.050 Hz): 2 dB between 450 ÷ 3.050 Hz and 3 dB at 300 Hz for a reference RF input signal level of -73 dBm with peak deviation of 20 kHz applied to the receiver input terminals.
- n.* Frequency modulation deviation: an input of ±20 kHz deviation and -67 dBm shall produce a signal output of +10 dBm.
- o.* Input signal protection:
- p.* The receiver shall not be damaged by the continuous application of a +35 dBm RF signal
- q.* The receiver shall be protected when the transmitter is at full power and the electrical isolation between the transmitter and receiver antenna terminals is as low as 26 dB; the protection circuit shall activate within 150 ms time interval used by the transmitter to go from the carrier “on” to the carrier “off” condition; provision shall be made to override the protection circuitry to the extent required to monitor the transmitter at full power; the override feature shall provide the required receiver output when the electrical isolation between the transmitter antenna terminal and receiver antenna terminals is in the range 26 dB to 36 dB.
- r.* Image frequency rejection: 80 dB.
- s.* IF rejection: 80 dB.
- t.* Spurious frequency rejection: 80 dB.
- u.* In-band IMD: 30 dB below a two-tone test level (935 and 1.045 Hz) for a frequency deviation of ±20 kHz.

3.3.4 UHF pre-post selector filter.

Tuneable RF filter to improve the selectivity performances of the UHF Link-11 transceiver assembly. The component shall be mounted within the same rack of the UHF transceiver. Minimum requirements:

- v.* Control from the associated UHF transceiver
- w.* Frequency range: 225 – 400 MHz
- x.* RF power rating: 100 W FM modulation
- y.* Selectivity: 50 dB bandwidth: ±8 MHz
- z.* Input/output impedance: 50 ohm unbalanced

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aa. Insertion loss: 2 dB max

3.4 Audio/Data Matrix

3.4.1 The Audio/Data Matrix is a switching equipment to commute audio, data (including sidetone) and keyline signals between local consoles, remote consoles, communication equipment and radio transceivers to be provided for all the involved sites.

3.4.2 Audio/Data Switch Matrix to be integrated by the Contractor shall meet the following requirements:

- a. Switching the system from HF Link-11 to UHF Link-11, audio and key lines
- b. Switching the system from HF Link-22 to UHF Link-22, audio and key lines
- c. Connecting the audio signals, VOICE, Link-11 DATA and Link-22 DATA, to the radio equipment HF and/or UHF
- d. Extra lines for expansion of two additional services and two additional equipment's
- e. Technology: solid state switching, non-blocking
- f. Audio inputs/outputs: 600 ohm balanced
- g. Management of input/output PTTs/Mutes/Keylines
- h. Audio channels isolation: 70 dB
- i. Gain: $0 \pm 0,5$ dB
- j. Frequency response (max): ± 2 dB between 20 and 3.400 Hz
- k. Switching time (max): 10 ms
- l. Local control: keyboard and LCD display
- m. Remote control interfaces: EIA RS 232 (or, equivalently, 422 or 485) and/or 10Base-T IEEE 802.3 (Ethernet).
- n. The matrix shall be reprogrammable via the remote control interface in better then 5s.
- o. Rack mountable with size (max): 19" x 480 mm x 4U (W x D x H)
- p. Matrix capacity two times the minimum needed

3.4.3 The Audio/Data Matrix shall be integrated with the "Matrix Bypass" patch panels meeting the following minimum requirements:

- a. Passive unit

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- l.* Weight (max): 500 kg (including HF dummy load)
- m.* Operating temperature: 0 ÷ +40 °C
- n.* Relative humidity: 90% at +40 °C without condensation

3.6 Dummy Load

3.6.1 The minimum requirements are:

- a.* HF dummy load capable of continuous power dissipation of 5 kW compliant with the following minimum requirements:
- b.* Frequency range: 2 ÷ 29.9999 MHz
- c.* Direct connection into 50 ohm coaxial line
- d.* Power dissipation capability: continuous 5 kW
- e.* VSWR (max): 1.1:1
- f.* Optional remote control interfaces: EIA RS 232 (or, equivalently, 422 or 485) and/or 10Base-T IEEE 802.3 (Ethernet)
- g.* Power supply: 230 Vac ± 10 % single phase @ 45 ÷ 65 Hz
- h.* Power consumption (max): 2 kW
- i.* Operating temperature: 0 ÷ +40 °C
- j.* Relative humidity: 90% at +40 °C without condensation
- k.* Cooling system: forced air
- l.* Interlock protection

3.7 HF Transmitter Antenna

3.7.1 The design, production and installation of the antenna masts shall comply with the following standards:

- a.* EN ISO 1461 – Hot dip galvanized coatings on fabricated iron and steel articles;
- b.* EN 10204 Metallic materials. Types of inspection documents;
- c.* EN 10025 – Hot rolled products of structural steels. General technical delivery conditions;
- d.* EN ISO 14 713 (Part 1, 2 and 3) – Zinc coatings - Guidelines and recommendations for the protection against corrosion of iron and steel in structures;
- e.* EN 10210-1 – Hot finished structural hollow sections of non-alloy and fine grain steels;

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- f. ISO 898 (part 1, 2 and 5) – Mechanical properties of fasteners made of carbon steel and alloy steel;
- g. ISO 5817 – Welding - Fusion-welded joints in steel, nickel, titanium and their alloys (beam welding excluded) - Quality levels for imperfections;
- h. ISO 6520-1 – Welding and allied processes - Classification of geometric imperfections in metallic materials - Part 1: Fusion welding.

3.7.2 The expected lifetime of the antenna mast shall be at least 15 years without the need for substantial maintenance.

3.7.3 Antenna requirements:

- a. Due to possible future expansions and limited space at the TX site, a combination of Monocone and Multifeed antennas with similar performance characteristics should be considered.

HF antenna with vertical polarization, omnidirectional azimuth radiation pattern and high efficiency and high gain at low take-off angle in order to sustain ground wave propagation over all the interested spectrum compliant with the following minimum requirements:

- b. Type: monocone (inverted cone)
- c. Frequency range: 2 ÷ 30 MHz
- d. Polarization: vertical
- e. Input impedance: 50 ohm
- f. Azimuth plane pattern: omnidirectional (within ± 1 dB)
- g. Elevation plane pattern: high gain at low take-off angles (nominal 5 dBi @ 2 MHz)
- h. VSWR (max):
- i. 2,0:1 into 50 ohm and in all the specified frequency range (transmitting)
- j. 2,0:1 into 50 ohm and, at least, in the frequency range 3 ÷ 30 MHz (receiving)
- k. Power handling capability (transmission): 10 kW
- l. Dimensions (max):
The maximum dimensions of the HF Antenna shall be based on the limited ground available at the TX site, taking into account that

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in the future an additional antenna for Link-22 (skywave) might be placed at this location.

m. Diameter (guy to guy with ground screen included):

- 80 m (transmitting), see also paragraph 3.7.3 (l)
- 53 m (receiving)

n. Height: maximum height in line with National regulations

o. The antenna sub-systems mounted on the antenna masts, as well as the antenna masts themselves shall be capable of withstanding following environmental conditions without suffering degradation of system performance (gain, pattern type, sensitivity) and without suffering permanent mechanical damages:

- Local weather conditions pertaining temperature, snow load and ice accumulation (glaze ice – 0.9 g/cm³), as per STANAG 4370. The region is defined as conditions A3 Intermediate and C0 Mild Cold (according to STANAG 4370) for the purpose of this Contract;
- High Temperature: Norm: + 65° C for operation;
- Low Temperature: Norm: - 50° C for operation;
- 44 - 61 m/s ±10% wind in Rozewie
- 44 - 61 m/s ±10% wind in Rzucewo
- Hailstones of up to 25 mm diameter, 0.9 g/cm³ density and 58 m/s terminal velocity;
- Sand and dust concentrations up to 1 g/m³, with particle size down to 20 µm at an air speed up to 20 m/s;
- The fundamental resonance frequency of the mast with equipment shall be greater than 3 Hz;
- The design of the antenna masts shall take into account seismic conditions of HN.

p. The antenna shall be provided with grounding/earthing and air obstacle light kits; each light kit shall include a double toroid transformer to be connected to light power supply at the base of the related antenna; the installations of air obstacle lights shall be implemented in accordance to ICAO Annex 14, Volume 1, Chapter 6, “Visual aids for denoting obstacles”, latest edition. The

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antenna and the support structure shall be treated so as to withstand installation in proximity of the sea.

3.8 UHF Antenna

Collinear UHF antenna with two dipoles with omnidirectional azimuth radiation pattern compliant with the following minimum requirements:

- a. Type: 2-channel collinear dipoles antenna
- b. Frequency range: 225 ÷ 400 MHz
- c. Polarization: vertical
- d. Omnidirectional azimuth radiation pattern
- e. Input impedance: 50 ohm
- f. Directivity gain: nominal 2 dBi
- g. VSWR (max): 2.5:1 (into 50 ohm and in all the specified frequency range)
- h. Isolation between channels: 25 dB
- i. Power capability: 400 W
- j. Dimensions (max):
- k. Diameter: 0.35 m
- l. Height: 3 m
- m. Weight (max): 35 kg
- n. Environmental operation:
 - 44 - 61 m/s ±10% wind in Rozewie
 - 44 - 61 m/s ±10% wind in Rzucewo
- o. Omnidirectional

3.9 Receiver HF/SSSB

- a. Rack mountable HF receiver compliant to Link-11 and Link-22 standards compliant to the following minimum requirements:
- b. Frequency range: 2 ÷ 29.9999 MHz
- c. Frequency tuning steps: 10 Hz

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- d. Tuning time (max): 10 s ¹⁰
- e. Frequency stability (max):
- f. ± 1 part in 10^7 after 30 minute warm up period
- g. ± 1 part in 10^8 for any period of 24 hours after a warm up period of 4 hours under any combination of specified service conditions
- h. RF input: 50 ohm impedance unbalanced to ground with an input VSWR not exceeding 2,5:1 over the operating frequency range
- i. Modes of operation:
 - AM including USB, LSB and ISB in compliance with STANAG 5511 and STANAG 5522
 - CW
- j. Audio outputs: 0 ± 3 dBm (adjustable) and 10,3 dB PEP/avg on balanced ungrounded lines with 600 ohm terminations
- k. Mute input
- l. Time delay (max): 2.5 ms (for any single frequency over the range 500 ÷ 3.050 Hz)
- m. Group (or differential) delay (max): 500 μ s (within the frequency range 815 ÷ 3.050 Hz)
- n. Audio frequency response (max): 2 dB passband 450 ÷ 3.050 Hz at the receiver output; response down by 2.5 dB between 415 and 450 Hz; response down by 3 dB at 300 Hz; response down by 60 dB at -400 and 4400 Hz; gain for each sideband adjustable to within 1/2 dB of nominal output
- o. Phase jitter (max stability): 2.5 degrees (rms value) and the probability of a shift greater than 30 degrees shall be 0.01 % when measured at the signal output terminals¹¹
- p. Sensitivity: -110 dBm producing a S+N/N of 10 dB (in both USB and LSB over the specified frequency range)
- q. Desensitisation dynamic range: with the receiver in a SSB mode of operation (with the passband setting providing a nominal 3 kHz

¹⁰ When the radio is operated with an external automatic antenna multicoupler, the coupler tuning time should not exceed 60 s.

¹¹ Measurements shall be performed over a sufficient number of adjacent frame pairs to establish the specified probability with a confidence of 95%; measured values shall be the average phase in an averaging time of 9,09 ms and 18.18 ms for frame lengths of 13,3 ms and 22 ms, respectively.

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- bandwidth) and tuning centered on a sinusoidal input test signal which level is adjusted to produce an output SINAD of 10 dB, a single interfering sinusoidal signal equal to or less than 90 dB above the test signal level and offset from this latter by $f_c \pm 5\%$ shall not degrade the output SINAD by more than 1 dB.
- r. Linearity: with the receiver operating at maximum sensitivity and with a reference input signal that produces an output SINAD of 10 dB, the output SINAD shall increase monotonically and linearly within +1.5 dB for a linear increase in input signal level until the output SINAD is equal to 30 dB; when saturation occurs, the output SINAD may vary +3 dB for additional increase in signal level.
 - s. Input signal protection: the receiver (with primary power on or off) shall not be damaged by the application of any input RF signal up to +53 dBm (open circuit peak value) applied to the receiver input terminals for a duration of 1 minute.
 - t. Internally generated spurious outputs (max): -112 dBm for 99 % of the available 3 kHz channel; -100 dBm for 0.8 % of the available 3 kHz channel; for 0.2 % of the available 3 kHz channel, spurious signals may exceed these levels.
 - u. Image frequency rejection: 70 dB
 - v. IF rejection: 70 dB
 - w. Other signals spurious: 55 dB for frequencies from $f_c \pm 2.5\%$ to $f_c \pm 30\%$ and 70 dB for frequencies beyond $f_c \pm 30\%$.
 - x. Audio frequency Total Harmonic Distortion (THD): with the receiver at rated output level, 35 dB below a reference tone level that is a RF test signal (producing a frequency within 300 ÷ 3050 Hz) 35 dB above the receiver noise threshold.
 - y. In-band IMD: with reference to two input signals of -53 dBm each spaced 110 Hz apart at frequencies selected to produce audio outputs in the 450 ÷ 3050 Hz range, 35 dB below the output level of either audio tone.
 - z. Out-of-band IMD: for a two-tone equal-amplitude input signals with each tone at -36 dBm or greater (with the closest signal spaced 30 kHz from the operating frequency), second order (and higher-order) responses shall produce an output SINAD equivalent to a single 110 dBm tone.
 - aa. Automatic Gain Control (AGC):

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- Attack time delay (max): 12 ms (from no signal to a two-tone +19 dBm signal).
- Decay (or release delay) time (max): 20 ms (from a 16 tone +19 dBm signal to a two-tone -81 dBm signal, in the data mode).
- Recycle period: capability of repeating the above operations every 100 ms (with a period between data signals higher than 10 ms).
- Dynamic range: the AGC shall maintain the receiver output level at 0 ± 3 dBm when the input signal level is in the range $-87 \div +13$ dBm.

bb. BITE: embedded

cc. Local and remote (BITE) controls

dd. Remote control interfaces: EIA RS 232 (or, equivalently, 422 or 485) and/or 10Base-T IEEE 802.3 (Ethernet)

ee. Power supply: 230 Vac ± 10 % single phase @ 45 \div 65 Hz

ff. Power consumption (max): 350 W

gg. Rack mountable with size (max): 19" x 580 mm x 3U (W x D x H)

hh. Weight (max): 20 kg

ii. Operating temperature: 0 \div +40 °C

jj. Relative humidity: 90 % at +40 °C without condensation

kk. Time delay (max): 3.5 ms (for any single frequency over the range 500 \div 3.050 Hz) (design objective 2.5 ms).

3.10 HF-RX Pre-Selector

- a. Rack mountable HF-RX pre-selector to allow the use of the receiver with strong input signals (improved receiver input selectivity). Each pre-selector shall meet the following minimum requirements.
- b. Automatic/manual and fast tuning type (less than 10 ms) with RF input signal protection
- c. Frequency range: 2 \div 29.9999 MHz
- d. Selectivity: 3 dB at 2% off the operating frequency and 50 dB at $f_c \pm 10$ %

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- e. Gain: 0 ± 3 dB
- f. Noise Figure (max): 20 dB
- g. IMD: 35 dB
- h. Power supply: 230 Vac ± 10 % single phase @ 45 ÷ 65 Hz
- i. Power consumption (max): 100 W
- j. Rack mountable with size (max): 19" x 580 mm x 2U (W x D x H)
- k. Weight (max): 20 kg
- l. Operating temperature: 0 ÷ +40 °C
- m. Relative humidity: 90 % at +40 °C without condensation
 - Intermodulation distortion: better than 35 dB

3.11 HF-RX Multi-coupler

- a. Rack mountable HF-RX multi-coupler in order to allow the use of one HF antenna with two (2) HF receivers. The following minimum characteristics for multi-coupler shall be met:
- b. Low noise and high linearity, operative also in presence of strong signals minimizing distortion and intermodulation
- c. Frequency range: 2 ÷ 29.9999 MHz
- d. Input pass band filter: 2 ÷ 29.9999 MHz, high rejection of out-of-band signals
- e. Input and output impedance: 50 ohm
- f. Number of inputs (antenna): 1
- g. Number of outputs (receivers): 2
- h. VSWR input/output (max): 1.5: 1
- i. Isolation between RF outputs: 30 dB
- j. Rack mountable with size (max): 19" x 480 mm x 4U (W x D x H)
- k. Weight (max): 70 kg
- l. Operating temperature: 0 ÷ +40 °C
- m. Relative humidity: 90 % at +40 °C without condensation

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3.12 HF Receiver Antenna

3.12.1 The physical and environmental requirements of this antenna and supporting structure are the same as for the HF Transmitter antenna specified in section 3.7.

3.13 RF Cabling

Different type of coaxial cabling to be provided for all the involved sites with the aim to connect transceivers and antennas to be compliant to the following minimum requirements:

- a. Standard RG-213/U coaxial cable attenuation (max):
 - 10 dB/100m @ 225 MHz;
 - 15 dB/100m @ 400 MHz
- b. Standard 7/8" coaxial cable attenuation (max):
 - 0.2 dB/100m @ 2÷4 MHz
 - 0.3 dB/100m @ 6 MHz
 - 0.4 dB/100m @ 10 MHz
 - 0.7 dB/100m @ 30 MHz
 - 1.8 dB/100m @ 225 MHz
 - 2.5 dB/100m @ 400 MHz
- c. Standard 1-5/8" coaxial cabling attenuation (max):
 - 0.1 dB/100m @ 2÷4 MHz
 - 0.2 dB/100m @ 6 MHz
 - 0.3 dB/100m @ 10 MHz
 - 0.4 dB/100m @ 30 MHz

The RF cabling shall be equipped with the proper connectors and cannot be directly connected to the transmitters; they shall pass from a suitable panel to be provided and installed at the entrance of the barrack/building; this latter panel shall be provided and equipped with suitable surge dischargers.

3.14 19" Standard Rack Cabinets

19" standard rack cabinets, having the dimensions indicated in this document, in the drawings and, in any case, able to support the installation of the envisaged devices.

- a. Ground connection kit for each frame part

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- b.* Two supply ribbons for the active parts, cabled on the back post, composed by at least 12 VDE (C15) type sockets
- c.* Suitable number of covering blank panels
- d.* A proportionate magneto-thermal differential breaker and a warning light
- e.* Front service socket set
- f.* Proportionate cooling set for equipment heat removal in the worst case
- g.* Ventilation slits to allow the forced cooling
- h.* Service drawer, minimum 2U height, placed to be easily accessible by a standing person. One every three racks.
- i.* Suitable protections against dust for the cables inputs and for the ventilation slits
- j.* External label in order to identify the rack in accordance with ANSI/TIA/EIA-606 or ISO/IEC 14763-1 Standards. The label shall be put either on the front or on the rear of the rack
- k.* External not removable label in metallic material, reporting the following data:
 - Inventory number and contract date (contract nr. Contract number of mm.dd.yyyy Inventory)
 - Purchaser
 - Contractor (contracting Company name)
 - Use destination

The rack/frame protection level shall be at least IP 20 and the supplying shall include the supports and the elements for installed cables bundling and blocking. The rack shall be compliant to IEC 60297 standard and shall be suitable for structured cabling having TIA/EIA 568-C standards and similar. The rack shall be able to contain a 19" Units number equal to how much indicated in the design and in the related estimate. The frame shall allow a correct installation and cabling management (e.g., the cables shall be installed in the observance of minimum bend radius).

3.15 Multiplexer and Radio Relay/DLOS Assembly

Radio relay and multiplexer, or similar device, to assemble and disassemble the analogue Link-11/Link-22 audio/data signals to be exchanged between the couple

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VLI/R - DTS (at Rozewie) and the remote radios (at Rzucewo). In addition, the microwave radio relays shall guarantee also the transport of packet traffic (mainly composed of VoIP/RoIP and control channels for remote management sub-system) between involved sites.

DLOS dish, as well as UHF antenna and AIS antenna shall be not mounted on existing buildings. A combined stand-alone mast/pole construction shall be used instead.

Minimum requirements:

- a. Platform: IDU-ODU architecture (connected by coaxial cable).
- b. Frequency band(s) in the range from 4.4 GHz to 5.0 GHz.
- c. Antenna polarization: horizontal or vertical (through 90° rotation of the antenna)
- d. Transmission/switching capabilities: TDM/packet/hybrid
- e. Air capacity (referred to packet transmission applications): 8 Mbps full-duplex throughput by single polarization through fixed or adaptive modulations.
- f. Layer-2 functions (referred to packet transmission applications):
 - IEEE Std. 802.1AX (Link Aggregation)
 - IEEE Std. 802.1X (Port based network access control)
 - Quality of Service (QoS) (IEEE Std. 802.1D (Media Access Control (MAC) Bridges) and IEEE Std. 802.1Q (Virtual Bridged Local Area Networks))
 - Support for 256 VLANs
- g. Packet network synchronization capability: Precision Time Protocol (PTP) v2 IEEE 1588-2008
- h. Assembly interfaces:
 - Link-11 audio/data and keylines discrete signal inputs/outputs
 - E1 trunk line conforming ITU-T Rec. G.703 [56], G.704 and G.732
 - Gigabit Ethernet conforming to standard 1000BASE-T (10/100/1000 autosensing) IEEE 802.3
- i. BITE: embedded

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- j. Performance monitor: quality of line(s) and path(s) through collection of suitable parameters every minute and 24-hour statistics (in compliance with ITU-T Rec. G.784 and/or G.828)
- k. Local and remote controls: BITE and performance monitor
- l. Remote control interfaces: 10Base-T IEEE 802.3 (Ethernet)
- m. Power supply: 230 Vac \pm 10 % single phase @ 45 ÷ 65 Hz (also through transformer to be supplied and installed along with the device)
- n. Power consumption (max): 400 W
- o. Operating temperature: 0 ÷ +40 °C
- p. Relative humidity: 90 % at +40 °C without condensation

The interfaces capacity shall be the minimum needed to satisfy each site requirement and the very final identification of the number and characteristics of signals to be transported between the involved sites shall be defined during the next design phases by CIS Contractor. The capacity related to the different frequency bands can be provided through the use of different equipment pertaining to different manufacturer companies.

This assembly shall respect the constraints required in the Link-11/Link-22 audio/data signals exchange between the DTS and the remote involved radios¹²; such constraints are all those contained within MIL-STD-188-203-1A referred to timings/synchronizations and power levels, in particular “the DTS shall apply the radio keyline a minimum of 7 ms and a maximum of one frame interval (Ed: 13,33 ms) prior to the application of the audio composite signal”; consequently, the differential delay between keyline and audio composite time transmissions shall be in the order of milliseconds.

All the radio relay installations shall be tested in compliance with ITU-T Rec. Y.1564 methodology.

¹² As far as the transportation of Voice or IP traffic, no stringent time constraints are required.

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SECTION 4 Technical Requirements: Systems and Infrastructure

The following paragraphs define the minimal requirements the Contractor shall be compliant with in order to implement auxiliary SSSB systems and to perform infrastructure activities (including cabling).

4.1 DTS Link-11 Site Architecture

4.1.1 The encrypted stream of Link-11 data from one TDS computer, such as the SSSB buffer server, to another – or more – TDS computer, such as a naval TDS, responds to the basic architecture of Figure 12, which requests for the use of TDS computers, cryptos, DTSs and RF transceivers for distribution over the air.



Figure 11: Basic Link-11 system architecture

4.1.2 Other solutions were developed throughout the history of deployment of SSSB and Link-11 installations in order to handle situations with radio sites unmanned or remote with respect to the buffer and control centres and efficiently transport multiple audio and control signals between the DTS and the radio equipment. They are known as:

4.1.3 Split-Site DTS,

In which the two primary functions of the Link-11 Terminal set (control and conversion into audio signal) are split between two physical locations, a split-local site as the control centre and a split-remote site with both radio transmitters and receivers. A DTS is required at each location

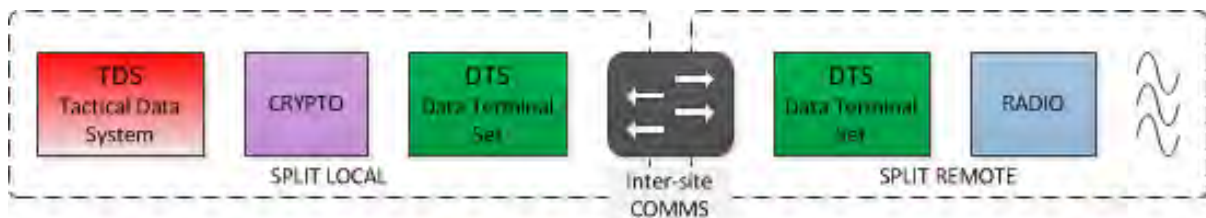


Figure 12: DTS Split-Site configuration

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4.1.4 Split-Split

Suited for remote independent transmit and receive radio sites, with the radio receiver located at the Intermediate Remote site (IREM), the transmitter at the Distant Remote site (DREM) and the TDS computer at the split local site. A DTS is required at each location.

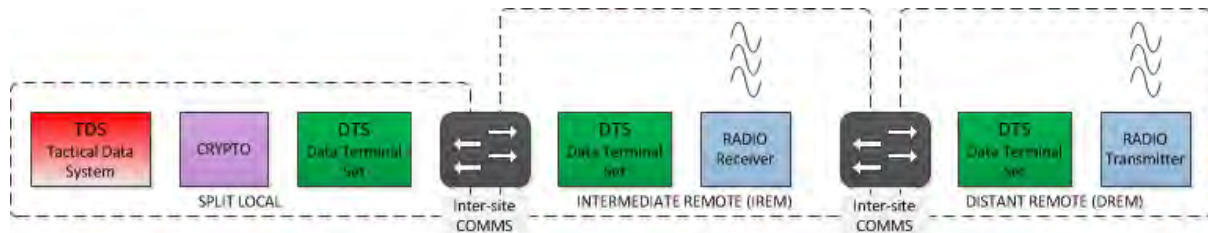


Figure 13: DTS Split-Split site configuration

In both of the configurations above, couples of wireline modems are to be used to connect the DTS devices. According to the technical data from the producer of the DTS model used in most recent NCI SSSB installations, the round-trip delay over the digital links from the local site to a remote site must be less than 65 ms.

For the scope of this project, since the radio sites are remote with respect to the control site(s) and the respective inter-sites communication sub-systems could be implemented, to date, only through the use of the National Digital Network (NDN), such timing requirements could have been achieved only through a very performing NDN.

In order to overcome this limitation and relax the timing requirements for the Inter-site communication sub-system, NCI developed an alternative design with the use of the VLI (Versatile Link Interface) interfaces. Multiple and differentiated VLI interfaces within the Link-11 architecture provide for the

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exchange of data and control signal between the TDS computer and the remote DTS:

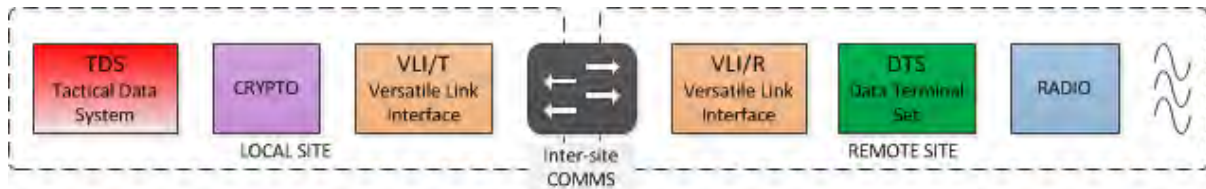


Figure 14: SSSB/Link-11 system based on NATO Versatile Link Interface (VLI) architecture

- 4.1.5 One VLI device in remote configuration (VLI/R) is connected to the DTS of the radio site. It emulates the remote TDS and thus terminates completely the Link-11 interface and all the timing requirements associated to it.
- 4.1.6 One VLI device in terminal configuration (VLI/T) in the local site. The VLI/T receives Link-11 data from the VLI/R via the NDN network and regenerates the Link-11 signal for the TDS.
- 4.1.7 One VLI device in data configuration (VLI/D or DLI) in between the TDS computer and the Link11, in order for the computer to interface the crypto NTDS or ATDS port.

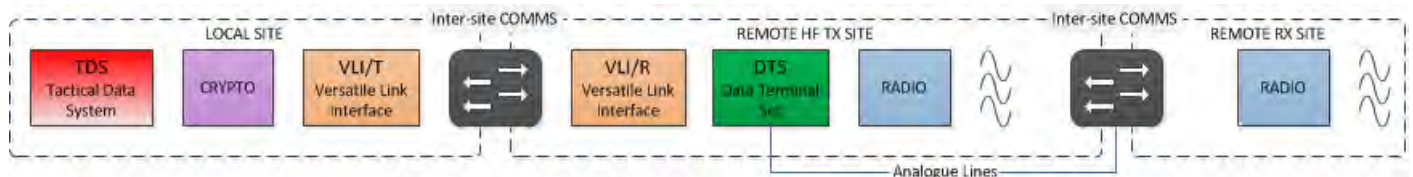


Figure 15: SSSB system – Simplified final architecture

4.2 UPS System

- 4.2.1 No additional NB backup power, or UPS, is anticipated. However, if it is subsequently found that additional UPS capacity is required for the correct operations of the CIS equipment in the facility building of the radio sites, then the provision of such additional UPS will be a Contractor's responsibility. Also, if replacement of battery pack(s) of existing UPS appliances is required, then the Contractor shall provide such replacement.

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- 4.2.2 In case complementary UPS NB appliances are required, the Contractor shall supply a UPS system with at least the following characteristics:
- a. Input voltage 400 Vac three phases with neutral, 45 to 65 Hz, double-online conversion with zero time transfer.
 - b. Output Power sized in accordance to the applied loads, considering a minimum of 20 minutes of backup power in case of a power failure.
 - c. Batteries shall be of sealed maintenance-free type, replacement of the batteries shall be possible without powering down the UPS.
 - d. The expected battery lifetime shall be at least 9 years.
 - e. UPS shall be rated for a 20% spare capacity.

4.3 Rooms Air Conditioning

- 4.3.1 Not Applicable

4.4 HF Transmitters Equipment Cooling

- 4.4.1 The Contractor shall provide cooling for HF transmitters in accordance with:
- a. Close circuit operations
 - b. Intake air filters from the outside
 - c. Ventilation or Ventilation/Cooling of the racks with high heat dissipation. Adjustable air flow to keep the mean temperature to the optimal value for the operating equipment. The energy consumption and the air flow shall be kept as low as possible.
- 4.4.2 The following requirements shall be complied:
- a. The cooling equipment shall be compatible with the installed fire extinguishing system (e.g. providing suitable interfacing, to stop HVAC in case of fire).
 - b. The cooling equipment shall be duplicated in order to guarantee continuous operations.
 - c. The cooling system shall be of heat-pump type, air/air reversible, with split unit installed on the walls.
 - d. The equipment shall be installed outside, preferably on the roof and splinter protected.
 - e. High quality COTS shall be used.
 - f. The system shall be automatic and provided with remote control and monitoring interfaces
 - g. Noise and vibrations shall be kept as low as possible and conforming to working environment specifications

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- h. Use of fluid is not recommended.
- i. The air flow shall be in ducts. Plenum is not recommended. It is recommended the use of suitable diffusers.
- j. The recommended cooling gas is R 407 C type or in accordance with the latest regulations.
- k. The incoming air flow shall be filtered at least to M Class.
- l. The Inside/outside openings shall be shaped (zig-zag) for splinter protection and secured to avoid entrance of animals, objects, etc.
- m. The racks shall be provided with automatic air flow control to maintain a constant operating temperature.
- n. Whenever possible avoid the use of ON/OFF devices.
- o. Special consideration shall be used in considering the heat exchanged of the HF transmitters with the room environment.
- p. Minimal energy absorption shall be one of the main design requirements.
- q. In addition:
 - Outside openings shall be secure.
 - Heat distribution using insulated copper pipes.
 - Outside Moisture discharge.

4.5 RF Cable Laying

4.5.1 The cable shall be of the following types:

- Flexible cable (wrappable/cable conduit lay)
- Rigid/semi rigid cable

4.5.2 The Contractor shall follow the below instructions related to the installation environment:

- a. Internal, laid
 - On metal duct, fixed in ordered manner.
 - On metal duct or vertical cable ladder, fixed on the ducts or ladders with cable clamps designed to support the cable weight. The clamps shall be installed at least every linear meter of the cable length.
- b. External, laid in cable duct trench at a depth of 60cm with inspection wells every 50m
 - If flexible routed through pipes are used then the size of the pipes

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shall be sufficient to easily proceed with the installation of the cables. The size of the pipes shall also allow the installation of the same quantity of cables again as the initial installation.

- If rigid lay in pipes made of two half concrete or clay pipes, with cable laying on the bottom half covered by the second half and sealed with mortar. Inspection wells shall be provided at junction points.

4.5.3 The Contractor shall perform the installation in accordance with the following general requirements:

- a. The curve radius of the laid cables shall conform to the cable manufacturer specifications.
- b. In cable routing special care shall be made in order to avoid torsions that can damage the cable and which can prevent pulling out and/or further insertion of additional cables.
- c. Cable junctions are allowed only where they correspond to inspection wells.
- d. Cable section shall be the same for the whole length of the cable.
- e. The cables shall be labelled and identified with cable strips:
 - i. At both ends
 - i. At every inspection well
 - ii. Every 10 m along the cable ducts or cable ladders
 - iii. Every time the cable change course

4.6 HF Antenna Installation

4.6.1 The Contractor shall conduct and/or obtain a proper soil study at the locations of antenna foundations, in order to determine the required design and size of those foundations.

4.6.2 Health and safety measures shall be implemented: including but not limited to safe to climb structures, sharp corners avoidance and proper safety marking.

4.6.3 For antennas that require a ground plane, the Contractor shall:

- a. Prepare the installation area in accordance to section 4.9 below.
- b. Excavate up to 30 cm the area intended for the laying of the ground plane and verify the flatness.
- c. Place pins on the area to allow position identification of antenna and guy line plinths.

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- d. Put in place a layer of dry rubble on the levelled area.
 - e. Install the ground plane as per Manufacturer specifications.
 - f. Put in place a layer of at least 10cm of mixed quarry.
- 4.6.4 For antennas that do not require ground plane, the Contractor shall:
- a. Clean and prepare the area.
 - b. Place pins on the area to allow position identification of antenna and guy lines plinths.
- 4.6.5 In addition, the Contractor shall perform the following Civil Works for HF antenna installations:
- a. Construction in reinforced concrete of the plinths of such a size to be compatible with the manufacturer specifications and the results of the soil tests.
 - b. The plinth at the base of the antenna mast shall be large enough to avoid that the grass growing around the area to come in contact with the antenna structure.
 - c. Connect the metal structures among them to the earth pins.
 - d. Prepare the base of the antenna for the RF cable joint, and the other devices as service power socket, discharger and air obstacle light power transformer.
 - e. Build a security/safety fence around the concrete base of at least 1m high. Fence material and size shall be adequate to avoid personnel accidental contact and wild animal access.
 - f. Antenna installation in accordance with the manufacturer instructions.

4.7 UHF Antenna Installation

- 4.7.1 The Contractor shall install the UHF antennas on a climbing galvanized steel pylon. The length of the pylon shall be identified by the Contractor per each site. UHF antenna as well as DLOS dish and AIS antenna shall be not mounted on existing buildings. A combined stand-alone mast/pole construction shall be used instead.

4.8 Microwave DLOS Antenna Installation

- 4.8.1 The Contractor shall install the required antenna mast for the installation of the microwave DLOS antenna required for communications between the two Radio Sites. Those antennas could be mounted on a galvanized steel

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mast/pylon of sufficient height to allow for the unhindered DLOS visibility between the two Radio Sites. The height of the mast/pylon shall be identified by the Contractor per each site. The height of the mast/pylon depends on the Contractor study for inter-site communication and the HN regulations.

4.9 Antennas Field Area Preparation

4.9.1 The site preparation activities are needed to clear all the designated areas inside the sites. In particular the areas dedicated to the HF antennas, the construction of the barrack/building, as well as the construction of the road. A summary of the preparation activities that may be required include:

- Clearing through cutting and stripping to surface level of any type of vegetation (trees, bushes and shrubs, including the remove of roots related to trees of medium size through excavation);
- Clearing through crushing of main rocks;
- Removal of any other items that can obstacle the constructions/installations;
- Digging of topsoil/grass layer, at least 20 cm deep, ground levelling and compacting;
- Excavation for the construction of the road, the barrack/building and for the external cabling distribution systems for services (power, signal and RF cabling);
- Preparation of the area designated for the HF antennas.

4.9.2 The zones designated for the HF antennas shall be two different areas at a distance of at least 100 m. Sufficient space on the site shall be reserved for a possible installation of a third antenna. After the clearing of those areas (from trees, bushes, shrubs, main rocks, topsoil, etc.), the related preparation includes (for each area):

- The flattening with slope close as much as possible to 0%; such flattening shall be performed at least for the expected surface of the ground screen.
- The excavation of the area intended for the laying of the HF antenna's ground screen. The bottom of the excavation shall be as flat as possible.
- The placement of pins to allow immediate position identification of the HF antenna tower and guy line plinths.
- The placement of a first layer of dry rubble (e.g. fine materials passing sieve, crushed rock, mixed quarry or similar) on all the excavated and flattened area for the laying of the HF antenna's ground screen.

4.9.3 All excavated spoil that is not re-used shall be disposed by the Contractor as per HN regulations.

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4.9.4 After the preparation of the antenna field, the HF antennas shall be installed.

Such installations include:

- The construction in reinforced concrete of the antenna plinths. The size and characteristics shall be compatible with the manufacturer specifications, the results of the soil tests, specific seismic and static calculations and the local environmental conditions (windspeed, temperature, a.s.o.);
- The preparation of the antenna bases for the RF cabling joints, and the other devices (service power sockets, dischargers, power transformers for air obstacle lights, etc.);
- The installation of the ground screens (provided along with the antennas) as per manufacturer specifications;
- The installation of air obstacle lights (provided along with the antennas) when relevant as per manufacturer specifications. No civil, military or private aerodrome or helipad was confirmed within the site boundary or in the proximity to date;
- The driving into the ground of the earthing/grounding rods (provided along with the antennas). The positions and insertion conditions shall be compatible with the manufacturer specifications and with the results of the soil tests;
- The electrical connection of the entire antenna metal structures (including the ground screens) to the earthing/grounding rods;
- The placement of a second layer of dry rubble (e.g. fine materials passing sieve, crushed rock, mixed quarry or similar) in order to fill the all excavated area for the laying of the antenna's ground screens.

4.9.5 Each HF antenna installation shall be capable of acceptable performance when exposed to windspeeds between 44-61 m/s $\pm 10\%$. The antennas and the supporting structure shall be designed and treated so as to withstand salt and other effects due to the vicinity of the sea.

4.9.6 The air obstacle lights infrastructure kits shall include transformers to be connected to the power supply at the base of the antennas, as outlined in para. 4.10 below. Marking and painting too shall be provided for the antenna main vertical structures/poles when relevant in compliance with ICAO norms, and valid national POL regulations.

4.9.7 The RF cabling shall be implemented with coaxial cables, minimum section 1-5/8" for the long external runs and 7/8" for cable tails and connections to devices and panels. The cables shall pass from a suitable panel installed at the entrance of the barrack/building and equipped with surge dischargers

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and earthing kits to be connected with the lightning protection system of the barrack/building.

- 4.9.8 In order to prevent physical damage to the HF antennas and protect personnel from hazardous RF voltages, the installation shall be completed with the installation of fence(s) around the HF antenna field. The material and size of this security/safety fence(s) shall be adequate to avoid personnel accidental contact and wild animal access.

4.10 Antenna Obstruction Lights (Aircraft Warning Lights)

- 4.10.1 The infrastructure shall be implemented in accordance to ICAO Annex 14, Volume 1, Chapter 6, "Visual aids for denoting obstacles", latest edition, as well as valid national POL regulations.
- 4.10.2 All the antennas shall be provided with obstruction light kits, based on LED technology for low/no maintenance.
- 4.10.3 The kit shall include a double toroid transformer to be connected to LT power supply at the base of the antennas.
- a. The LT power cable(s), connected to the electric panel of the site, shall be laid into a PVC pipeline laid underground with a sufficient number of inspection wells.

4.11 Lightning System

- 4.11.1 The lightning system, which specific characteristics shall be identified in relation to the structure to be protected, shall be designed in relation to the following regulations:
- a. EN 62305-1:2011, "Protection against lightning - Part 1: General principles"
 - b. EN 61000
 - c. Safety regulations

4.12 Ground and Earth System

- 4.12.1 The earth system shall be implemented by means of an underground copper braid laid along the building perimeter reinforced with ground earth stakes accessible and sectioned via inspection wells.
- 4.12.2 The earth system shall be sized in accordance with the electric system specifications and of the surround soil type and quality. In any case the total earth resistance shall not be in excess of a few tenths of an Ohm.
- 4.12.3 The ground system shall be implemented by connecting all metal structures existing in the building and of the concerned structures related to the civil infrastructure and the existing systems like electricity, air cooling ventilation heating etc.

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4.13 Site Monitor System

- 4.13.1 The Contractor shall supply one Site Monitor System at each site. This shall be compatible with any monitoring system already installed by the HN.
- 4.13.2 Function:
- a. The function of the site monitor system is to reveal the status of operation of the respective SSSB Radio Site.
 - b. The monitor system shall provide the vital site states and alarms via an interface to the SSSB Open System Communication Control (OSCC LLC).
- 4.13.3 Architecture:
- a. The data to be monitored are conveyed to the management system that will relay to the remote monitoring station at the other site and the control centre via Local Area Network (LAN) and Long Haul Network (LHN).
 - b. Monitored data.
 - c. Radio Receivers, HF and UHF.
 - d. Radio Transmitters, HF and UHF.
 - e. Low Tension power network.
 - f. Low Tension UPS.
 - g. Electric system.
 - h. Air conditioning system.
 - i. Equipment air cooling system.
 - j. Fire Alarms.
 - k. Anti-intrusion system.
- 4.13.4 Any other recommendation from the Contractor in relation to the installed devices shall be detailed in his bidding proposal.

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SECTION 5 Technical verifications

5.1 Technical verifications

5.1.1 These activities are studies dedicated to the verification of the technical and operational.

5.1.2 The Contractor shall prove the EM coverage as per the following:

a. SSSB Operational Requirement

- “To provide a real-time automatic exchange of Air Defence (AD) data between Maritime Forces and NATO Defence Ground Environment (NADGE)”

b. Radio coverage

- HF: “300 NM gapless coverage”
- UHF: “LOS up to 150 NM”

c. HF Operational Modes

- Ship-Shore High Speed Data exchange NTDS Link-11 as per MIL-STD-188-203-1A and STANAG 5511
- Ship-Shore High Speed Data Exchange Link-22 as per STANAG 5522
- Voice SSB for coordination, Ship-Shore

d. Transmitters

- TX power 5kW peak and mean, frequency range 2-30 MHz, SSB for Link-11, Link-22 modes and Voice mode

e. Propagation Type

- Link-11 Vertical polarization, Ground wave
- Link-22 Vertical polarization, Ground wave
- Link-22 Sky wave
- Voice Coordination Vertical polarization, Ground wave

f. Minimum S/N in Link-11 mode

- With reference to MIL-188-203-1A para 5.1.13, in order to identify the coverage area in Link-11 mode, using the simulation program Advanced Stand Alone Prediction System (ASAPS), the following values can be used to guarantee a BER value better than 10^{-3} :

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- a. Receiver minimum input power value:
 - $P_{IN} = -105$ dBm (equivalent to $1.27 \mu\text{V} / 50$ Ohm)
- b. Receiver input Signal Noise Ratio value
 - S/N = 15 dB
- c. Minimum S/N in Voice mode
 - In this operational mode for the HF receiver it is possible to assume the following conditions for the input and output (minimum sensitivity) that a good quality of the Voice signal delivered by the receiver:
 - Input signal: -110 dBm (equivalent to 0.7 Volt / 50 Ohm)
 - Output S/N: 10 dB
- d. TX Antenna Field
 - The following parameters are the minimum requirement for the TX Antenna Field:
 - Coverage Area: 300 NM
 - Minimum S/N: 10 dB at the receiver antenna
 - TX Power: 5 kW
 - Simulations: Month/Day/Hour
 - Frequency: 2 to 30 MHz
 - BW: 3 kHz
 - RX Antenna: Isotropic Vertical
 - Man Made Noise: -150 dBW/Hz

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(shipboard)

- Propagation: Ground Wave
- Polarization: Vertical/Horizontal, Elliptic

g. Results representation

- Recommended tabular representation (examples):

Area of interest:	300 nm	TX Antenna type
S/N	10 dB	

Transmission				Reception			
TX Power		5 kW		RX Antenna		Isotropic Vertical	
Mode		See Table		BW		3 kHz	
Winter				Man Made Noise		-150 dBW/Hz @ 3 MHz	
Summer				Required Days		95%	
Day	D	Hour		Confidence Level S/N Ratio		95%	
Night	N	Hour					

Freq (MHz)	Sky Wave Propagation				Ground Wave Propagation			
	January		July		January		July	
2								
3								
4								
5								
6								
7								
8								

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...								
29								
30								

Legend:

O	No Coverage
X	Coverage
	Not evaluated

- Recommended map representation:

Location		Antenna			
Frequency		Season		Time of Day	
TX Power	5 kW	Propagation		Man Made Noise	-150 dBm (ITU R, P372)
Reception confidence	95%	Required Days	95%	Bandwidth	3 kHz

- 5.1.3 HF Transmitter decoupling: For the two radio sites the Contractor shall verify the transmitter decoupling.
- a. To verify if the decoupling between the TX antennas it is sufficient to allow the correct operation of the transmitters in relation to the radiated signal quality.
- 5.1.4 The Contractor shall verify whether the radio communication system presents side effects related to insufficient decoupling:
- b. High coupling
 - Excess of SWR
 - Difficult automatic tuning of the final stage of the amplifier
 - c. Coupling

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- Spurious emission due to intermodulation between transmitters
 - Spurious emission in the TX bandwidth influence the quality of distant reception
 - Spurious emission outside the TX bandwidth influence the receivers of the RX site
- 5.1.5 The Contractor shall verify that maximum values recommended for the spurious emission values due to TX intermodulation are not exceeded:
- d. The quantity of the spurious emission values are related to:
 - Transmitter characteristics
 - Power Level
 - Antenna decoupling
 - Antenna characteristics
 - e. It is assumed that that quantity shall not be bigger than the spurious values generated by the transmitter when used with a dummy load that is 30/35 dB lower than the value of the two tones generated with full power
- 5.1.6 Recommended procedure
- f. Reference:
 - Richard C. Jonson, “Antenna engineering Handbook”, Third edition
 - g. Initial values:
 - Frequency: 2 – 30 MHz
 - Power Level: 5 kW
 - TX Antennas relative distances: (per Final Project)
 - Antenna characteristics: (per Final Project)
 - Equipment characteristics: (per Final Project)
- 5.1.7 Results representation:
- The Contractor shall provide drawings, representing the mutual decoupling between the antennas in dB, versus the relative distance, and versus the maximum coupling allowed by the transmitters and of the RF infrastructure
- 5.1.8 Decoupling between the TX Antenna Field and the RX Antenna Field. For the two radio site the Contractor shall verify the TX and RX Antenna Fields decoupling.

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5.1.9 To verify if the decoupling between the antenna fields it is sufficient to allow the correct operation of the SSSB system in relation to the potential corruption of information due to the amplification and demodulation process provided by the receivers related to string signals radiated by the transmitters.

5.1.10 HF Receiving Antennas efficiency

- a. Contractor shall verify the HF receiving efficiency;
- b. Contractor shall implement the RX site with one single receiver antenna;
- c. Contractor shall ensure that the antenna shall drive, using a multi-coupler or an antenna matrix, two HF Receivers with the associated division of the received signal from the antenna;
- d. Contractor shall verify that, in standard operational conditions, the received signal from a Naval Unit located within the SSSB coverage area is compatible with the receiver Signal Noise figure;

Such verification is deemed necessary even if, due to former experience in similar installation, the S/N ratio provides an external noise higher than the noise generated at the input of the receiver.

- e. In addition, the Contractor shall also verify if the presence of strong received signals produces any distortions at the receiver side. In such case the Contractor shall evaluate if the receiver characteristics are able to cope with such case. In case of adverse results, the Contractor shall propose any specification changes accordingly.

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BOOK II

PART IV – STATEMENT OF WORK

SOW - ANNEX C

SECURITY ASPECT LETTER

PROJECT SECURITY INSTRUCTIONS

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SECTION 1 SECURITY ASPECT LETTER (SAL)

- 1.1. In the performance of this Contract, the prime Contractor and any Sub-Contractor(s) are required to comply with NATO security regulations as implemented by the NSA (National Security Authority) of the Host Nation in which the work is performed.
- 1.2. All classified information and material shall be safeguarded in accordance with the requirements established by the NSA of the nation in which the work is performed.
- 1.3. In particular, the Contractor shall:
 - 1.3.1. Appoint an officer to be responsible for supervising and directing security measures in relation to the Request for Proposals (RFP), Contract or Subcontract;
 - 1.3.2. Submit in due time to his NSA the personal particulars of the persons he wishes to employ on the project with a view to obtaining Personnel Security Clearances (PSCs) at the required level.
 - 1.3.3. Maintain, preferably through the above mentioned officer responsible for security measures, a continuing relationship with the NSA in order to ensure that all NATO classified information involved in the Bid, Contract or Subcontract is properly safeguarded.
 - 1.3.4. Abstain from copying by any means, without first obtaining HN (programme/project office) permission, any classified materiel (including documents) entrusted to him by HN (programme/project office).
 - 1.3.5. Supply his NSA, when requested by the latter, with any information on persons who will be required to have access to NATO classified information.
 - 1.3.6. Maintain a record of his employees taking part in the project and who have been cleared for access to NATO classified information. This record must show the period of validity and the level of the clearances.
 - 1.3.7. Deny access to NATO classified information to any persons other than those authorised to have access by his NSA.
 - 1.3.8. Limit the dissemination of NATO classified information to the smallest number of persons as is consistent with the proper execution of the contract or subcontract (ie. Need to know, Need to hold).

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- 1.3.9. Comply with any request from HN (programme/project office) or his NSA that persons to be entrusted with NATO classified information sign a statement undertaking to safeguard that information and signifying their understanding of their obligations under National legislation on the safeguarding of classified information, and that they recognise that they may have comparable obligations under the laws of the other NATO Nations in which they may have access to classified information.
- 1.3.10. Report to the HN (programme/project office) Security Officer and to his NSA any breaches, or suspected breaches of security, suspected sabotage or subversive activity, any breach giving rise to doubts as to the trustworthiness/integrity of an employee, any changes in the ownership, supervisory or managerial staff of the facility or any changes that affect the security arrangements and security status of the facility, and any other information that may be required by the NSA, such as reports on holdings of NATO classified information or materiel.
- 1.3.11. Obtain the approval of HN (programme/project office) before beginning negotiations with a view to sub-contracting any part of the work that would involve the Subcontractor having possible access to NATO classified information, and to place the Subcontractor under appropriate security obligations that in no case may be less stringent than those provided for his own Contract.
- 1.3.12. Undertake not to utilise, other than for the specific purpose of the Bid, Contract or Subcontract, without the written permission of HN (programme/project office) or the prime Contractor, any NATO classified information supplied to him, and return to HN (programme/project office) all classified information referred to above, as well as that developed in connection with the Contract or Subcontract unless such information has been destroyed, or its retention has been duly authorised by the contracting office or the sub-contracting officer. Such NATO classified information shall be returned at such time as the contracting office may direct.
- 1.3.13. Comply with any procedure established with respect to the dissemination of NATO classified information in connection with the Contract or Subcontract.
- 1.4. Unless specifically authorised to do so by HN (programme/project office), the Contractor may not pass on any NATO classified information to any third party to whom a request to supply goods or services has been submitted.
- 1.5. No change in level of classification or de-classification of documentation or materiel may be carried out unless written authority in this respect is obtained from HN (programme/project office).
- 1.6. Failure to implement these provisions and the security regulations established by the NSA of the nation where the contractual work is being

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performed may result in termination of this Contract without reimbursement to the Contractor or claim against NATO, HN (programme/project office) or the national government of the said Nation.

- 1.7.** The HN (programme/project office) security classification check list indicates the degree of classification of the data and materiel (equipment, information, technical manuals, specifications) that may be handled in the performance of work under this Contract and that must be safeguarded in accordance with the provisions of this letter.
- 1.8.** The transportation/return of NATO classified documents from private Contractors / Subcontractors to the HN (programme/project office) is to be performed on the Contractor / Subcontractor initiative through their NSAs.

SECTION 2 PROJECT SECURITY INSTRUCTIONS (PSI)

- 2.1. For Contractors, or Subcontractors working with, or accessing NATO information classified NC, or above, whether at NATO premises or at an approved Contractor's facility, the procedures set out for Prime and Sub Contracts shall apply accordingly. In this case, a Facility Security Clearance (FSC) without storage capabilities shall be issued by the appropriate NSA/DSA in compliance with national regulations.
- 2.2. After a prime contract has been let, a prime Contractor may negotiate sub-contracts with other Contractors, i.e., sub-Contractors. If there are to be sub-contracts for which permission must be obtained from the Programme/Project Management Office/Agency (NPA/NPO) prior to negotiation or award, Contractors shall be notified by the applicable (NPA/NPO):
 - 2.2.1. That they must obtain such permission; and
 - 2.2.2. That they must seek such permission prior to submitting the request for verification or initiation of the FSC for a potential sub-Contractor. If deemed necessary, both actions may be accomplished simultaneously, with the consent of the programme/project management agency/office. Close co-operation between the facility Contract Manager and the facility Security Officer will be required.
- 2.3. When the Contractor and Subcontractor are registered/incorporated in the same NATO Nation, permission to negotiate will not be required from the NPA/NPO, unless otherwise required in the Contract document. The NPA/NPO will, however, be informed by the Contractor that a Subcontract has been negotiated, and be given all contractual details relevant to the security of the NATO classified information involved. It shall be the responsibility of the Contractor to ensure through the National/Designated Security Authorities (NSA/DSA) that all sub-Contractors comply with the appropriate security requirements.
- 2.4. The following additional requirements shall apply for all Subcontracts:
 - 2.4.1. Before entering into negotiations, the Security Officer of the Contractor that is to let the subcontract shall initiate a request as outlined in paragraph 3 above, through his/her NSA/DSA, with respect to a Facility Security Clearance (FSC) for the potential sub-Contractor.
 - 2.4.2. When the potential sub-Contractor is under the jurisdiction of the NSA/DSA of another nation, the requesting Contractor's NSA/DSA shall forward the request to that NSA/DSA.

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- 2.4.3. The NSA/DSA of the potential Subcontractor shall return the completed “Facility Security Clearance Information Sheet” (FIS) request, together with the required information to the requesting Contractor, through the responsible NSAs/DSAs. A copy of the FIS shall be forwarded by the requesting Contractor’s NSA/DSA to the responsible management agency/office.
- 2.4.4. Upon receipt of confirmation that the Subcontractor has been granted the appropriate FSC, the Contractor may open negotiations with the potential Subcontractor. All classified information released by the Contractor to the potential Subcontractor shall be through, or in compliance with instructions from, the Contractor’s NSA/DSA. It remains the responsibility of the NSA/DSA of the Subcontractor to make the appropriate arrangements to ensure the protection of all classified information that is received. Such arrangements shall be co-ordinated with the NSA/DSA of the Contractor that is to let the Subcontract, in accordance with arrangements set out in the Project Security Instructions (PSIs).
- 2.4.5. The Contractor shall comply with the requirements set forth in NATO Security Policies with respect to negotiations with the potential Subcontractor. NATO classified information released to the potential Subcontractor shall be returned to the Contractor at such time as may be designated by the NPA/NPO or the Contractor.
- 2.4.6. Project Security Instructions (PSI) shall be applied with the guidance in the AC/35-D/1036 for the structure and content.

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NATO Communications and Information Agency
Agence OTAN d'information et de communication

BOOK II

PART IV – STATEMENT OF WORK

SOW - ANNEX D

SUPPORT TO SECURITY ACCREDITATION

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SUPPORT TO SYSTEM SECURITY ACCREDITATION

SECTION 1 OVERVIEW

- 1.1.** The overall SSSB-POL System, to be developed, installed, integrated and tested jointly by the Contractor and the Purchaser shall be subject to security accreditation by the National Security Accreditation body of the Host Nation Poland (HN POL). Ultimate aim is to achieve the 'Approval to Operate' (ATO) status for the entire SSSB-POL System at the Final System Acceptance (FSA) milestone (ATO-System).
- 1.2.** ATO-System is granted by HN POL's Accreditation Authorities to permit the operations of the SSSB-POL System at system-level, and allows for final endorsement of residual vulnerabilities by the Accreditation Authorities.
- 1.3.** The ATO-System status will certify that the SSSB-POL System, as a whole, is able to process, store and forward security-sensitive and classified information (up to NS) under conditions agreed with the HN POL, and that this system does not present any unacceptable risks.
- 1.4.** The ATO-System will be based on defined security accreditation procedures and applications that will be carried out in accordance with applicable NATO regulations and National rules of the HN, based on risk analysis and security level assessment.
- 1.5.** HN POL is not entitled to put the system into operation before the ATO-System is declared.
- 1.6.** In order to facilitate the declaration ATO-System, a set of security documentation deliverables will be developed and submitted by the Purchaser (i.e., NCI Agency) in the scope of this activity, which will compile the Security Accreditation Support Package (SASP). The Purchaser may need to request the Contractor to provide specific input concerning this set of documentation, to which the Contractor shall respond in sufficient detail. The SASP will be comprised of the following deliverables:
 - a) Security Accreditation Plan (SAP)
 - b) Security Risk Assessment (SRA)
 - c) System Specific Security Requirement Statement (SSRS)
 - d) System Interconnection Security Requirement Statement (SISRS)
 - e) Security Operating Procedures (SecOps)
 - f) Security Test and Evaluation Plan (STEP)

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- 1.7. The deliverables of the Security Accreditation Support package will be composed in accordance with the NATO Security policies and guidelines, as well as taking into account the National security rules of HN POL. Further on, those deliverables will be developed specifically for the SSSB-POL System and any of its interfaces to National assets (e.g. to the NDN or other National networks or systems), or to NATO assets or networks.

SECTION 2 SCHEDULE

- 2.1. The Security Accreditation Support Package (SASP) will be developed and delivered by the Purchaser (i.e. NCI Agency) between the Critical Design Review (CDR) and Provisional System Acceptance (PSA) to enable HN POL authorities to commence the accreditation process at PSA, with the aim to achieve Approval To Operate (ATO) at the project's Final System Acceptance (FSA).

SECTION 3 REFERENCES

- 3.1. As a minimum the following references will apply:
- a) C-M(2002)49-Corr12 (14 Sep 2015) – NATO Security Policy
 - b) AC/35-D/2000-Rev7 (07 Jan 2013) – Directive on Personnel Security
 - c) AC/35-D/2001-Rev2 (07 Jan 2008) – Directive on Physical Security
 - d) AC/35-D/1030 (20 May 2005) – Guidelines on Physical Security
 - e) AC/35-D/2004-Rev3 (15 Nov 2013) – Primary Directive on CIS Security
 - f) AC/35-D/2002-Rev4 (17 Jan 2012) – Directive on the Security of Information
 - g) C-M (2008)0113 (27 Nov 2008) – The Primary Directive on Information Management
 - h) AC/35-D/1021-Rev 3 (31 Jan 2012) – Guidelines for the Security Approval or Security Accreditation of Communication and Information Systems (CIS)
 - i) AC/35-D/1017-Rev3 (29 Jun 2017) – Guidelines for Security Risk Management (SRM) of Communication and Information Systems (CIS)
 - j) AC/35-D/1014-Rev3 (31 Jan 2012) – Guidelines for the Structure and Content of Security Operating Procedures (SecOps) for CIS
 - k) AC/35-D/1015-Rev3 (31 Jan 2012) – Guidelines for the Development of Security Requirements Statements (SRSs)
 - l) AC/35-D/1019-Rev1 (12 Dec 2008) – Guidelines for the Security Evaluation and Certification of Communication and Information Systems (CIS)

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- m) AC/322-D/0030-Rev5 (23 Feb 2011) – INFOSEC Technical and Implementation Directive for the Interconnection of Communication and Information Systems CIS
- n) AC/322-D/0049 (29 Apr 2002) – Directive for Transmission Security
- o) AC/322-D(2007)0036 (12 Jul 2007) – Technical and Implementation Directive on Emission Security.
- p) AC/322-D(2015)0031 (18 Dec 2015) – CIS Security Technical and Implementation Directive on Cryptographic Security and Mechanisms for the Protection of NATO Information within NNN & IO CIS
- q) AC/322-D/0048-Rev2 (09 Dec 2011) – Technical and Implementation Directive on Computer and Local Area Network (LAN) Security
- r) NATO Computer Incident Response Capability (NCIRC) security settings for MS Windows ® operating systems
- s) AC/35-D/2005-Rev3 (12 Oct 2015) – Management Directive on CIS Security
- t) SDIP-28/1 (Dec 2009) – NATO Zoning Procedures
- u) SDIP-29/2 (Mar 2015) – Selection and Installation of Equipment for the Processing of Classified Information

3.2. The overall security accreditation process is described in Reference s) above.

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SECTION 4 PURCHASER RESPONSIBILITIES

- 4.1. It is the overall and joint responsibility of the Purchaser and the Contractor to develop an appropriate SSSB-POL System design and provide all necessary statements and documents to ensure security accreditation approval (ATO System) until Final System Acceptance (FSA).
- 4.2. Obtaining the 'Approval To Operate' (ATO) will depend on the successful approval of the Security Accreditation Support Package (SASP) by HN POL. The approval of the Security Accreditation Support Package will depend on the maturity of the respective documents that are comprising this package, and which are described in section SECTION 5 below.
- 4.3. In support of producing the SASP, the Purchaser will engage directly with representatives of the Host Nation in order to discuss particular security-related requirements but also to clarify and/or enhance the documentation to be provided as part of the SASP. This process may be organised in the form of physical meetings or workshops that will be attended by the Purchaser, the Contractor, and representatives of the Host Nation.
- 4.4. In order to develop the SASP, the Purchaser may need to request the Contractor to provide specific input concerning this set of documentation, to which the Contractor shall respond in sufficient detail as and when requested.
- 4.5. The Security Accreditation Support package in its Final Draft will be presented by the Purchaser to the Host Nation and its Security Accreditation Authority.
- 4.6. The Purchaser will, and the Contractor shall, take into account the NATO security demands as well as particular national rules of the Host Nation, in order to reflect all related requirements in the resulting SSSB-POL System design and installation thereof.
- 4.7. Complementary to the information that will be provided by the Purchaser in the SASP, and as part of the SSSB Site Preparation Data Packages (SPDP), the Contractor shall provide detailed installation plans that depict sufficient information about equipment, cabling and power provisions at the two Radio sites.
- 4.8. The delivery of hardware, software and workmanship necessary to address the various security requirements shall be within scope of the contractual activities.

SECTION 5 SECURITY ACCREDITATION SUPPORT PACKAGE

5.1. Security Accreditation Plan (SAP)

- 5.1.1. The Security Accreditation Plan (SAP) will be the first document to be prepared by the Purchaser and shall describe the plans on how to develop and implement the content of the Security Accreditation Support Package.

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- 5.1.2. The SAP will include sufficient detail to demonstrate the Purchaser's plans and capabilities to develop the content of the Security Accreditation Support Package.
- 5.1.3. If necessary, and since the respective situation per individual SSSB site (Buffer site, RX and TX radio sites) may differ substantially, any of the documents included in the Security Accreditation Support Package may be composed of several sub-sections or Appendices, addressing respectively the individual sites.
- 5.1.4. The Purchaser may need to request the Contractor to provide specific input concerning this document, to which the Contractor shall respond in sufficient detail¹.
- 5.1.5. A final draft and final version of the SAP will be delivered as a stand-alone document by the Purchaser according to Section 5 of the SOW.

5.2. Security Risk Assessment (SRA)

- 5.2.1. The Purchaser will produce a Security Risk Assessment (SRA), identifying the threats and vulnerabilities to the system, determining their magnitude and identifying areas needing safeguards or countermeasures.
- 5.2.2. The objective of the SRA is to define the security objectives of confidentiality, availability and integrity/authenticity of the designed SSSB-POL System according to the particular services to be provided by the resulting SSSB-POL System, the values of the traffic and information stored and transported over the SSSB-POL System, and the nature and levels of the particular threats being identified.
- 5.2.3. The SRA may be composed as a standalone document, but may instead be included in the SSRS and SISRS documents (ref. 5.3 and 5.4 below). If composed as a standalone document, the Purchaser will insert appropriate cross-references from the SSRS and SISRS documents to the applicable sections in the SRA.
- 5.2.4. The Purchaser may need to request the Contractor to provide specific input concerning this document, to which the Contractor shall respond in sufficient detail.
- 5.2.5. This Risk assessment will be developed in accordance with the guidelines contained in above Reference 3.1 bullet i).

5.3. System Specific Security Requirement Statement (SSRS)

- 5.3.1. The Purchaser will develop a System Specific Security Requirement Statement (SSRS) describing the entire SSSB-POL system architecture, including all its assets and the related security requirements, the security environment, security measures and security administration that have to be implemented in support of the system.

¹ The Contractor's SAP, as requested in the main SOW, addresses the Contractor's plans to fulfil the requirements of this Contract. The Contractor's SAP may provide necessary input to the actual SAP referenced in this section, as part of the Security Accreditation Support Package (SASP), and which will be produced by the Purchaser (NCI Agency) in liaison with the Contractor.

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- 5.3.2. The Purchaser may need to request the Contractor to provide specific input concerning this document, to which the Contractor shall respond in sufficient detail.
- 5.3.3. This SSRS shall be developed in accordance with the guidelines contained in above Reference 3.1 bullet k).

5.4. System Interconnection Security Requirement Statement (SISRS)

- 5.4.1. The Purchaser will develop a SISRS, with specific information on each SSSB site (Buffer site, RX and TX Radio site).
- 5.4.2. In terms of interconnections between various networks or systems, for elements of the SSSB-POL System connected to or providing connectivity via the NDN or any other Host Nation's network or system, the particular national security requirements of the Host Nation will be taken into account.
- 5.4.3. The Purchaser may need to request the Contractor to provide specific input concerning this document, to which the Contractor shall respond in sufficient detail.

5.5. Security Operating Procedures (SECOPS)

- 5.5.1. The Purchaser will develop Security Operating Procedures (SecOps), describing the implementation of procedural security requirements. The SecOps are to follow the guidelines provided in above Reference 3.1 bullet j).
- 5.5.2. In terms of operational procedures, for elements of the SSSB POL System connected to or providing connectivity via the NDN, or any other Host Nation's network or system, the particular national security requirements of the Host Nation will be taken into account.
- 5.5.3. The Purchaser may need to request the Contractor to provide specific input concerning this document, to which the Contractor shall respond in sufficient detail.

5.6. Security Test and Evaluation Plan (STEP)

- 5.6.1. The Purchaser will develop a Security Test and Evaluation Plan (STEP), describing the testing activities for the security functions at each SSSB site or the SSSB system as a whole.
- 5.6.2. The site-specific technical, administrative and security safeguards will be evaluated based on administrative and technical documentation reviews, a physical configuration management audit, equipment and/or system diagnostics, discrete security function testing, and total system testing to the extent possible in the test environment.
- 5.6.3. The Purchaser may need to request the Contractor to provide specific input concerning this document, to which the Contractor shall respond in sufficient detail.