

NCIA/ACQ/15/1740
27 November 2015

NOTIFICATION OF INTENT

Upgrade Geographic Information Services Increment 3 –

IFB-CO-14179-GIS

Estimated Value: Investment scope (EUR 8.2M) including 1 year Warranty

The scope of this upcoming opportunity is anticipated to be an upgrade of the Core GIS system addressing deficiencies and new requirements; upgrading the software baseline provided under Increment 2; ensuring common functional capability across all Core GIS sites; making Core GIS compatible with DCIS and furthermore, meeting the requirements of the Bi-SC Service Employment in Support of the NATO Command Structure. The IFB is envisaged to be issued in April 2016 with a Bid Closing Date in July 2016 and Contract Award in November 2016.

NCI Agency POC: Michel Trebaol

E-mail: michel.trebaol@ncia.nato.int

- To : See Distribution List
- Subject : **NOTIFICATION OF INTENT (NOI) TO INVITE BIDS, IFB-CO-14179-GIS “Upgrade Geographic Information Services Increment 3 – CP9C0150”**
- Reference(s) : A. AC/4-D/2261(1996 Edition)
B. AC/4-D/2261-ADD2 (1996 Edition)
C. AC/4(PP)D/27046-ADD1
D. AC/4-DS(2015)023

1. In accordance with Reference (D), notice is hereby given of the intent of the NATO Communications and Information Agency (NCI Agency), as the Host Nation, to issue an Invitation for Bid (IFB) in relation to the implementation of the project “Upgrade Geographic Information Services Increment 3 – CP9C0150”. Note that the issuance of the IFB is subject to prior authorisation from the Investment Committee.

2. A summary of the requirements of the Invitation for Bid is set forth in Annex A, attached to this letter. These requirements are being refined and detailed as part of the preparation of the Invitation for Bid.
3. The reference for the Invitation for Bid will be **IFB-CO-14179-GIS**, and all correspondence concerning this IFB should reference this number.
4. The scope of work for this project has been authorised as recommended by Reference (C). The IFB will include evaluated options for a Spiral 2 quick upgrade and refreshment as well as for additional sites in Kosovo and Afghanistan. Optional CLINS will be included for 2nd and 3rd year warranty as well. This additional effort would be subject to a separate financial authorisation from NATO funding authorities.
5. Following authorisation from the IC, the NCI Agency will use the International Competitive Bidding (ICB) Procedure, Lowest Compliant Bid Procedures. It is planned to award a single firm-fixed price contract for the entire scope of work with an expected duration of 16 months and follow on contract options for Spiral 2, for additional sites in Kosovo and Afghanistan as well as for 2 additional years of warranty. No partial bidding will be allowed.
6. The IFB is planned to be issued in April 2016, with an anticipated Bid Closing Date in July 2016 and expected Contract Award in November 2016.
7. Details regarding a Bidder's Conference, if applicable, will be included in the IFB document.
8. Pursuant to Paragraph 5 of Reference (C), National Responsible Authorities are kindly requested that the NCI Agency be provided with Declarations of Eligibility, **not later than 1 March 2016** of qualified and certified firms which may be interested in receiving an Invitation for Bid for this project. The Declarations of Eligibility should include the following information: **Name of the Firm, Telephone number, Fax number, E-mail address and Point of Contact** within each of the nominated firms. This information is critical to enable prompt and accurate communication with prospective bidders and should be sent to the following address:

NATO Communications and Information Agency
ACQ/ASG
Avenue du Bourget 140
1140 Brussels, Belgium
Attention: Michel Trebaol
e-mail: michel.trebaol@ncia.nato.int

9. Bidders will be required to declare a bid validity of twelve (12) months from closing date for receipt of bids, supported by a bid guarantee of 250,000 Euros (two hundred and fifty thousand Euros). If the selection and award procedure exceed the bid closing date by more than twelve (12) months, firms may be requested to voluntarily extend the validity of their bids and the bid guarantee accordingly. Bidders may decline to do so, withdraw their bid and excuse themselves from the bidding process without penalty.

of their bids and the bid guarantee accordingly. Bidders may decline to do so, withdraw their bid and excuse themselves from the bidding process without penalty.

10. The National Authorities are advised that the IFB package will be classified as NATO UNCLASSIFIED.

11. The successful bidder may be required to handle and store classified information up to the level of "NATO RESTRICTED". In addition, execution of the proposed contract may require unescorted access and work of contractor personnel at NATO Class II security areas, and in accordance with C-M(2002)49, NATO Security Policy, personnel of the winning bidder will be required to hold individual security clearances of "NATO SECRET". Only firms maintaining such cleared facilities and the appropriate personnel clearances will be able to perform the resulting contract.

12. It is requested that all firms interested in participating in this procurement be introduced by their National Authorities with the required "Declaration of Eligibility" and certification of the required security clearances. Requests for participation in this competition received directly from commercial firms cannot be considered.

13. Your assistance in this procurement is greatly appreciated.

14. The NCI Agency point of contact for this IFB is Mr. Michel Trebaol at e-mail: michel.trebaol@ncia.nato.int.

FOR THE GENERAL MANAGER:



Peter Scaruppe
Director of Acquisition

Attachment: Annex A - Summary of the Requirements



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ANNEX A – SUMMARY OF REQUIREMENTS – IFB-CO-14179-GIS

PROCUREMENT OF SUPPLIES AND SERVICES TO IMPLEMENT THE PROJECT “IFB-CO-14179-GIS “Upgrade Geographic Information Services Increment 3 – CP9C0150”

Background

The existing GIS was implemented through 2 increments as project 2001/5IS03028 - Interim Geographic Information System (IGIS) and project 2001/5IS03029 – Core Geographic Information Services in CP 5A0050/9B00202.

- The Interim Geographic Information System (IGIS) was implemented between 2002 and 2004 based on the Commercial-Off-The-Shelf (COTS) software package Esri ArcGIS Desktop as a standalone Cartographic Workshop for the Geo sections of the NCS. This was referenced as NATO Core GIS Increment 1.
- The NATO Core GIS project (referenced as Increment 2) was contracted in 2007 and delivered in 2012 as a capability also based on the ESRI ArcGIS Suite (desktop and server) to provide timely and current geospatial information and services to functional services via the Bi-SC AIS network capabilities and web services. NATO Core GIS Incr. 2 in its original scope failed repeatedly system acceptance and consequently the contract was partly terminated with a down-sized scope.

The scope of Increment 3 is to address deficiencies and new requirements; upgrade the software baseline provided under Increment 2; ensure common functional capability across all Core GIS sites; and make Core GIS compatible with DCIS.

Scope

The NCI Agency foresees the GIS capability upgraded by Increment 3 to comprise of the following components:

- Cartographic Workshop: the expert system for extensive non-standard analysis and for data preparation. The Cartographic workshop is required to administrate the Geospatial Web Services and to create new services.
- Server Software: the server side capability that provides the services through standard web-technology interfaces.
- Client Components: the components forming the user interface to the services that could either run in a web browser environment or standalone apps. The client components need to be extensible and embeddable into FAS clients.
- Portal: a service provided by a user-friendly web interface that enables users to discover geospatial information and services. Registered users can create interactive online maps enriched with data from different sources even from local data holdings like Excel workbooks with coordinates. These new maps can then be shared with other users.

Functional Requirements:

Increment 3 as an upgrade project will focus on the improvement of the existing system in the following functional areas.

Intended Use

- NATO Core GIS supports the complete geospatial information lifecycle. It is used by two main communities: specialised geospatial sections and the broad community of functional services users. The geospatial sections belong to J2 and provide HQ-wide geospatial support. Their task is to collect, import, manage and disseminate digital geospatial information and printed map products. The functional services users discover, exploit, process, and analyse this data.
- This capability is used within the static portion of the NATO Command Structure (NCS) and selected elements of the NATO Force Structure (NFS) over the NATO General Communications System (NGCS), by the NATO Response Force (NRF) and other NATO expeditionary bodies over the NATO Deployable CIS (DCIS), and should be useable by our coalition partners over the FMN.
- Geospatial Sections
 - The geospatial sections within the strategic and operational headquarters are the users of the cartographic workshop which consists of the heavy components of GIS framework. Their role is to maintain the Designated and Supplemental GIS Information (DGI/SGI) datasets for NATO.
 - The main tasks associated with this function are the data formats conversions (usually from national raw data), data compression, metadata management, data management, image exploitation and creation of online and offline geospatial products (paper maps, geo-PDF, and web layers). High performance plotters and scanners complement this capability.
 - This data must be suitable for advanced military analysis, and capable of providing advanced decision-supporting products such as terrain analysis, routing, line of sight analysis, identification of potential helicopter landing sites, or special maritime charts.
 - Geospatial sections use a cluster of synchronised servers disseminating a common GIS picture and spatial products across the staff, which can be in turn be consumed and enriched by other functional area users, NATO and national Functional Services.
- Functional Area Users
 - The data provided by the geospatial sections needs to be easily discoverable in order to be consumed and augmented by functional area users and functional services across the headquarters.

- The staff will use the geospatial products throughout the planning phases, and as the base of briefing for the leadership. Both digital and printed products are necessary with a recurrent need for the creation of ad-hoc products.
- Common geospatial components need to be re-usable in light FS clients and need to be able to display the geospatial information in conjunction with FAS-specific spatial assets. These FS need to be not able to request advanced processing results from NATO Core GIS and make use of layers and of a Gazetteer service provided by NATO Core GIS. Examples of light FS-clients are SharePoint web-parts, NCOP, or Intel FS.
- The heavy FS clients, requesting geospatial information conveyed through web services or in bulk geospatial data files can carry out their own spatial analysis and mesh up geospatial information with other information. Examples of heavy FS-clients are AC2IS, Triton, and LC2IS.

Interoperability

- The capability delivered through Increment 3 has to abide by general, cross-functional and functional-specific interoperability requirements.
- From a general standpoint, NATO Core GIS must comply with the infrastructure in place provided by the Bi-SC AIS and FMN concepts, in particular in terms of operating systems, virtualisation and cloud computing frameworks, hardware compatibility, and the use of standard network protocols (REST, SOAP) and security settings.
- From a cross-functional point of view, NATO Core GIS must implement the NATO Interoperability Standards and Profiles (NSIP), reference I, in order to allow automation with other functional area systems on the network.
- NATO Core GIS must finally comply with most recent relevant geospatial-specific protocols and standards to be interoperable with national systems and able to consume their data:
 - OGC (WMS, WMTS, WFS, WCS, WPS), Esri REST API.
 - STANAG 7170: Additional Military Layers AML.
 - STANAG 2586: NATO Geospatial Metadata Profile.
 - STANAG 2592: NATO Geospatial Information Framework (NGIF).
 - Lidar sensors or Multibeam Bathymetry Echo Sounders (MBES).

Modes of Operation

- NATO Core GIS Increment 3 will be required in peacetime, in crisis and for exercises throughout the static and deployed environments.
- It will be deployed on a variety of different networks depending on the organisational element it supports for example:
 - at operational static commands on the NATO Secret Network,
 - at deployed NATO or coalition headquarters on the Mission Secret Network, and
 - at support sites on the NATO Unclassified or NATO Restricted Network.
- Geospatial sections at the strategic and operational headquarters shall be delivered a complete capability for the computationally and graphically demanding large geospatial data and handling of huge datasets. The hardware consists of storage, high-performing workstations (ruggedized laptops in the case of DCIS) for computationally intensive data processing, plotters up to A0, scanners, and DVD burners.

Non-Functional Requirements:

Increment 3 as an upgrade project will focus on the improvement of the existing system in the following non-functional areas.

Security

- NATO Core GIS Increment 3 must be capable of supporting different security domains (e.g. NATO and Coalition) with different requirements for cryptographic mechanisms and algorithms.
- All its components shall go through the normal approval security benchmarks, such as Approved Fielding Product List (AFPL) and Coalition Interoperability and Assurance Validation (CIAV).
- NATO Core GIS shall be able to implement user-level access segregation through Active Directory in order to make the geospatial data available on a need-to-know basis.

Performance

- The Geo application server shall be able to serve up to 200 concurrent requests for different users regardless of the consumer (client or a FS server).
- While creating and maintaining the NATO Core GIS Digital Geographic Data Baselines the real achievable throughput capacity between the data storage infrastructure (server) and the Cartographic Workshop (client) shall be at least 10 Mbps. The network infrastructure shall guarantee the above mentioned bandwidth for satisfactory GEO service performance.
- The capability shall provide usage and performance metrics to support administrators to tune the system for optimal response time.

Scalability and Sizing

- For the capability implemented on the static network, scalability shall mostly be achieved by leveraging the infrastructure of CP 150, specifically the cloud computing and content distribution network provided by the IT Modernisation. In combination with a preferred Enterprise Licensing Agreement this shall ensure that the framework can grow on demand. The ability of the NGCS to absorb additional workload for tasks