NCIA/ACQ/2024/06771
24 May 2024

Market Survey

DELIVERY OF REINFORCEMENT ENABLEMENT SIMULATION TOOL TO JOINT SUPPORT AND ENABLING COMMAND

NCI Agency Reference: MS-CO-423262-REST

The NATO Communications and Information Agency is seeking information from Nations and their Industry regarding availability, pricing and delivery timeline of REST within all NATO Nations.

NCI Agency Point of Contact

Contracting Officer: Mr Radu Munteanu

E-mail: radu.munteanu@ncia.nato.int

To : Distribution List (Annex A)

Subject : **NCI Agency Market Survey MS-CO-423262-REST**

1. Through issuance of this notice, the NCI Agency seeks to identify the availability and technical capability of all qualified NATO nation businesses that believe they can provide the services described in this announcement.
2. This is a Market Survey (MS). It is NOT a solicitation for proposals nor a pre-solicitation notice.
3. This MS is being issued to identify potential solutions, to calibrate requirements and identify possible suppliers.
4. The broadest possible dissemination by Nations of this Market Survey Request to their qualified and interested industrial base is requested.
5. A summary of the requirements is set forth in the Annex B attached hereto. Respondents are requested to reply via the questionnaire at Annex C. Other supporting information and documentation (technical data sheets, marketing brochures, catalogue price lists, descriptions of existing installations, etc.) are also desired.
6. The NCI Agency reference for this Market Survey - Request for Information is **MS-CO-423262-REST**, and all correspondence and submissions concerning this matter should reference this number.
7. Respondents are invited to carefully review the requirements in Annex B.

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8. Responses may be issued to NCI Agency directly from Nations or from their Industry to the Point of Contact indicated at Paragraph 11 below. Respondents are invited to carefully review the requirements in Annex B.
9. Responses shall in all cases include the name of the firm, telephone number, e-mail address, designated Point of Contact, and a NATO UNCLASSIFIED description of the capability available and its functionalities. This shall include any restrictions (e.g. export controls) for direct procurement of the various capabilities by NCI Agency. Non-binding pricing information is also requested as called out in Annex C.
10. Responses are due back to NCI Agency no later than **23:59 hours Central European Time (CET) on 21 June 2024.**
11. Please send all responses, via email, referencing MS-CO-423262-REST in the title of the email to: radu.munteanu@ncia.nato.int.
12. Product demonstrations are not foreseen during this initial stage. At this stage, clarification requests or any further questions are not accepted in return. NCI Agency reserves the right to invite respondents to discuss their response.
13. Respondents are requested to await further instructions after their submissions and are requested not to contact directly any NCI Agency staff other than the POC identified above in Paragraph 11.
14. The NCI Agency may seek additional clarification from respondents.
15. Any response to this request shall be provided on a cost-free and voluntary basis. Not responding will not prejudice or cause the exclusion of companies from any future procurement that may arise from this Market Survey.
16. Responses to this request, and any information provided within the context of this survey, including but not limited to pricing, quantities, capabilities, functionalities and requirements will be considered as indicative and informational only and will not be considered as binding on the participant or on NATO within the context of any future acquisition.
17. The NCI Agency is not liable for any expenses incurred by firms in conjunction with their participation in this Market Survey and this Survey shall not be regarded as a commitment of any kind concerning future procurement of the items described therein.

For the Chief of Acquisition:

Radu Munteanu
Contracting Officer

Enclosures:
Annex A (Distribution List)
Annex B (Request for Information - Summary of Requirements)
Annex C (Request for Information - Questionnaire)

ANNEX A
Distribution List for Market Survey

All NATO Delegations (Attn: Investment Adviser)

NATO Members Embassies in Brussels (Attn: Commercial Attaché)

NCI Agency – All NATEXs

NCI Agency – (reserved)

ANNEX B

SUMMARY OF REQUIREMENTS

1. Introduction

The Joint Support and Enabling Command (JSEC) is SACEUR's Joint Command for the Functional Domain Enablement with AOR-wide multi-domain responsibility for Enablement, Reinforcement by Forces (RbyFo) and Sustainment Flow. The Reinforcement and Sustainment Network (RSN) is JSEC's key operational level tool to enable SACEUR's AOR. JSEC is now seeking for a Reinforcement Enablement Simulation Tool (REST) to fulfil its mission.

Requirements for REST have been shared with NATO and this led to a Trust Fund Project. This project is now fully funded. The NATO Communications and Information (NCI) Agency has been tasked as the executing agent.

The NATO Communications and Information (NCI) Agency has been requested to investigate whether there are existing logistics systems available on the market, which satisfy the needs of JSEC.

For this reason, NCI Agency is performing an Informal Market Survey through this questionnaire. Your responses to the questions are most appreciated. Following the response, we may follow up with additional questions.

Note that since this is an Informal Market Survey, there is no requirement for highly detailed responses or analysis; we are mostly after qualitative information, and where quantitative information is requested, approximations suffice.

2. Purpose

The purpose of REST is to develop and enhance the Reinforcement and Sustainment Network (RSN) in order to ensure and facilitate the execution of the Reinforcement by Forces and Sustainment Flow. REST shall be able to simulate plans, analyse the network and disseminate the result within NATO. It shall make predictive analysis based on recent events, historical data and other parameters defined by users.

Figure 1 shows an illustration of what the RSN is in part composed of: In the Area of Responsibility of SACEUR, it consists of Physical and Functional elements (Illustration of Physical and Functional layer elementsFigure 2) that form multiple layers according to JSEC functions. Examples of such layers are the physical infrastructure layer, military availability layer and contract layer. There are several more layers according to JSEC's functional areas.

REST shall be fed by multiple sources of information and data (NATO sources and open sources) to be processed in real time with a minimum of manual tasks. The manual tasks should be reduced to validation or manual input to update or augment missing information. Therefore, interoperability with existing NATO Functional Area Services (FASes) like LOGFAS, TOPFAS, JOCWatch and automatic import from open data sources is extremely important.

The capability shall have the functionality to simulate a deployment plan, assess the feasibility/efficiency of it and produce an updated deployment plan based on this assessment. The simulation will be based on real data and scenarios. This tool must have a training capacity to enable the preparation of the forces.

Given the high volume of data that will be required to be processed in the simulation process, any proven technology already integrated or that could be easily integrated in the simulation tool would be considered as a key advantage.

The project is looking for a field proven solution allowing tailored configuration.

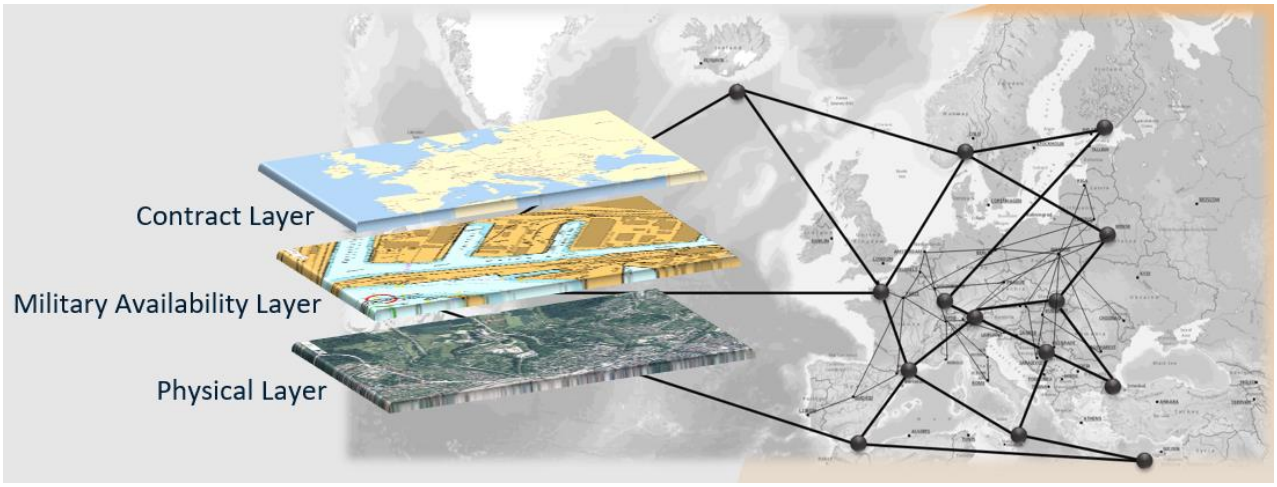

Figure 1 Illustration of the Reinforcement and Sustainment Network

Figure 2 Illustration of Physical and Functional layer elements

3. Project Scope

The initial requirement is for a tool covering:

- Develop the RSN with physical and functional elements,
- Analyse the RSN or subsystems of the RSN,
- Plan and simulate in peacetime, crisis and conflict,
- Evaluate and forecast events or incidents,
- Propose courses of action,
- Create scenario and settings allowing use for simulation or training.

The tool shall be flexible enough to allow the configuration of new functional requirements without extensive development costs.

Additional components and functionalities can be proposed and will be considered within the overall balance between price and capability.

4. Eligibility

Eligible suppliers must be from Participating NATO Nations (ALBANIA, BELGIUM, BULGARIA, CANADA, CROATIA, THE CZECH REPUBLIC, DENMARK, ESTONIA, FINLAND, FRANCE, GERMANY, GREECE, HUNGARY, ICELAND, ITALY, LATVIA, LITHUANIA, LUXEMBOURG, MONTENEGRO, THE NETHERLANDS, NORTH MACEDONIA, NORWAY, POLAND, PORTUGAL, ROMANIA, SLOVAKIA, SLOVENIA, SPAIN, SWEDEN, REPUBLIC OF TÜRKIYE, THE UNITED KINGDOM and THE UNITED STATES), unless otherwise specifically authorized by the NCI Agency.

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QUESTIONNAIRE

Organisation name:

Contact name & details within organisation:

Notes:

1. Please DO NOT alter the formatting. If you need additional space to complete your text then please use the 'Continuation Sheet' at the end of this Annex and reference the question to which the text relates to.
2. Please feel free to make assumptions, *HOWEVER* you must list your assumptions in the spaces provided.
3. Please DO NOT enter any company marketing or sales material as part of your answers within this market survey. But please submit such material as enclosures with the appropriate references within your replies. If you need additional space, please use the 'Continuation Sheet' at the end of this Annex.
4. Please DO try and answer the relevant questions as comprehensively as possible.
5. All questions within this document should be answered in conjunction with the summary of requirements in Annex B.
6. All questions apply to Commercial or Government responders as appropriate to their Commercial off the Shelf (COTS) or Government off the Shelf (GOTS) products.
7. Cost details required in the questions refer to Rough Order of Magnitude (ROM) Procurement & Life Cycle cost, including all assumptions the estimate is based upon:
    - Advantages & disadvantages of your service/solution/organisation,
    - Any other supporting information you may deem necessary including any assumptions relied upon.

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QUESTIONS

1. Core functions

1.1. RSN development

- Do you have an integrated capability, which can manage each element of the RSN but also their dependencies?
- Does your solution support the analysis of the RSN use and propose optimizations?
- Does your system allow creation of subnetwork (e.g. mobility corridors) to be used independently or by coupling?
- Does your solution have the option to display alerts of events that have been automatically assessed with an impact on the RSN, existing plans or any relevant element of the network?
- Does your solution cover physical and functional elements as depicted in Figure 2?

1.2. Plan feasibility

- Does your solution enable the creation of a deployment plan based on the status of the network, the personnel and materials to deploy from home bases to final destinations and the related sustainment flow?
- Does your solution enable the simulation of existing plan with to enable feasibility assessment of existing course of actions?
- Will the performance decrease if multiple simulations are run simultaneously?
- Is your solution based on calculation algorithms that can be configured? If yes, what are the limitations in term of configuration?
- Does your solution allow the manual update of any element of the RSN to trigger a new simulation?
- Does the solution take into account constraints as local regulations (e.g. customs papers) in the simulation? If yes, explain how it can impact the result of a simulation?
- Does your solution propose the integration of multiple plans and the ability to deconflict them against capacity constraints (e.g. bottlenecks, choke points, congestion) in order to attain desired order of arrival of forces and sustainment based on mission priorities?

1.3. Plan execution

- Does your solution allow to monitor the execution of a plan?
- If yes, what are the main differences (if any) with the simulation functionality?
- Does your solution allow to compare the current situation with the planned situation and is it able to propose mitigation measures?
- Does your tool allow time projection for a specific event which allows to see how much time is left for a decision making?
- In addition, of your solution, could you provide any interfaced solution (hard or soft) to track movement of personnel & materials and to be reported and compared with the movement plans in your solution?

1.4. Data management

- Does your solution include a data management service?
- If yes, does it allow to process data from structured and unstructured data sources?
- Is there any data retention parameter limiting the time and quantity of data available?

- Which technology supports data integration, data processing and data presentation?

1.5. Visualisation

- Does your solution include an interactive digital map allowing the display of any data with geo location info?
- Does the solution allow to zoom-in and out and select a specific area to focus on?
- Does your solution support supports open standards (OGC) like WMS and commonly used industry standards like KML?
- Does your solution allow the user to set their own view(s) and save it (them) for later usage?
- Does your solution allow to visualization of a plan or scenario day by day?
- Does your solution include dashboards and reporting features?

2. Command and Control (C2) system

- Does your solution have a C2 capability? If yes, please provide a description of its main functions.
- Does it allow the operator to define areas of interest with different levels of alert?
- Is your system capable of distributing the logistics picture to other units of higher echelons? If yes, which architecture, interfaces and protocols are used?
- Is there anything else we should know about your C2 System that we did not address in the above lines?

3. Training and exercising

- Does your solution propose an integrated feature for training and exercising?
- If yes, please describe it.
- Does your solution allow to create and run scenario based in a training mode on real data or manual inputs, without compromising the planning, simulation and execution (sandbox)?
- Does you solution have a timestamp feature allowing to make a snapshot at a specific point and allow re-run from this point?
- Does your solution include a repository to share documents (working documents, operation procedures, results of simulation,…)?

4. Network requirements

- Does your solution require a specific interconnection infrastructure (network)? What are the minimum network requirements (e.g. throughput, delay, etc.)?
- Do you employ any security technologies (e.g. VPN, crypto devices etc.)?
- Does your solution require access to Internet or off-premise cloud infrastructure?
- Do you need specific services on the on premise network for your systems to operate?

5. Interoperability

- Do your sub-systems support any interoperability standard to disseminate and receive information? Please briefly describe which data exchange standards are implemented in your solution.

- Does your solution support the use of geo map as an external service?
- Does your solution support the use of data management component as a service?
- Does your solution natively expose APIs, services to be consumed by other systems?

6. System availability

- What is the minimum delivery time for one instance to be used on a single location by two hundred users?
- What is the minimum time required from the contract signature to the completion of acceptance testing, training delivery, deployment at one location and declaration of the final operational capability?

7. Security

- Have you performed penetration testing on your system and would you be willing to share any results with NCI Agency to reduce the risk for eventual Independent Verification and Validation testing, including NATO penetration tests?
- Which security domains can your system run in? Unclassified, Secret, Mission?

8. Manning during operation

- What are the manning requirements? Is continuous manning required?
- Does it require permanent manning from your company?
- Does it require manning from local operational staff? If yes, what are the requirements for the skills of those operators, and what are the training requirements?

9. Maintenance and troubleshooting

- Would your organisation be prepared to tailor, upgrade, deliver, install and support this capability to JSEC? If so, what arrangements or conditions would be required for this delivery and support?
- How much engineering support from your company would be expected, typically, during a full year of normal operation?
- Could local engineers be trained to do maintenance and troubleshooting to a certain level? If yes,
  - to what level can non-company engineers provide such maintenance?
  - what is the level of training from your company required to do this?
- What are the estimated operation and maintenance cost? Please provide these costs for a period of 10 years with increments of one year.
- Please provide your estimated Mean Time Between Failures and Mean Time To Repairs?

10. Proven performance in operation

- Is your system in operation anywhere, either for civil or military purposes, or has it been? If yes,
  - Please provide information on where and for how long?
  - Please share any results on its performance, including references?

- Please include information on actual downtime, both planned and unplanned?
- Please provide a list of users of your proposed capability including POCs.

11. Acquisition Options

- Are there any legal or Intellectual Property Rights (IPR) considerations for making your product available to NATO or NATO Nations including having it deployed to NATO operations?
- What would be the Rough Order of Magnitude (ROM) cost for your solution, including system setup, training, and one year warranty and Operations and Maintenance? Please indicate the price per components.
- Are there any recurring cost associated with the operation of the system (i.e. licence fees)?
- Are there any export restrictions?

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Market Survey - Questionnaire

NCI Agency is looking for a REST system. If your organisation meets the requirements detailed in Annex B, we would welcome your response to the Request for Information in the following format:

1. Cover Letter

Brief introduction of your organisation, expressing your interest in providing REST system to NCI Agency.

2. Company Overview

Provide an overview of your company, including its history, expertise, and experience in delivering such solutions that are relevant to our requirements outlined in Annex B. Include relevant client references or case studies of organisations that have successfully used your solution.

3. REST Solution Features

Detail the features and functionalities of your REST solution, and highlight any unique capabilities that set your solution apart.

4. Content Library

Continuation Sheet	Page #
Please feel free to add any information you may think that may be of value to NCI Agency in the space provided below. Should you need additional space, please copy this page and continue with the appropriate page numbers.	__ of __