



NCIA/ACQ/2025/06484  
28 JANUARY 2025

## REQUEST FOR INFORMATION

### SHAPE Radio Overhaul

**NCI Agency Reference: RFI-06484**

NCI Agency is seeking information from Nations and their qualified vendors regarding solutions for replacing the obsolete VHF radio system with a modern TETRA-based communication system utilizing the Astrid network.

NCI Agency Point of Contact

Senior Contracting Assistant: Esteban Diaz

E-mail: [Esteban.Diaz@ncia.nato.int](mailto:Esteban.Diaz@ncia.nato.int)

**To:** Distribution List (Annex A)

**Subject:** NCI Agency Request for Information SHAPE Radio Overhaul

1. NCI Agency requests the assistance of the Nations and their Industry to identify a commercially available solution that can meet or exceed NATO requirements for ensuring enhanced, secure communication capabilities, seamless interoperability with key partners, and future readiness for Astrid's 4G/5G migration by 2030.
2. A summary of the requirements is set forth in the Annex B attached hereto. Respondents are requested to reply to the required information at Annex C. Other supporting information and documentation (technical data sheets, descriptions of existing installations, etc.) are also desired.
3. The NCI Agency reference for this Request for Information is **RFI-06484** and all correspondence and submissions concerning this matter should reference this number.

4. Respondents are invited to carefully review the requirements in Annex B.
5. 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.
6. Responses are due back to NCI Agency no later than **12:00 Brussels time on 14 March 2025**.
7. Clarification requests can be submitted no later than 15 calendar days prior the Request for Information closing date.
8. Please send all responses via email to the following NCI Agency Point of Contact:  

For the attention of: Mr Esteban Diaz at [Esteban.Diaz@ncia.nato.int](mailto:Esteban.Diaz@ncia.nato.int)
9. NCI Agency reserves the right to request for a service demonstration to selected suppliers. However, the NCI Agency may seek additional clarification from respondents.
10. 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 8.
11. Any response to this request shall be provided on a voluntary basis. Not responding will not prejudice or cause the exclusion of companies from any future procurement that may arise from this Request for Information.
12. Responses to this Request for Information, 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 information only and will not be construed as binding on NATO for any future acquisition.
13. The NCI Agency is not liable for any expenses incurred by firms in conjunction with their responses to this Request for Information and this shall not be regarded as a commitment of any kind concerning future procurement of the items described.
14. Your assistance in this Request for Information is greatly appreciated.

FOR THE CHIEF OF ACQUISITION:

Esteban Diaz  
Senior Contracting Assistant

Enclosures:

Annex A (Distribution List)

Annex B (Request for Information – Scope and Requirements)

Annex C (Request for Information – Questionnaire / Information requested)

**ANNEX A**

**Distribution List for Request for Information  
RFI-06484**

All NATO Delegations (Attn: Investment Adviser)

NATO Members Embassies in Brussels (Attn: Commercial Attaché)

NCI Agency – All NATEXs

**NCI Agency – (reserved)**



## **ANNEX B**

### **Scope and Requirements**

#### **1. Information**

- 1.1. Purpose of the RFI: This RFI seeks information from qualified vendors regarding solutions for replacing the obsolete VHF radio system with a modern TETRA-based communication system utilizing the Astrid network.
- 1.2. Objective: Ensure enhanced, secure communication capabilities, seamless interoperability with key partners, and future readiness for Astrid's 4G/5G migration by 2030.
- 1.3. Scope of the RFI: Vendors are invited to share insights on technical feasibility, compliance with Astrid requirements, and contractual model.

#### **2. Project**

- 2.1. The "SHAPE Radio Overhaul" project aims to replace the current and obsolete VHF radio system with a new solution using TETRA technology via the Astrid network. The project will deliver enhanced communication capabilities, secure and encrypted programming, and full operational coverage across key facilities. This includes providing seamless direct communication with the Belgian Federal Police, Belgian Emergency Services, and USAG BENELUX-Chievres.

#### **3. Procurement Approach:**

- 3.1 NCIA evaluates two possible approaches for the implementation and operation of the TETRA-based communication system:

1. NATO Owned – Contractor Operated (NOCO):

Under this approach, NCIA will own the equipment while the supplier provides operational and maintenance services.

The supplier must provide a Rough Order of Magnitude (ROM) for:

- Initial investment: including the supply of all end-user devices, the indoor coverage solution with repeaters, and initial training for users and operators.
- Operation & Maintenance (O&M): covering services such as the Astrid network subscription fees, 24/7 service desk, on-site support with required response times (4 hours for critical issues, 8 hours for non-critical), routine maintenance, updates, and periodic security testing.

2. Contractor Owned – Contractor Operated (COCO):

Under this approach, the supplier retains ownership of all equipment and provides the required services under a comprehensive yearly fee. The supplier must provide a ROM for the yearly fee.

The yearly fee must include:

- The supply and maintenance of all end-user devices and infrastructure.

- Full indoor coverage, including the installation and maintenance of repeaters.
- Astrid network subscription for all users.
- Comprehensive O&M services as detailed above, including technical support and training.

**3.2** Both approaches will be evaluated based on their overall cost-effectiveness, scalability, and alignment with the project's operational and strategic objectives. Vendors are encouraged to outline the benefits and risks associated with each approach and to provide detailed ROM breakdowns for comparison

#### **4. Technical Requirements:**

##### **4.1. Coverage:**

- Full outdoor coverage: Provided by Astrid's national TETRA network, including SHAPE compound, SACEUR Residence (Chateau Gendebien in Mons), and Chievres Airbase.
- Indoor coverage with repeaters: Required for Building 185, sensitive buildings (101, 102, SACEUR Residence), and the new HQ (optional future provision).
- Optional coverage: Schools and any additional facilities upon request.

##### **4.2. Communication System:**

###### 4.2.1 User devices:

- 4 dispatcher consoles.
- ~15 mobile radios (vehicle-mounted).
- ~130 portable terminals.
- Dedicated TETRA devices for Chievres Airbase to ensure interoperability with the Astrid network.

###### 4.2.2 Features:

- Group-based communication with encrypted Over-the-Air Programming (OTAP) and Rekeying (OTAR).
- No one-to-one communication; strictly group-based.
- Voice recording and playback capabilities for operational transparency.

##### **4.3. Transition and Future-Proofing:**

- Compliance with Astrid's planned migration to 4G/5G by ~2030.
- Vendors must consider 2 alternatives:
  1. Hardware replacement strategies.
  2. Dual-technology devices from the outset for a seamless transition.

**4.4. Security and Integration:**

- End-to-end encryption for secure communication.
- Interoperability with Belgian Federal Police and Emergency Services.
- Approval from Astrid for all devices, repeaters, and network architecture.

**ANNEX C**  
**Questionnaire / Information requested**

**Company name:**

**Contact name & details (phone number and email address):**

Please **DO NOT** enter any company marketing or sales material as part of your answers within this Request for Information. But please submit such material as enclosures with the appropriate references within your replies.

Please **DO** try and answer the relevant information requested as comprehensively as possible. All points within this document should be answered in conjunction with the summary of requirements in Annex B.

Cost details required in the questions refer to Rough Order of Magnitude (ROM) Procurement & Life Cycle cost, including all assumptions the ROM is based.

**1. Technical and Implementation Details:**

Q 1.1. Which is your proposed solution architecture, including indoor coverage plans and repeaters for sensitive areas?

Q 1.2. Which is your proposed integration strategy for seamless interoperability and homologation with Astrid and key partners?

Q 1.3. Which is your proposed transition plan for Astrid's migration to 4G/5G by 2030?

**2. Coverage and Measurement:**

Q 2.1. Which is your methodology for verifying indoor and outdoor coverage?

Q 2.2. Which are your potential solutions for mitigating coverage gaps identified during the validation process?

**3. Operations and Maintenance:**

Q 3.1. Which are you proposed Service level agreements (SLAs) for maintenance and incident resolution?

Q 3.2. Which are your Routine testing, updates, and reporting protocols?



**4. Risks and Mitigations:**

Q 4.1. Which are the potential anticipated risks (e.g., technical, operational, or coverage gaps) and your proposed mitigation strategies?

**5. Vendor Capabilities:**

Q 5.1. Which is your experience in deploying TETRA solutions with Astrid?

Q 5.2. Could you please include any reference to previous projects of comparable scale and complexity?

Q 5.3. Could you please include a list of your Astrid approved equipment?

**6. ROM Information:**

Q 6.1. Could you please provide a detailed breakdown of ROM for the NOCO Model?

Including:

6.1.1 ROM for the initial investment, covering:

- Supply of all end-user devices (portable, mobile, and dispatch units).
- Indoor coverage solution, including repeaters for specified buildings.
- Initial training for users and operators.

6.1.2 Annual ROM for Operation & Maintenance (O&M), including:

- Astrid network subscription fees.
- 24/7 service desk for incident and change management.
- On-site technical support with specified response times (4 hours for critical failures, 8 hours for non-critical).
- Routine maintenance, updates, and periodic security testing.

Q 6.2. Could you please provide a detailed breakdown of the ROM for the COCO model?

Including:

6.2.1 ROM for a yearly fee that encompasses:

- Ownership, supply, and maintenance of all end-user devices and infrastructure.
- Full indoor coverage solution, including repeaters.
- Astrid network subscription for all users.
- All O&M services detailed in the NOCO approach.

Q 6.3. Could you please provide for both models (NOCO and COCO)?

- 6.3.1 A comparison of the projected costs over the system's lifecycle (10 years).
- 6.3.2 Clear identification of any optional costs, such as additional repeaters for the new headquarters building or school coverage.
- 6.3.3 Recommendations for optimizing cost efficiency while maintaining service quality and compliance with the stated requirements.