To whom it may concern

30.03.2026 No 2-7/26/.1155

Request for Information

Hereby the Estonian Centre for Defence Investments (hereinafter ECDI) would like to invite you to participate in the preliminary Request for Information (RFI) stage of preparation of the tendering process for procurement of **"Radar Electromagnetic Support Measure (R-ESM)"** for Estonian Defence Forces (EDF).

First procurement quantities are **12 complete systems**. The procurement will involve sensor system, C2 system, UAV solution and other necessary components.

The RFI contains questions about technical parameters of the systems, ROM (rough-order-of-magnitude) prices for systems, training, estimated lifecycle cost, delivery and manufacturing schedules.

1. **General**

   1.1. The information in this document is a part of the Request for Information (RFI) which **shall** give the basis for the Answer to RFI (ARFI) and is not subject to changes except for the revisions issued by ECDI.

2. **Concept of process**

   2.1. Description of the rules for all the RFI process steps is presented in this RFI.
   2.2. Prior to release of public procurement, a RFI phase is provided for:

      2.2.1. Evaluating capabilities of the R-ESM solution on the market;
      2.2.2. Evaluating the commercial aspects of Manufacturers;
      2.2.3. Deconflicting technical and operational requirements;
      2.2.4. Collecting input data from industry.

3. **Delivery of Answers to RFI**

   3.1. Manufacturers *shall* submit a complete ARFI in accordance with the instructions for ARFI preparation.
   3.2. ARFI *shall* be delivered by via e-mail to daniel.kivi@rkik.ee.
   3.3. The ARFI documentation *shall* be clearly identified.
   3.4. ARFI *shall* be delivered not later than **on 30th April 2026.**
   3.5. ECDI reserves the right to extend ARFI's final acceptance date with prior notification to participants no later than 7 calendar days before ARFI's final acceptance date.

4. ARFI acceptance

4.1. ARFI documentation *shall* be prepared in accordance with the instructions specified in RFI, including the following requirements:

    4.1.1. The ARFI *shall* be delivered in a soft copy;

    4.1.2. Soft copy *shall* be in Microsoft Excel(*.xlsx), Microsoft Word (*.doc or *.docx) or Adobe (*.pdf, with no text copying restrictions) format;

    4.1.3. English or Estonian language *shall* be used throughout the ARFI.

4.2. All prices *shall* be based on the terms specified in RFI and the currency used *shall* be EUR.

5. Communication during RFI period

5.1. It is anticipated that prospective Potential Tenderers will wish to ask questions relating to this RFI in order to familiarize themselves more thoroughly with certain requests when compiling their ARFI.

5.2. In order to limit the risk of a Manufacturer's obtaining incorrect advice from a staff member not fully conversant with all aspects of the project; the exchange of information relevant for the interpretation of the complete RFI during the RFI period *shall* conform to the procedures set out in this item.

5.3. No information will be provided unless the Manufacturers' questions are submitted in writing by e-mail on Manufacturers' printed letterhead.

5.4. All such questions concerning commercial and technical matters *shall* be addressed to: Mr. Daniel Kivi – Communications and IT product engineer, mobile: +372 5307 3305, e-mail daniel.kivi@rkik.ee.

5.5. ECDI reserves the right to decline any question which ECDI considers irrelevant or of a leading nature vis-a-vis proposals from other Manufacturers or for any other reason ECDI considers irrelevant.

5.6. **Questions have to be provided no later than 7 days before ARFI final acceptance date.**

6. Further Information about the Manufacturers

6.1. ECDI reserves the right to request any further information it may deem necessary to evaluate the ARFI, which *shall* include, but not be limited to, a breakdown of or supplement to any unit rates, prices or percentages, technical and operational and any additional information necessary for the appraisal of the ARFI.

7. The meetings with Manufacturers before the ARFI submitting date.

7.1. No meetings with Manufacturers are planned.

8. Treatment of ARFI

8.1. ECDI will not be liable for any costs or expenses incurred by the Manufacturer in connection with preparation or delivery of the ARFI.

8.2. **ECDI reserves the right not to accept any ARFI if there is a valid reason** (e.g. if the project is cancelled or postponed significantly or similar).

9. Content of ARFI

9.1.   A Complete ARFI *shall* include no more than 3 documents:

      9.1.1.   Answers Matrix (AMTX) document, fully completed without layout changes;

      9.1.2.   General description of the Manufacturer and Subcontractor(s) with list of reference R-ESM projects in last 10 years;

      9.1.3.   ARFI document with system description and ROM (rough-order-of-magnitude) prices for systems.

9.2.   The ARFI is defined as the complete reply from a Manufacturer to RFI.

      9.2.1.   It is essential that the overall layout of the ARFI follows these instructions. If needed, the Manufacturer is free to add further information as attachments to the specified annexes.

10. Evaluation of ARFI

10.1.   The purpose of this RFI is to find companies who would be interested offering different R-ESM Systems for military purposes, that will meet the minimum military requirements and are ready to offer their systems and related services to EDF. In this RFI we would like to map different companies and different solutions what industry can offer.

10.2.   After your feedback, ECDI and EDF will evaluate you company's system profile and suitability to achieve the goals in a timely and cost-effective way while satisfying the operational requirements of the EDF.

10.3.   After evaluation of the received answers to the RFI, ECDI will decide the final procurement strategy. The potential procurement is expected to **take place in second half of 2026 and the first potential delivery is expected to take place in 2027.**

Respectfully,

Marko Leibenau
Strategic Category Manager

Annex: Answers matrix RFI R-ESM

Daniel Kivi
Daniel.Kivi@rkik.ee

IR No	Information Request (IR)	Answer or ARFI Reference	Remarks
1.	General		
	RADAR ELECTROMAGNETIC SUPPORT MEASURE (R-ESM). R-ESM is a passive sensor system for detecting, identifying, geo-locating and tracking various radar signals minimum 100 kilometers away		
1.1	The provided system shall consist of: a) R-ESM sensor with accessories b) C2 system c) Training and ILS (Integrated Logistics Support) d) UAV/tethered UAV solution for R-ESM sensor		
1.2	Is most of the hardware equipment Commercial off-the-shelf (COTS) or (MOTS) - military off the shelf or is future research and/or development needed?		
1.3	What is the current state of the software/firmware? Under develpment, existing etc.		
1.4	The system should be able to operate autonomously within boundaries of national defence plans, as well as part of NATO's IRS framework		
1.5	The system should be able to contribute to both national and NATO intelligence collection if needed		
1.6	The system should be modular, interoperable, compact, lightweight and rapidly deployable in order to overcome terrain limitations by utilizing manmade objects like masts and building or aerial platforms, keep the deployment footprint to the minimum and make it easy to conceal		
1.7	The system should be able to detect, identify, geo-locate and track radar signals of the common surveillance and weapons systems used in the modern battlefield		
1.8	The system shall meet high mobility criteria for rapid deployment and utilization of manmade objects: a) High-rise buildings b) Masts c) Lookout Towers		
1.9	The system shall be able to be deployed rapidly by up to three persons		
1.10	The sensor shall be compact in order to disguise and camouflage it with relative ease in different environments.		
1.11	The sensor should meet the criteria of high reliability in order to enable operations in extended periods of time		
1.12	The system should have a solution for uninterruptable power supply in order to counter unexpected power outages for up to 30 minutes.		
1.13	The system shall link together different R-ESM sensor networks and fuse their collected data for central processing.		
1.14	The system shall have a built in mission planning tools		
1.15	The sensor shall be operable in GNSS denied or contested environment		
1.16	Do you have the R-ESM system in service in NATO and/or European Union?		
1.17	Is the system designed for 24/7 continuous operation?		
1.18	The system and all it's subsystems should be able to operate independently at least according the requirements given in STANAG 4866 ed. 1, NATO AECTP-230 Edition B, for areas A3, A2, A1, B1, B2, C0, C1 in such way that no vital changes in performance is caused		
1.19	System shall be able to use public grid or auxiliary generator as secondary power source for batteries		
1.20	Please provide a list of (public) reference projects with details of year of delivery, country of delivery, type, model		
1.21	Please provide a general overview of Built In Test Equipment and Control and Monitoring System		
1.22	Please describe the fault isolation system/approach. For example, when system has a malfuction on the battelfield. How is this fault isolated and what backup options the system critical capabilities have.		
2.	Training		
2.1	The system should have a simulator functionality to allow for training of personnel based on realistic scenarios built on customer requirements		
2.2	Please specify the duration of maintenance engineers training? Please also specify the maintenance level that will be achieved?		
2.3	Please specify the duration of Instructors training? Please also specify the instructor level that will be achieved?		
2.4	Please specify the duration of operators/controllers training?		
3.	Sensor System		
3.1	How do you plan to operate in GNSS denied environment?		
3.2	The R-ESM sensor should be able to detect and geo-locate non-radar signals within its operational parameters like jammers and datalinks		
3.3	Please specify system environmental characteristics (e.g. temp, ice, humidity)? How is the ability to operate in heavy rain/snow, heavy wind, low and hot temperatures achieved?		
3.4	The sensor should have a independent power supply option		
3.5	The sensor shall have a detection range for typical air defence, air surveillance and airborne radar signals not less than 100 kilometers in optimal conditions and when LOS is present		
3.6	The sensor shall operate at least in 2-18 GHz frequency range		
3.7	The sensor shall have instantaneous bandwidth of at least 250 MHz		
3.8	Please specify what are the options for scanning resolution?		
3.9	Please specify how long does it take to scan the entire spectrum range (with different resolutions)?		
3.10	Please specify minimum amount of sensors you need for detection, geo-locating and tracking pulse signals		
3.11	Is there a option for continuous wave signal detection?		
3.12	The sensor shall have instantaneous direction finding azimuth coverage of at least 120 degrees		
3.13	The sensor shall be capable of recording IQ data		
3.14	Please specify operators display information update interval		
3.15	Please specify range accuracy		
3.16	Please specify different options for detection (AOA, TDMA, so on)		

3.17	Please specify the weight of the sensor system with antenna		
3.18	Please specify what kind of system is it able to detect and identify?		
3.19	The sensor system should have accessories for installing and attaching the sensor to buildings masts etc		
3.20	Please specify what kind of ruggedization options are available for the sensor system?		
3.21	Please specify the MTBF (mean time before failures) and MTBCF (mean time before critical failures) of the system		
4.	**Command and Control**		
4.1	The system should be configured and operated both autonomously and remotely over the network		
4.2	The sensor shall be remotely operated over the network in order to reduce footprint of sensor deployment		
4.3	The system shall store processed data for at least 24 hours in order to counter loss of network		
4.4	The C2 system and sensor systems shall share collected data via common NATO standard messaging format STANAG 5500 and be CESMO compatible		
4.5	The C2 system shall be able to collected and perform data fusion from multiple sensors and sensor networks		
4.6	The system shall have the option to be remotely controlled, task the sensors directly and remotely over the IP network protocol (4G, LTE, LAN or optical socker)		
4.7	It shall be possible to create predefined collection missions with predefined criteria for recording, reporting and alerting		
4.8	The system shall not store emitter database, signals library information physically inside the sensor		
4.9	The sensor should have an information protection measure in place in case of unauthorized physical access to the sensor		
4.10	The system should be able to perform automated collection, recording, reporting and alerting in according to predefined criteria		
4.11	The system shall have a emitter database, signals library with the option for operator to update the database remotely		
4.12	Is there a option for presentation of tactical situation picture in correlation with sensor locations and data?		
4.13	Please describe the fault recording system		
4.14	Please describe the recording and playback system of operators displays and their activities		
4.15	Please specify operators display update interval		
4.16	The sensor and C2 system shall be password protected		
5.	**UAV/Tethered drone**		
5.1	Do you already have a working UAV/tethered drone solution or is there a recommended suitable UAV or tethered drone solution available for easily achievable sensor deployment?		
5.2	How do you plan to operate the drone in GNSS denied environment?		
5.3	Please specify which spectral bands are used		
5.4	Flight time for the UAV solution in optimal conditions?		
5.5	What is the maximum allowed wind speed for operable use?		
5.6	Is there a mobile option for UAV/Tethered drone to be used on a SUV for example?		
5.7	Please specify the MTBF (mean time before failures) and MTBCF (mean time before critical failures) of the **system**		
5.8	What kind of UAV solutions can you offer for 50km of R-ESM sensor detection?		
5.9	Any other solutions you can offer for 100km of R-ESM sensor detection? (for example balloon option)		
6.	**The services and products to be procured**		
6.1	The EDF shall be trained to conduct basic maintenance and repair for the R-ESM system.		
6.2	Please provide us the list of critical spare parts for the complete system.		
6.3	Special tools and testing equipment for maintenance and services of delivered products.		
6.4	Services: installation, documentation, training, technical and maintenance assistance during and after delivery and warranty period, integration, testing and handover		
6.5	Logistical Support for at least 10 years. What is a maximum you can offer?		
7.	**Maintenance**		
7.1	Do you have the product production and maintenance facilities in Europe?		
7.2	The system shall have maintenance, spare parts, mid-life upgrade and software updates available for the duration of the expected life cycle		
7.3	The system shall have 2 years of warranty for hardware and software		
7.4	What is the approximate system life cycle cost for one (1) year? 100 deployments, 500 working hours		
7.5	What is the approximate system life cycle cost for ten (10) years? 1000 deployments, 5000 working hours		
7.6	Supplier shall be responsible of obsolescence management. As minimum the supplier shall monitor obsolescence of spare parts of the Vehicle and notify Customer with resolution proposal. Each obsolescence issue is subject for a ECP and is managed through the configuration management process.Critical systems and subsystems shall not become obsolete in less than ten (10) years from the delivery.		
8.	**ROM (rough-order-of-magnitude) prices for systems and delivery times**		
8.1	Unit price for 1 system (May be 2 different prices for 50 km and 100 km UAV solutions)		
8.2	Unit price for 6 systems (May be 2 different prices for 50 km and 100 km UAV solutions)		
8.3	Unit price for 12 systems (May be 2 different prices for 50 km and 100 km UAV solutions)		
8.4	Potential delivery and manufacturing schedules		
8.5	Project execution, installation and FAT and SAT test price for one (1) system		
8.6	Project execution, installation and FAT and SAT test price for six (6) systems		
8.7	Project execution, installation and FAT and SAT test price for twelve (12) systems		
8.8	Future possible life-cycle support agreement annual cost etc.? Please provide a description with concept and approximate prices		