



**REQUEST FOR INFORMATION  
FOR  
ROMAirTCM - ROMATSA Air Traffic Complexity Management Tool**

**Bucharest**

**February, 2020**

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## 1. Introduction

Romanian Air Traffic Services Administration (ROMATSA) is a self-financing public enterprise under coordination of Ministry of Transportation of Romania, being the national certified Air Navigation Services Provider (ANSP) responsible for provision of Air Traffic Services (ATS), consisting of Air Traffic Control Service (ATC Service), Flight Information Service (FIS) and Alerting Service (ALRS), provision of Communications, Navigation and Surveillance (CNS) services, Meteorological Service for International Air Navigation and part of Aeronautical Information Services (AIS), and part of Search and Rescue.

The air navigation services provided by ROMATSA are:

- **En-route** air traffic control and information in the BUCUREȘTI FIR. These services are provided by a single Regional Control Centre – BUCUREȘTI ACC ATS Unit.
- **Terminal** (approach and aerodrome) air traffic control and information from 3 APP ATS Units, as follows:
  - BUCUREȘTI APP - responsible for air traffic control in two terminal areas: BUCUREȘTI TMA and NAPOC TMA,
  - ARAD APP responsible for air traffic control in ARAD TMA
  - CONSTANȚA APP responsible for air traffic control in CONSTANȚA TMA

and 16 TWR ATS Units.

In addition to its basic activities, ROMATSA also has the right to perform consulting activities and to provide services in its field of activity, as well as research and development activities, including the manufacturing and trading of products specific to the air traffic management field, by its own forces or in partnership with the internal or external economic entities.

ROMATSA is also part of the Danube FAB together with BULATSA.

At present, ROMATSA is in the process of launching the development of ROMAirTCM (ROMATSA Air Traffic Complexity Management Tool) with the objective of implementing a Traffic Complexity Tool and associated procedures, fully compliant with:

- the specific Family detailed in SESAR Deployment Programme,
- the specific objective detailed in the implementation level of the ATM Master Plan, and related European Commission Regulations<sup>1</sup>.

The project is called throughout this document “ROMAirTCM”.

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• <sup>1</sup> Commission Implementing Regulation (EU) 2019/123 of 24 January 2019 laying down detailed rules for the implementation of air traffic management (ATM) network functions and repealing Commission Regulation (EU) No 677/2011

• Regulation (EU) No 716/2014 on the establishment of the pilot Common Project

Before launching any formal procedure, ROMATSA seeks for a preliminary feedback from any interested economic operators for the project. ROMATSA therefore decided to initiate information exchanges with ATM software developers / providers through the present Request for Information (RFI) which guarantees equal access to information, transparency and equity.

ROMATSA invites suppliers to submit an information package which will cover the technical, operational and safety aspects, containing their currently available technology, products and solution for the implementation of ROMAirTCM. The information provided in the initial technical information will be used in finalizing a tender for the procurement of ROMAirTCM with an aim for contract signing within the fiscal year of 2020.

## 2. Request for Information's objectives

This RFI aims at identifying the suppliers interested by the ROMAirTCM project and its related contract and get their opinion and advice about it. Moreover, its purpose is also to identify the technologies and products available or announced on the market which may be beneficial to the project.

This RFI is **not a Call for Tender (CFT)** under Romanian public procurement rules, so neither ROMATSA, nor any economic operator will be committed by any information exchanged under this RFI's umbrella.

Replies and potential subsequent discussions will only be used to further refine and focus the project strategy and the procurement specifications towards the formal steps to come at a later stage when the formal **Call for Tender (CFT)** would begin. ROMATSA will not perform any kind of candidates' pre-selection through this RFI.

Any interested provider is invited to react on the present RFI and to **present in-depth information** about their traffic complexity management solutions (also system components' requirements/ specification will be welcome).

The following chapters provide more information about the ROMAirTCM project, including questions on issues of specific interest to this project. Opinions and advises are particularly expected on:

- Efficient risk management to make timescale credible: the basic version of the ROMAirTCM must be delivered on time to comply with European ATM Master Plan Implementation View (level 3) - Plan 2019, which indicates the target date for Full Operational Capability (FOC) as 31<sup>st</sup> of December 2021.
- Work sharing principles between ROMATSA and the future supplier.

## 3. Project scope

The scope of the project covers all the activities related to the definition, development / customisation, implementation, calibration and testing of ROMAirTCM with the objective to reach full compliance by January 2022 with the specific implementation objective

detailed in the European ATM Master Plan Implementation View (level 3) - Plan 2019 and with the specific project family detailed in SESAR Deployment Programme.

According to objective FCM06 – Traffic Complexity Assessment detailed in European ATM Master Plan Implementation View (level 3) - Plan 2019, the traffic complexity tools should continuously monitor sector demand and evaluate traffic complexity (by applying predefined complexity metrics) according to a predetermined qualitative scale. The predicted complexity coupled with traffic demand will enable ATFCM to take timely action to adjust capacity, or request the traffic profile changes in coordination with ATC and airspace users. The objective is also detailed in Deployment Programme AF # 4 - Network Collaborative Management, AF4.4 – Automated Support for Traffic Complexity Assessment, family 4.4.2 - Traffic Complexity Tool.

ROMAirTCM shall consist of the following main instances:

### **3.1. ACC București and APP București**

- 2 WPs (working positions) in Bucharest ACC OPS Room, dedicated to pre-tactical and tactical evaluation of traffic load and complexity of Bucuresti ACC Sectors
- 1 WP in Bucharest APP OPS Room, dedicated to pre-tactical and tactical load and complexity evaluation of traffic for optimised integration into en-route flows in the context of H24 Free Route Airspace operations implementation.
  
- 2 WPs within București ACC and București APP premises (separated of the 2 WPs to be installed in the Ops Room) dedicated to performing of the following activities:
  - ✓ Pre-tactic, tactic and post-operations traffic analysis
  - ✓ Sector configurations optimisation associated to different traffic scenarios.
  - ✓ Optimised integration of traffic to/from terminal areas in the context of H24 Free Route Airspace operations implementation.

### **3.2. Operations Division**

- 2 WPs within Operations Division – En-route Management Unit
- 1 WPs within Operations Division – Terminal Management Unit

dedicated to performing of the following activities:

- ✓ Strategic, Pre-tactic, tactic and post-operations traffic analysis.
- ✓ Traffic samples preparation, including associated complexity level evaluation (using specific metrics) for different training and evaluation purposes.

- ✓ “What if” analysis dedicated to sector configurations optimisation associated to different traffic scenarios.
- ✓ Optimised integration of traffic to/from terminal areas in the context of H24 Free Route Airspace operations implementation.

#### **4. The main responsibilities of the supplier**

The future supplier will be responsible for:

- Traffic complexity management tool deployment
- Hardware provision and installation
- Software configuration, calibration and testing
- Added-value database and associated queries configuration
- Relevant data capture / conversion
- Specific training of all involved parties (ATCOs, experts, technical personnel)
- Assistance during the testing, monitoring and calibration processes before and after implementation
- Software maintenance and repair services
- Helpdesk and support services

#### **5. Project Roadmap**

The ROMAirtCM shall be operational in January 2022, with the following steps:

##### **STEP 1 – to be accomplished by the end March 2021**

- Workstations’ delivery and setup
- Tool installation and basic functionalities training for project core team
- NM B2B data connection
- The definition of the interfaces between ROMAirtCM and the relevant data sources (FPL/OLDI/LARA/ MET)
- The integration with available local systems (according to the above defined interfaces)
- Initial Traffic load and workload metrics configuration
- Testing and necessary improvements identification
- Description and approval of needed enhancements

##### **STEP 2 - to be accomplished by the end of 2021**

- Implementation and testing of the needed enhancements identified at the end of STEP 1
- Identification of the new available relevant local systems and the definition of the appropriate interfaces
- Integration with new available local systems (where the standard interfaces are available)
- Final calibration and fine tuning
- Training and hands on the system

## 6. Project Presentation

The final goal of the project is to deliver an automatized traffic complexity management tool able to support both the pre-tactical and tactical operational decision making process in terms of best sector configuration option and also the strategic and post-operations analysis processes.

### 6.1. Project key-objectives:

- To improve safety in ATC
- To optimize ATCo workload predictability
- To increase the efficiency of local resources use
- To increase capacity
- To enhance productivity through improved human resources utilization and task distribution optimization
- To avoid unnecessary delays to flights
- To reduce the environmental footprint
- To support improved strategic operational planning in the context of continuous performance improvement (forward-looking analysis)
- To support extensive post-operational analysis in the context of continuous performance improvement (backward-looking analysis)

### 6.2. Operational Concept

#### 6.2.1. Strategic and Pre-Tactical Phase:

- ROMAirtCM will support the forward-looking operational analysis and an efficient capacity planning process in order to support the forecast traffic demand integration and an efficient human resources management.
- The tool will allow the use of available forecast traffic for performing relevant scenarios for potential impact analysis on ACC sectors' configurations complexity.
- The forward-looking operational analysis will be supported by the possibility of performing of different interrogations by flexible queries and reports, using the available traffic forecasts and the latest available demand updates

**6.2.2. Tactical phase:** ROMAirtCM will be able to correlate the predicted demand with the actual traffic and to compare it with the current or planned sector configuration capacity and to warn the user in case of detecting imbalances. In addition, in support of the operational decision making process, ROMAirtCM will allow the creation of "what-if scenarios" for best configuration option identification and to check the effect of configuration changes and 4D trajectory modifications (re-routings, level capping, etc) applied to specific flights or traffic flows.

**6.2.3. Post-Operations Phase:** ROMAirtCM will allow detailed backward – looking analysis as follows:

- The tool will allow the reversion to any moment in the past and replay the traffic situation interactively.
- ROMAirtCM will allow the user interaction with real-life scenarios in order to evaluate the potential "what if" results in real-time.

- ROMAirtCM will allow performing of different interrogations by flexible queries and reports generation meant to support the analysis process and continuous operational procedures' improvement.

### 6.3. Operational Requirements

Key target high level operational requirements to be met are listed below.

#### 6.3.1. Geographical scope

Full airspace of LRBBCTA (By January 2022)

#### 6.3.2. Implementation levels

**Level 1 - ATCO workload measurement and prediction** according to the available current and predicted relevant and available data

**Level 2: Automated traffic complexity management:**

- Proactive automated decision support for improved local traffic management
- Operational warnings available
- Automated dynamic airspace optimisation support
- Traffic flow management
- What-if scenarios provision and analysis
- Operational human resources optimisation
- Archive, replay and evaluation of real operational past situations, applying the corresponding environment / scenarios / real traffic situations (including ATFCM measures)

**Level 3: Cross-border cooperation** by complexity management at regional level, according to established CDM processes

- Connection with NM systems
- Connection with adjacent centers' systems:
  - Extension to SEE FRA initiative ACCs (stepped approach 2022+)
  - Extension to airspaces of adjacent ACCs not part of SEE FRA initiative (stepped approach 2022+)

#### 6.3.3. Time window

- Minimum look ahead time window is **2 hours**
- Maximum look ahead time is up to **8 hours**

## 7. Timescale

Based on this RFI's replies and internal analysis, ROMATSA will launch a Call for Tender (CFT) to be concluded with a contract award. The foreseen timescale to set the contract into place is as follows:

- RFI: from the 3<sup>rd</sup> of February 2020 to the 28<sup>th</sup> of February 2020
- CFT: from May 2020
- Contract award: by 31<sup>st</sup> of October 2020



Furthermore, ROMATSA is looking to build with the future provider a win-win partnership for the commercialization of the tool resulted from the development and implementation of ROMAirTCM tool.

## **8. Guidelines for RFI's replies**

### **8.1. ROMATSA commitments**

At this stage, neither ROMATSA is committed to launch a call for tender at a later stage for the accomplishment of the project, nor answers from the providers which will answer at this RFI are binding.

The technical and scheduling description of ROMAirTCM provided in this document does not constitute a reference specification. ROMATSA reserve the right to modify its requirements, both in terms of technology and implementation timeframe, independently or not of its analysis of the replies to this RFI.

Providers cannot claim for any payment from ROMATSA as a consequence of the work to answer the RFI.

ROMATSA will analyse the replies with the objective to consolidate the call for tender specification. ROMATSA is committed to guarantee the confidentiality of the information provided by the participants through their replies according to the RFI confidentiality policy described in chapter 8.5 below.

### **8.2. Communication plan:**

This RFI is published on ROMATSA web site from Monday, the **3<sup>rd</sup> of February 2020**.

#### **8.2.1. Before replies reception**

Interested providers may send written requests for further details or a list of questions regarding the contents of this document to the below mentioned contacts. ROMATSA will seek to provide written answers within two weeks.

#### **8.2.2. Replies reception**

Replies to this RFI must be provided in English and must be received before Friday the 28<sup>th</sup> of February 2020, 16:00 LT. They must be sent to the ROMATSA contacts specified in section 8.4 below.

The following must appear on the envelope: "**Reply to RFI for ROMAirTCM - ROMATSA Air Traffic Complexity Management Tool**".

Each supplier providing a reply is invited to appoint a person who will be its contact point with ROMATSA.

### **8.2.3. After replies reception**

Following receipt of the replies, ROMATSA may require oral presentations, site visits or additional information in order to complete or clarify the replies.

ROMATSA cannot commit to provide dedicated feedback on every RFI reply. It will however attempt to do so.

### **8.3. Layout and contents**

RFI is an invitation to providers to demonstrate their strengths, experience, capabilities and interest in undertaking a project.

Beyond the company's presentation, RFI can be structured as shown below:

Cap. I – Executive Summary of the information provided and recommended solution(s) (summary of sections I to VII)

Cap.II - Answers on the operational aspect

Cap.III - Answers on the technical aspect

Cap.IV - Answers and advises on the management of the project, focusing mainly on the following aspects:

- Risk analysis
- Scheduling and financial aspects
- Induced role-sharing between the supplier and Customer.

Cap. V - Other information considered relevant by the economic operator

Cap.VI - Confidential information (see chapter 8.5 below for detailed information)

Financial and scheduling information requested may be detailed as follows:

- Financial references: budgets and brief descriptions of equivalent operations completed by the economic operator;
- Budget assessment: principal elements and items (development, manufacturing and support), relative or absolute costs, fixed costs, induced costs (licenses, third party equipment...), financial flows throughout the operation and associated assumptions;
- Simplified schedule: description of macro tasks and associated time-frame links between macro tasks, related risks analysis.

ROMATSA is aware that some providers may not be able or willing to address all the issues listed above. However, they are encouraged to provide information on issues for which they have specific expertise to value.

Replies can be also performed by a consortium of several suppliers.

The suppliers are free to propose any variant on any element of the project. They can also address issues not raised by ROMATSA in the present document.

The reply will be in the form of A4 documents. It will also be provided on digital support (CD-ROM or DVD). The reply should not exceed 100 pages for sections I to VI.

#### **8.4. ROMATSA points of contact**

Ms. Daniela BRĂTESCU and Ms. Elisabeta PLĂMĂDEALĂ are the contact persons for this RFI. Any questions or replies related this RFI have to be sent to both contact persons.

<p><b>Ms. Daniela BRĂTESCU</b> Head of En-route Management Unit, Operations Division 10 Ion Ionescu de la Brad Blvd. 013813, Bucharest, Romania Phone: +40 21 208.33.12 Email: <a href="mailto:daniela.bratescu@romatsa.ro">daniela.bratescu@romatsa.ro</a></p>	<p><b>Ms. Elisabeta PLĂMĂDEALĂ</b> ATM Expert, En-route Management Unit, Operations Division 10 Ion Ionescu de la Brad Blvd. 013813, Bucharest, Romania Phone: +40 21 208 32 25 Email: <a href="mailto:elisabeta.plamadeala@romatsa.ro">elisabeta.plamadeala@romatsa.ro</a></p>
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#### **8.5. Confidentiality policy**

By submitting their contribution in response to the present RFI, contributors expressly accept that ROMATSA reserves the right to use information received to the purpose of:

- defining the strategy and procurement procedure for the ROMAirTCM - ROMATSA Air Traffic Complexity Management Tool”.
- defining the potential technical, financial, operational and legal requirement specifications for the procurement of the ROMAirTCM or component operations;
- and generally defining the follow-up to the project.

Any information of any nature, be it technical, operational, financial or otherwise, submitted in response to the RFI, the contributor wishes to keep confidential, shall be identified as such by means of ad hoc statement. ROMATSA will ensure compliance with and protection of the trade secret of any information quoted as confidential through such a statement.

In lack of such statement, ROMATSA shall assume that information provided by the contributors shall not be subject to any usage and/or release restriction towards any third party.

END -