10.4.19

Obstacle and Terrain Evaluation and Information Management System

Supply and maintenance of an advanced and automatic Obstacle Evaluation and Management system

Request for Information (RFI)

Civil Aviation Authority of the State of Israel (CAAI)

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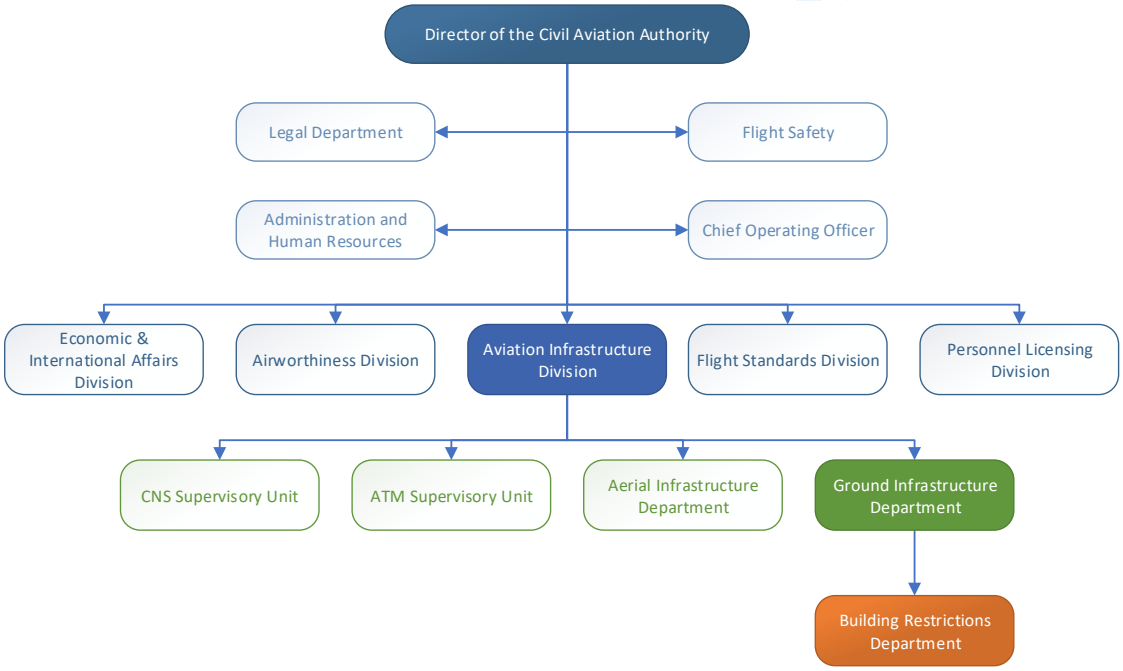
1. Introduction

1.1. The Civil Aviation Authority of Israel

The Civil Aviation Authority of Israel (CAAI) is a statutory authority which regulates civil aviation in the state. Its functions include regulating civil aviation according to laws, regulations, and ICAO SARPs, as well as advancement of the civil aviation sector. CAAI is the aviation authority in charge of licensing and certification of persons and organizations in Israel's Civil Aviation sector.

Among other things, CAAI is responsible for the publication of aeronautical information (AIP) and aviation infrastructure (airspace design and validation of flight procedures). CAAI's Building Restrictions Department belongs to the Aviation Infrastructure Division that is responsible, among other things, for the supervision, certification and promotion of regulation for ground infrastructure, aerial infrastructure, CNS and ATM.

Additionally, CAAI's Building Restrictions Department is responsible for the analysis and approval process of the potential hazards to flights due to obstacles, in regard to the civil aviation infrastructures in Israel. The department is handling inquiries and requests from the public and from government entities (such as planning committees, municipal and others). Inquirers vary between a crane/antenna/high rising building to national layout plans and municipal master planning or zoning plans. Plans are commonly received by the department in CAD format with supplementary information in Hebrew. The department produces responses in textual format, in Hebrew, and often attaches zoning files in CAD format.


Director of the Civil Aviation Authority
Legal Department
Flight Safety
Administration and Human Resources
Chief Operating Officer
Economic & International Affairs Division
Airworthiness Division
Aviation Infrastructure Division
Flight Standards Division
Personnel Licensing Division
CNS Supervisory Unit
ATM Supervisory Unit
Aerial Infrastructure Department
Ground Infrastructure Department
Building Restrictions Department

1.2. Background and CAAI Responsibilities

CAAI's Building Restrictions Department routinely examines obstacle approval requests. The requests vary, from crane installations to full town master planning schemes. Requested are being issued by a verity of users according to a format predefined by CAAI. CAAI is required to efficiently collect, screen, evaluate and manage the various obstacle applications that are sent to the Building Restrictions Department and evaluates their impact on aerodromes, airspace and CNS (NAVAIDs) safeguarding. Additionally, CAAI maintains a database of requests, in which for every request exists a record of detailed technical data and information related to its statutory process and status. Obstacle records and responses issued by CAAI are archived for future analysis and knowledge management.

CAAI currently utilizes a locally developed, tailor-made, Obstacle Assessment and Management system. The existing system enables CAAI to conduct automatic evaluation of obstacles. CAAI is interested in exploring other solutions in order to improve its compliance with ICAO regulation, extend its capabilities and improve the service that is provided to the public.

The state of Israel is required to comply with the ICAO SARPs included Annex 14 and Annex 15 of the Chicago Convention. CAAI strives to fully comply with these standards and recommended practices in the safety critical field of aerodrome, airspace and CSN safeguarding.

The evaluation and management of obstacles by CAAI is conducted on a nation-wide scale and includes safeguarding of several international and domestic airports, a national Controlled VFR route network and CNS systems. Some obstacle limitation surfaces are based on international regulation and others are based on domestic regulation.

1.3. Purpose and Clarifications

The purpose of this document is to assist CAAI in the processes of data collection as a basis for a potential future international tender process. CAAI realizes that supplementary data is required in various aspects related to the industry's existing capabilities, technical specification of products and best practices. CAAI conducted a review of the desired technical features and compared them to the existing solution. CAAI is interested in implementing new capabilities while maintaining the existing critical features in order to

further improve its service to the public. Therefore, CAAI is interested in identifying the potential organizations capable of suppling Obstacle Evaluation and Management solutions, and learn about the main characteristics of these solutions.

The goal of the RFI is to help CAAI achieve a comprehensive understanding of Obstacle Evaluation and Management systems available on the market today, and their level of compliance with features and capabilities that are considered to be critical in CAAI's point of view. For that matter, CAAI would like to receive information related to the Obstacle Evaluation and Management system functional aspects, multi-users and network capabilities, automated OLS/IFP/CNS (NAVAIDs) safeguarding capabilities, compliance with regulation, interfaces and data format compatibility.

Any additional information that participants will include in their response will be gratefully received and may be taken into consideration.

Please note the following:

I. This document is a Request for Information (RFI) and not a Request for Proposal (RFP), therefore it does not constitute a commitment or obligation, implied or otherwise, for CAAI to take procurement action in this matter.

II. The objective of this RFI is to provide CAAI with as accurate and as comprehensive information as possible. Following the completion of the RFI, CAAI will consider its action, considering technical and professional requirements, among other considerations.

III. Neither CAAI nor the Government of Israel will be responsible for any cost incurred in furnishing the responses for this RFI document.

IV. CAAI is not obligated to complete a tender based on responses and responders to this RFI.

V. Any figures or details provided by CAAI as part of this RFI are indicative only and may change.

VI. Response to this RFI does not constitute a requirement for qualifying to participate in a RFP process or an advantage in participation in a RFP, if and when such process shall be conducted.

VII. Information provided in the responses to this RFI is intended to be used internally in CAAI. Nonetheless, it should be noted that RFI responses may be presented

externally as part of procurement committee discussions. In such case, responders shall have no claim against CAAI.

2. Responding to this RFI

2.1. Minimum information to include in RFI

RFI responses shall include the following minimum information:

2.1.1. Participating organization's name;

2.1.2. Contact details of the participating organization;

2.1.3. Name and position of the primary point of contact (POC) for this RFI, within the participating organization;

2.1.4. E-mail address and phone number of the POC;

2.1.5. Information that the participating organization would like to provide CAAI in regard to the RFI questions detailed in paragraph 3 of this document.

2.2. Response Submission Deadline

2.2.1. Responses to this RFI must be submitted no later than 11:59 PM Israel Standard Time (GMT+2), on May 14th, 2019.

2.2.2. RFI submissions will be accepted as e-mail attachments only in PDF or Word Document formats. All responses must be sent to the following e-mail address with "CAAI ETOD RFI Response" in the subject line: levip@mot.gov.il.

2.2.3. Point of Contact for Inquiries: for any questions or requests for clarifications please contact Mrs. Pnina Levi at levip@mot.gov.il or via telephone +972-3-9774562 (CAAI, Aviation Infrastructure main office).

3. RFI Questions

3.1. Product Features Review and Specification

3.1.1. Describe the main features and capabilities included in your product. If the product is composed of several sub-systems, please specify the various sub-systems and their functionalities.

3.1.2. Describe the technical specification of the product.

3.2. Compliance with Regulation

3.2.1. Does the solution provided by your organization fully comply (or can be provided in a manner that will be in full compliance) with regulation requirements? If not, what are the standards that your solution is not in full compliance with?

Note: The term “regulation requirements” in this context refers to: ICAO Annex 14, Annex 15 and Annex 10, ICAO Document 9881, database structure that is fully compatible with AIXM 4.5, AIXM 5.1 or other AIXM version, ICAO Document 8168 (PANS OPS), FAA part 77 and FAA TERPS.

3.2.2. Does the solution provided by your organization enable implementation of domestic regulation in the form of protection surfaces with parameters that are different than those specified in international regulation?

3.3. Technical Specification

3.3.1. Please define a typical system architecture that, in your opinion, is suitable for CAAI needs (types of working stations, system hierarchy).

3.3.2. What type of graphical and tabular/textual user interface exists in the system? Does graphical interface include both 2D and 3D display of obstacle data, infrastructure and limitation surfaces?

3.3.3. Does the system support various global coordinate systems, such as WGS84 (GCS/UTM), WGS 1984 Web Mercator Auxiliary Sphere and local coordinate systems such as Israel TM Grid? Are transformations from global to local

coordinate systems conducted in a seamless manner and without any loss of accuracy?

3.3.4. Does the system support database search functionality, permitting the user to easily access historical obstacle data and evaluation results?

3.3.5. Does the system support automated evaluation of obstacles in reference to pre-defined aerodrome obstacle limitation surfaces (aerodrome safeguarding)?

3.3.6. Does the system support automated evaluation of obstacles in reference to pre-defined instrument flight procedures protection surfaces?

3.3.7. Does the system support automated evaluation of obstacles in reference to pre-defined communication, navigation and surveillance protection surfaces?

3.3.8. Does the system include import/export capabilities in the common industry formats (such as XLS, CAD, shapefile, GBD, XML-AIXM and KML)?

3.3.9. What types of outputs are included in the system (reports, charts, obstacle data file types, MS Office application formats etc.)? Does the system support automated production of formal CAA response letters and or letter of requirement to publish a NOTAM to the NOTAM office? If so, can response letters be formulated to be produced in Hebrew?

3.3.10. Describe the processes of aerodrome/runway/IFP/CNS (NAVAIDs) establishment. Is the process fully user-configurable, if not – to what extent is the process configurable? Does the system support multiple runways configuration?

3.3.11. Describe the main steps of the obstacle evaluation process, from user input to system output. Specify how the system presents results to the user (spatial and vertical penetration of the surface/s, separation of surfaces, obstacle details).

3.3.12. Does the system support management of terrain database (DEM, DTM, DSM)? What terrain database formats are supported?

3.4. Service Model

3.4.1. What are the possible service models for the implementation of your solution?

3.4.2. Please specify any additional hardware or software that CAAI may be required to purchase independently as part of the solution implementation.

3.4.3. What levels of maintenance and support services are typically provided with the system? What are the main characteristics of a SLA for the system?

3.5. Network, Interfaces and Multi-user Applications

3.5.1. Is the solution proposed by your company based on a server or standalone infrastructure? Does the solution support multi-user access?

3.5.2. What interface capabilities are built-in the system? Specifically, can the system receive applications and approval requests from users outside CAAI via the internet? If any examples of such interfaces exist, please describe the example or provide a case study.

Note: In the context of this paragraph, interfaces refer to any automated transfer of information to or from external systems, such as government agencies information management systems, user application interface components (digital forms, online portals), safeguarding enquiries charging system etc.

3.5.3. Does the system permit automated distribution of information to the public in the form of replies to data inquiries or results of an evaluation process?

3.6. Data Security

3.6.1. What were the information protection standards used in the development of the system?

3.6.2. In case of external interfaces, does the system include internal data protection features?

3.7. Language

3.7.1. Is the system capable of supporting data and user interface in the Hebrew language? If a development process will be required in order to comply with

such requirement, what is your assessment in terms of time and ROM price for the development process?

3.8. Past Experience

3.8.1. Provide summary description of previous relevant experience and customers in the field of national obstacle evaluation and management system.

Please include the following information: Customer details, deliverables description, scope of work and additional services delivered.

3.8.2. If available, please include letters of recommendations or recommenders contact details.

3.9. Quality Assurance

3.9.1. Does your organization comply with ISO 9001?

3.9.2. What other quality control and quality assurance mechanisms does your organization use in similar projects?

3.9.3. What data quality assurance and quality improvement features are included in the system (Input control and restrictions, CRC etc.)?

3.10. Estimated Cost (excluding VAT)

3.10.1. Provide estimated cost (Rough Order of Magnitude, ROM) in US Dollars or Euro, excluding VAT for the system and for specific work packages as proposed by your organization (data migration, database establishment, quality control etc.).

Note: include in your ROM price proposal any additional software, hardware or other system components that are required to be purchased by CAAI.

3.10.2. Provide ROM estimation in US Dollars excluding VAT for yearly fee for technique support and system maintenance. Specify the pricing method (for

example – annually payment for specific scope of support, payment per support activity etc.)

3.10.3. If relevant, provide information on proposed methods of minimizing costs and increasing the efficiency of the project (for example, extending the service agreement to a certain duration).

3.10.4. If relevant, provide information on additional taxes that may apply on CAAI.

3.11. Typical Project Milestones and Timeframe

3.11.1. Based on your experience, please provide information regarding the typical milestones of a system implementation project (initiation, data preparation/migration, installation, protection surfaces design, training etc.). Please specify, what is the estimated overall project timeframe?

3.11.2. If relevant, provide information on methods that may expedite the implementation of the system.

3.12. Additional Information

3.12.1. Please feel free to provide any additional relevant information your organization would like to include in response to this RFI.