

## **Tender Specifications**

### **Attached to the Invitation to tender**

## **Invitation to tender No. EMSA/NEG/10/2021 for Consultancy services on potential Artificial Intelligence and Machine Learning solutions in Integrated Maritime Services**

### **1. Introduction**

The European Maritime Safety Agency (EMSA) was established under Regulation (EC) No 1406/2002 of the European Parliament and of the Council<sup>1</sup> for the purpose of ensuring a high, uniform and effective level of maritime safety. Among its tasks, the Agency develops, hosts, operates and monitors the central SafeSeaNet (SSN) system that supports the exchange of maritime safety information among EU Member States (MS), Norway and Iceland (as mandated by Directives 2002/59/EC and 2010/65/EU), and in some cases with countries outside of the EU/EEA.

EMSA supports Member State authorities in a variety of their functions by providing tailored-made services (e.g. Integrated Maritime Services- IMS), tools (e.g. Automated Behaviour Monitoring), data (vessel traffic monitoring), and information products (e.g. SSN incidents, Port State Control classification of ships' flags in terms of their safety performance). The volume, variety and velocity of data being processed and stored by EMSA is increasing and this trend is expected to continue for vessel positions, Earth Observation (EO) satellite images and related products. In addition, technical implementations are on-going continuously extending the period of retention of all vessel positions.

This ever-increasing data provides opportunities to extend the type of information, as well as functionalities and tools that EMSA can offer to Member States for their evidence-based decision making.

EMSA is considering using Big Data solutions automated processes and techniques to gain insights into certain datasets as well as the usage of queries and data aggregation procedures to achieve these insights (for instance, via Data Analytics) and to address specific business scenarios.

Data analytics can be defined as the process of analysing raw data to provide more meaningful insights and conclusions about that information. It aims at processing "raw" data for finding patterns and relationships by applying, inter-alia, statistical techniques. Many of the techniques and processes of data analytics have been automated into processes and algorithms that work over raw data for human consumption.

EMSA is looking for data analytics processes and techniques based on Artificial Intelligence (AI) techniques, namely Machine Learning (ML) algorithms. The Machine Learning provides insights hidden in data without explicitly being instructed about the location of the data (where) or the conclusions related to specific patterns (what). The learning can be understood as a scientific study of algorithms and statistical models that computer-based systems use to effectively perform specific tasks without explicit instructions, relying on patterns and inference instead.

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<sup>1</sup> Regulation (EC) No 1406/2002 of the European Parliament and of the Council of 27 June 2002 establishing a European Maritime Safety Agency (OJ L 208, 5.8.2002, p. 1.).

Since different types of analytics, Big Data processing, real-time analytics, and Machine Learning may be needed by EMSA an effective solution supporting these needs is to be considered. Consequently, EMSA may need to establish a Data Lake (DL) to support the users. The Data Lake is understood as a centralized repository that allows storage of structured and unstructured data at any scale. This solution also offers flexibility as it may serve new business scenarios that were not initially defined. Different types of analytics can be used on DL like SQL queries, big data analytics, full text search, real-time analytics, and machine learning.

The above considerations are reflected in the EMSA's single programming document 2020-2022 which refers to: (1) '[...] further development of the ABM [Automated Behaviour Monitoring] tools and the analysis of which "big-data" analytics techniques and products can support the IMS community [...]; and (2) '[...] development of machine learning and artificial intelligence applications in order to improve risk assessment, vessel position predictability, statistics and innovation'.

## 2. Objective, scope and description of the contract

### 2.1 Objective

In order to address the challenges outlined in the introduction, EMSA needs to analyse potential AI and Machine Learning solutions build around specific business use cases (Ref. Appendix 1) and gather elements facilitating decision-making on a potential way forward.

Consequently, the objective of the tender is to contract **consultancy services resulting in a number of deliverables, including a final report that helps to identify how to build Artificial Intelligence (AI) and Machine Learning (ML) solutions within EMSA's Integrated Maritime Services (IMS)**. These solutions shall contribute, in an economical, efficient and sustainable way, to the maritime safety, security, environment protection and the efficiency of the maritime traffic.

The overall operational objective of the AI and ML, in the context of IMS, will be to reduce the workload of the maritime administrations, maritime traffic or maritime surveillance operators, by automatizing certain analysis and presenting the data in a user-friendly and aggregated form, supporting ad-hoc analysis and potential alerting on events that may negatively impact maritime safety or security.

In addition to this timely acquisition of data on maritime operations at sea and in ports, as well as in shipping communities, constitutes an opportunity for early detection, prediction and advanced analyses of maritime occurrences that may impact maritime safety, security and marine environment protection. AI and ML may provide for opportunities of acquiring and processing of information that has significant value for response to the evolving situation including identification of maritime risks aggregation, and detection of maritime operations changes both on strategic and tactical levels.

### 2.2 Scope

Within the resulting contract the following tasks shall be completed by the contractor:

- Task 1 - Identify, list and analyse the existing, on-going and planned ML or AI developments in the wider context of the maritime safety domain (e.g. marine electronics or equipment, within the developing projects such as STM<sup>2</sup>, or commercial safety services to shipping industry), and relevant developments in other transport modes in order to support potential, future added-value, benchmarking of EMSA's IMS AI and ML solutions and to avoid potential overlap.

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<sup>2</sup> <https://www.seatraficmanagement.info/>

- Task 2 - Perform feasibility analysis of the identified IMS use cases, confirming whether the business use cases can be addressed with the Machine Learning (ML) solutions, advanced analysis or other type of AI. This shall be performed via the analysis and validation of the identified use cases (Refer to Appendix 1). The feasibility analysis shall identify and refer to similar or analogous systems/ implementations in the maritime or other transport domains.
- Task 3 - Perform a demonstration of potential AI or ML solutions, based on a sample data set(s) for two out of four use cases agreed with EMSA (Refer to Appendix 1). All the costs related to the implementation of this task (e.g. necessary IT or Cloud infrastructure of the contractor, etc.) remain under the responsibility of the contractor.
- Task 4 - Elaborate and draft business requirements for the potential solutions for AI or ML, following EMSA's Business Requirements definition guidelines (see Appendix 2). Per each use case defined in the Appendix 1, the following points shall be included:
  - a. Analyse and further refine business requirements;
  - b. Define: objectives, potential value /benefit measurements and success metrics, stakeholders, expected outputs, priorities;
  - c. Refer to applicable data/information: specific, existing data sets (see Appendix 3), potential, new data sets, gap analysis (missing information data sets), data mapping of other human activities at sea affecting traffic operations; ports' data; aggregated or calculated metadata for ports (waiting times, patterns of life, etc/).
  - d. Propose specific ML models or other types of solutions, identifying risks and other considerations (complexity and 'explainability').
- Task 5 - Based on the analyses under above tasks 1 and 2 at least four (4) new use cases and the evolution of the already identified scenarios shall be proposed and elaborated with draft business requirements developed as per task 4.
- Task 6 - Gather outcome of all actions defined in tasks 1-5 and prepare a written document titled: 'Report on potential AI and Machine Learning solutions in the Integrated Maritime Services (IMS), supporting Member States authorities in maritime safety, security, environment protection and the efficiency of the maritime traffic'. Including an executive summary and the high-level infographics shall be developed in the report for the purpose of illustration and explanation of the potential AI and ML solutions to the non-experts and IMS business users.

The expected outcome shall be a high-level document with the definition and prioritization of the business requirements, as well as a high-level evaluation technical resources and effort that will be required for its future implementation. In the future, the report may be used as an input for the potential, practical future implementation of the AI and ML solutions, with a potential use of Data Lake, aimed at IMS end-users using the existing or new IMS interfaces.

The report shall take into consideration a general description of the current situation and potential help of the technology as also outlined in the Appendix 1.

EMSA IMS business and technical teams shall be consulted by the contractor for the purpose of this study, in order to define correctly all the elements essential for feasibility analysis and definition of the requirements. The baseline for the meetings is to have the meetings in person at EMSA premises, however considering the COVID-19 pandemic situation, teleconference calls may be used regularly. All the costs related to the organization of the meetings remain under responsibility of the contractor.

Meetings with relevant stakeholders shall be organized by the contractor, e.g. to confirm the business requirements, analyse the data and access to data, etc.

Technical implementation is not expected within this contract. This contract will consist simply in a feasibility analysis, demonstration of the AI or ML methods on a sample data set, and further refinement of the business requirements, as well as a compilation of a report document summarizing all the elements and actions.

Tenderers shall include in their offer the initial analysis of the use cases provided by EMSA (see Appendix 1) in terms applicability to specific AI and ML solutions.

### **3. Contract management responsible body**

EMSA Unit 3.1 in charge of Maritime Digital Services - will be responsible for managing the contract.

### **4. Project Planning**

Project Plan shall be provided by the tenderer in the offer and shall include:

- The indicative dates for the kick-off, as shortly as possible following signature of the contract.
- The meetings, indicated milestones, as well as the planning of the tasks and deliveries. Potential presentational meetings and the remote ones (teleconferences) shall be clearly identified in the project plan.
- The total duration of the project shall not exceed 6 months.
- The Project Plan shall demonstrate the iterative process carried out throughout the analysis, feasibility, consultation, demonstration(s) and the report drafting.

#### **4.1 Agendas and minutes of meetings**

Meetings shall be agreed and held with EMSA stakeholders (business and technical teams) for the kick-off, regular consultations, presentation, or demonstrations of the deliveries per each task, and when each milestone is reached.

The baseline for the meetings is to have the meetings in person at EMSA premises, however considering the COVID-19 pandemic situation teleconference calls may be used regularly.

Progress meetings. These meetings shall be held on a weekly basis to review the progress of the report, discuss possible bottlenecks of the activities and review the priorities when applicable. The open actions, open issues and risks shall be reviewed at these meetings. Normally these meetings should last maximum 30 minutes. In some cases, and upon agreement of EMSA and the contractor, these meetings may be extended to discuss other topics, linked to the execution of the contract and for consultations.

For the progress meetings, remote connections by using voice/video conferencing systems are preferable.

The contractor shall provide as a minimum the following reports for all meetings held with EMSA:

- I. Agenda for the meetings. Prior to a meeting, an agenda, the content of which shall be agreed with EMSA, as well as drafts of the presentations to be made in a meeting, shall be provided, if applicable.
- II. Minutes of the meetings. The minutes must include at least the topics discussed, decisions taken and action items with indication of the responsible person and deadline of the actions. The minutes shall be provided within 2 working days following the event.

## 4.2 Milestones and Deliveries

The foreseen milestones and deliveries are summarized in the table below, with references to specific tasks:

ITEM	DELIVERABLE	MILESTONE	TIMING	INTERIM PAYMENT	FINAL PAYMENT
Kick Off Meeting (KOM)	Minutes of the meeting	Y	As soon as possible, after signing the contract	-	-
Task 1 - Identify, list and analyse the existing, on-going and planned ML or AI developments in the wider context of the maritime safety domain (e.g. marine electronics or equipment, within the developing projects such as STM <sup>3</sup> , or commercial safety services to shipping industry), and relevant developments in other transport modes in order to support potential, future added-value, benchmarking of EMSA's IMS AI and ML solutions and to avoid potential overlap.	<p>Presentation of the identified projects and analysis.</p> <p>Draft/ Proposed text for the chapter in the final report.</p>	Y	Around 1-1.5 months after signing the contract	Y	-

<sup>3</sup> <https://www.seatraficmanagement.info/>

ITEM	DELIVERABLE	MILESTONE	TIMING	INTERIM PAYMENT	FINAL PAYMENT
Task 2 - Perform feasibility analysis of the identified IMS use cases, confirming whether the business use cases can be addressed with the Machine Learning (ML) solutions, advanced analysis or other type of AI. This shall be performed via the analysis and validation of the identified use cases (Refer to Appendix 1). The feasibility analysis shall identify and refer to similar or analogous systems/ implementations in the maritime or other transport domains.	Minutes of the meeting(s).  Draft/ Proposed text for the chapter in the final report.	Y	Around 3 months after signing the contract	-	-
Task 3 - Perform a demonstration of potential AI or ML solutions, based on a sample data set(s) for two out of four use cases agreed with EMSA (Refer to Appendix 1). All the costs related to the implementation of this task (e.g. necessary IT or Cloud infrastructure of the contractor, etc.) remain under the responsibility of the contractor.	Preparing and performing a demonstration of potential AI or ML solutions.  Minutes of the meeting(s).  Draft/ Proposed text for the chapter in the final report	-	Around 4 months after signing the contract	-	-

ITEM	DELIVERABLE	MILESTONE	TIMING	INTERIM PAYMENT	FINAL PAYMENT
<p>Task 4 - Elaborate and draft business requirements for the potential solutions for AI or ML, following EMSA's Business Requirements definition guidelines (see Appendix 2). Per each use case defined in the Appendix 1, the following points shall be included:</p> <ul style="list-style-type: none"> <li>a. Analyse and further refine business requirements;</li> <li>b. Define: objectives, potential value /benefit measurements and success metrics, stakeholders, expected outputs, priorities;</li> <li>c. Refer to applicable data/information: specific, existing data sets (see Appendix 3), potential new data sets, gap analysis (missing information data sets), data mapping of other human activities at sea affecting traffic operations; ports' data; aggregated or calculated metadata for ports (waiting times, patterns of life, etc/).</li> <li>d. Propose specific ML models or other types of solutions, identifying risks and other considerations (complexity and 'explainability').</li> </ul>	Draft/ Proposed text for the chapter in the final report	Y	Around 4 months after signing the contract	-	-
<p>Task 5- Based on the analyses under tasks 1 and 2 at least four (4) new use cases and the evolution of the already identified scenarios shall be proposed and elaborated with draft business requirements developed as per task 4.</p>	Draft/ Proposed text for the chapter in the final report	Y	Around 5 months after signing the contract	--	-



ITEM	DELIVERABLE	MILESTONE	TIMING	INTERIM PAYMENT	FINAL PAYMENT
<p>Task 6- Gather outcome of all actions defined in tasks 1-5 and prepare a written document titled: 'Report on potential AI and Machine Learning solutions in the Integrated Maritime Services (IMS), supporting Member States authorities in maritime safety, security, environment protection and the efficiency of the maritime traffic'.</p> <p>The report shall include an executive summary and the high-level infographics shall be developed in the report for the purpose of illustration and explanation of the potential AI and ML solutions to the non-experts and IMS business users.</p>	Final report document,	Y	Within 6 months after signature of the contract	-	Y

The final deliverable for this contract, which must be in English and in a digital editable format, is the report document, titled **'Report on potential AI and Machine Learning solutions in the Integrated Maritime Services (IMS), supporting Member States authorities in maritime safety, security, environment protection and the efficiency of the maritime traffic'**; and containing all elements as defined in the scope of the contract (please refer to Section 2.2 above).

Template of the EMSA's report document will be provided to the successful tenderer. The report shall be adapted to the template as well as the organization corporate identity in terms of colour-codes, logos, fonts used, etc. (see Appendix 4). The high-level infographics developed for the purpose of illustration and explanation of the potential AI and ML solutions to the non-experts and IMS business users, shall be also aligned with EMSA's corporate identity (see Appendix 4).

## 5. Timetable

The estimated date for signature of the contract is October 2021.

The total duration of the project shall not exceed 6 months.

The table in Section 4.2 provides indicative timelines for the specific meetings, tasks and deliveries.

## 6. Estimated Value of the Contract

The maximum budget available for this contract is EUR 100,000.00 excluding VAT.

## 7. Terms of payment

Payments will be made in accordance with the provisions of the draft **Service Contract** available in the Procurement Section under the call to tender **EMSA/NEG/10/2021** on EMSA's website ([www.emsa.europa.eu](http://www.emsa.europa.eu)).

## 8. Terms of contract (purchase order)

When drawing up a bid, the tenderer shall bear in mind the terms of the draft Service Contract.

EMSA may, before the contract is signed, cancel the award procedure without the tenderers being entitled to claim any compensation.

## 9. Financial guarantees

The Contract is subject to performance guarantee. The tender(s) shall propose with the offer a suitable Guarantor (e.g. bank or financial institution) and provide a letter of commitment from the Guarantor. The suitability of the Guarantor will be assessed against the following criteria: The Guarantor's Long-Term credit rating must be above or equal to BBB- (S&P or equivalent) with at least two registered or certified rating agencies (of which at least one should be S&P, Moody's or Fitch) at the time of the submission of the offer.

## 10. Subcontracting

If the tenderer intends to either subcontract part of the work or realise the work in co-operation with other partners it shall indicate in its offer which part will be subcontracted, as well as the name and qualifications of the subcontractor or partner. It should be noted that the overall responsibility for the work remains with the tenderer.

The tenderer must provide required evidence for the exclusion and selection criteria on its own behalf and, when applicable, on behalf of its subcontractors. The evidence for the selection criteria on behalf of subcontractors must be provided where the tenderer relies on the capacities of subcontractors to fulfil selection criteria<sup>4</sup>. The exclusion criteria will be assessed in relation to each economic operator individually. Concerning the selection criteria, the evidence provided will be checked to ensure that the tenderer and its subcontractors as a whole fulfil the criteria. However, the selection criteria may apply individually where it is relevant in view of their nature.

## 11. Requirements as to the tender

Bids can be submitted in any of the official languages of the EU. However, as the main working language of the Agency is English, bids should preferably be submitted in English and shall in particular include an English version of the documents requested under points 13.5 and 14 of the present Tender Specifications. The tenderer must comply with the minimum requirements provided for in these Tender Specifications. This includes compliance with applicable obligations under environmental, social and labour law established by Union law, national law and collective agreements or by the international environmental, social and labour law provisions listed in Annex X to Directive 2014/24/EU of the European Parliament and of the Council.<sup>5</sup>

The tenderer shall complete the Tenderer's checklist.

If the tenderer intends to either subcontract part of the work or realise the work in co-operation with other partners (Join Offers) it shall indicate it in its offer by completing the form "Statement of Subcontracting / Joint Offer". This document is available on the Procurement Section / Calls for Tenders (Documents for tenderer) of EMSA's website ([www.emsa.europa.eu](http://www.emsa.europa.eu)).

The tender must be presented as follows and must include:

- a) A signed **cover letter** indicating the name and position of the person authorised to sign the contract/purchase order, the bank account on which payments are to be made and the email address to be used for contacts during the procurement procedure.
- b) **The Financial Identification Form completed**, signed and stamped. This document is available on the Procurement Section (Financial Identification Form) of EMSA's website ([www.emsa.europa.eu](http://www.emsa.europa.eu)).
- c) **The Legal Entity Form** completed, signed and stamped along with the requested accompanying documentation, including recent proof of that authorisation (not more than one year old). This document is available on the Procurement Section (Legal Entity Form) of EMSA's website ([www.emsa.europa.eu](http://www.emsa.europa.eu))

Tenderers are exempt from submitting the Legal Entity Form and Financial Identification Form requested if such a form has already previously been completed and sent either to EMSA or any EU Institution. In this case the tenderer shall simply indicate on the cover letter the bank account number to be used for any payment in case of award.

**Part A:** All the information and documents required by the contracting authority for the appraisal of tenders on the basis of the points 10, 13.13 and 14.2 of these specifications (exclusion criteria).

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<sup>4</sup> To rely on the capacities of a subcontractor means that the subcontractor will perform the works or services for which these capacities are required.

<sup>5</sup> Directive 2014/24/EU of the European Parliament and of the Council of 26 February 2014 on public procurement and repealing Directive 2004/18/EC (OJ L 94, 28.3.2014, p. 65).

**Part B:** All the information and documents required by the contracting authority for the appraisal of tenders on the basis of the Economic and Financial Capacity (part of the selection criteria) set out under point 14.4 of these specifications.

**Part C:** All the information and documents required by the contracting authority for the appraisal of tenders on the basis of the Technical and Professional capacity (part of the selection Criteria) set out under point 14.5 of these specifications.

**Part D:** All the information and documents required by the contracting authority for the appraisal of tenders on the basis of the **Award Criteria** set out under point 1616 of these specifications;

**Part E:** Setting out prices in accordance with point 12 of these specifications.

## 12. Price

- a) Price must be quoted for Consultancy services on potential Artificial Intelligence and Machine Learning solutions in Integrated Maritime Services and shall include all the costs necessary to execute the project, including any travel costs required by the tenderer to travel to EMSA for the meetings foreseen in the project plan. No additional costs will be reimbursed by EMSA.
- b) Prices must be fixed amounts and non-revisable.
- c) Prices must be quoted in euro.
- d) Under Article 3 and 4 of the Protocol on the privileges and immunities of the European Union, the latter is exempt from all duties, taxes and other charges, including VAT. This applies to EMSA pursuant to the Regulation 1406/2002/EC. Therefore, price and the amount of VAT must be shown separately.

## 13. Joint Offer

Groupings, irrespective of their legal form, may submit bids. Tenderers may, after forming a grouping, submit a joint bid on condition that it complies with the rules of competition. Such groupings must specify the company or person heading the project and must also submit a copy of the document authorising this company or person to submit a bid.

Each member of the group must provide the required evidence for the exclusion and selection criteria. The exclusion criteria will be assessed in relation to each economic operator individually. Concerning the selection criteria, the evidence provided by each member of the group will be checked to ensure that the group as a whole fulfils the criteria. However, the selection criteria may apply individually where it is relevant in view of their nature.

If awarded, the contract will be signed by the person authorised by all members of the group. Tenders from groups of service providers, contractors or suppliers must specify the role, qualifications and experience of each member or group.

## **14. Information concerning the personal situation of the tenderer and information and formalities necessary for the evaluation of the minimum economic, financial, technical and professional capacity required.**

### **14.1 Legal position – means of proof required**

When submitting their bid, tenderers are requested to complete and enclose the **Legal Entity Form** available on the Procurement Section of EMSA's website ([www.emsa.europa.eu](http://www.emsa.europa.eu)).

### **14.2 Grounds for exclusion – Exclusion criteria**

To be eligible to participate in this contract award procedure, a tenderer must not be in any of the exclusion situations listed in the Declaration of Honour.

For this purpose, the Declaration of Honour available on the Procurement Section of EMSA's website ([www.emsa.europa.eu](http://www.emsa.europa.eu)) shall be completed and signed.

### **14.3 Legal and regulatory capacity – Selection criteria**

#### **14.3.1 Standards / Prerequisites**

N.A.

### **14.4 Economic and financial capacity – Selection criteria**

#### **14.4.1 Standards / Prerequisites**

The tenderer must be in stable financial position and must have the economic and financial capacity to perform the contract.

#### **14.4.2 Evidence**

- a) Financial statements or their extracts for the last two years for which accounts have been closed.
- b) Statement of the overall turnover and, where appropriate, turnover relating to the relevant services for the last two financial years.
- c) Tenderers are exempt from submitting the documentary evidence if such evidence has already been completed and sent to EMSA for the purpose of another procurement procedure and the provided documents are up-to-date. In this case the tenderer shall simply indicate on the cover letter the procurement procedure where the evidence has been provided.
- d) If, for some exceptional reason which EMSA considers justified, a tenderer is unable to provide one or other of the above documents, it may prove its economic and financial capacity by any other document which EMSA considers appropriate. In any case, EMSA must at least be notified of the exceptional reason and its justification in the tender. EMSA reserves the right to request at any moment during the procedure any other document enabling it to verify the tenderer's economic and financial capacity.

## 14.5 Technical and professional capacity – Selection criteria

### 14.5.1 Standards / Prerequisites

The tenderer and the proposed team shall have the technical and professional capacity to perform the contract.

#### **Tenderer**

The company providing the consultancy services and drafting report shall demonstrate technical and professional capacity for conducting the consultations, analysis, preparing demonstrations and drafting report.

The tenderer's technical and professional capacity will be evaluated based on the following criteria that will be applied to the legal entity(ies) submitting the offer (individually or jointly) and not to any mother company or company of the same group:

- Then tender shall have a proven experience in the innovative projects in the maritime safety or transport domains.
- The tenderer shall have proven experience with projects or consultations, reports or studies in the area of AI and ML and methods for assessing value/benefit measurements and defining success metrics.
- The tenderer shall have a proven experience in the demonstrations or 'proof of concept(s)' using the AI and ML techniques.

#### **Team**

The team managing the project, conducting the consultations, analysis, demonstrations and drafting the report shall be clearly identified.

The teams(s) involved in the activities for this tender, conducting the analysis, consultations, demonstration of the AI and ML solutions on the sample data, and report drafting, shall include at least the following distinct roles (roles to be performed by different persons):

- a. Project Manager,
- b. Maritime Expert(s),
- c. Business Analyst(s),
- d. Data scientist(s); and
- e. Machine Learning (ML) Engineer(s).

The team members shall have a proven experience in consultations and drafting reports in English.

For the team involved in the activities within this tender, the following criteria apply per each role:

- a) Project Manager:
  - i. Proven knowledge of English (minimum B2 level).
  - ii. At least 3 years' experience in the project management.

- iii. Proven experience in analysis, feasibility, consultation or demonstration(s)s and the documents drafting.
- b) Maritime domain projects expert:
  - i. Proven knowledge of English (minimum B2 level).
  - ii. At least 3 years' experience in the maritime projects.
  - iii. Proven experience in ship traffic management, or maritime safety or maritime transport.
- c) Business analyst:
  - i. Proven knowledge of English.
  - ii. Proven experience in the AI and ML business value assessment.
- d) Data scientist:
  - i. At least 3 years of experience within the role.
  - ii. Proven experience in the maritime or transport domain projects.
- e) Machine Learning (ML) Engineer(s):
  - i. At least 3 years of experience in the field.

#### 14.5.2 Evidence

##### Tenderer

The evidence shall be presented using the template table below:

Selection Criteria	Evidence
<ul style="list-style-type: none"> <li>Proven experience in innovative projects in the maritime safety or transport domains.</li> </ul>	<ul style="list-style-type: none"> <li>List of minimum 2 reports or studies in this area over the past 5 years and short description on how the projects provided the experience required.</li> </ul>
<ul style="list-style-type: none"> <li>Proven experience with projects or consultations, reports or studies in the area of AI and ML.</li> </ul>	<ul style="list-style-type: none"> <li>List of relevant projects and short description on how the projects provided the experience required.</li> </ul>
<ul style="list-style-type: none"> <li>Proven experience in the demonstrations</li> </ul>	<ul style="list-style-type: none"> <li>List of relevant projects and short</li> </ul>

or 'proof of concept(s) using the AI and ML techniques.	description on how the projects provided the experience required.
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## Team

For the team members, relevant CVs in EuroPass format<sup>6</sup> or equivalent format shall be provided for each proposed profiles. The evidence shall be presented using the template table below.

Role in the activities for this sender, Name, reference CV and Certificates	Selection Criteria	Evidence
Project Manager	<ul style="list-style-type: none"> <li>a) Proven knowledge of English (minimum B2 level).</li> <li>b) At least 3 years' experience in the project management.</li> <li>c) Proven experience in analysis, feasibility, consultation or demonstration(s) and the documents drafting.</li> </ul>	<ul style="list-style-type: none"> <li>a) Language certificates B2 or higher, or the English -based curriculum education, or projects / studies in English.</li> <li>b) Short explanation on how the experience was gained.</li> <li>c) List of at least 3 projects reference with the analysis, feasibility, consultation or demonstration(s) and the documents drafting, and short explanation on how the experience was gained.</li> </ul>
Maritime domain expert(s)	<ul style="list-style-type: none"> <li>a) Proven knowledge of English (minimum B2 level).</li> <li>b) At least 3 years' experience in the maritime projects.</li> <li>c) Proven experience in ship traffic management, or maritime safety or maritime transport.</li> </ul>	<ul style="list-style-type: none"> <li>a) Language certificates B2 or higher, or the English-based curriculum education, or projects / studies in English.</li> <li>b) Short explanation on how the experience was gained.</li> <li>c) List of at least 3 projects reference in ship traffic management, or maritime safety or maritime transport, and short explanation on how the experience was gained.</li> </ul>
Business analyst(s)	<ul style="list-style-type: none"> <li>a) Proven knowledge of English</li> <li>b) Proven experience in the AI and ML business value</li> </ul>	<ul style="list-style-type: none"> <li>a) Projects/reports/studies in English.</li> <li>b) Short explanation on how the experience was gained.</li> </ul>

<sup>6</sup> <https://europass.cedefop.europa.eu/documents/curriculum-vitae>

	assessment.	
Data scientist(s)	a) At least 3 years of experience within the role.  b) Experience in the maritime or transport domain projects.	a) Short explanation on how the experience was gained.  b) At least 1 project in maritime or transport domain and short explanation on how the experience was gained.
Machine Learning (ML) Engineer(s)	a) At least 3 years of experience in the field.	a) Short explanation on how the experience was gained.

The Contractor may during the implementation of the Contract replace the team members in charge of delivering the services with other ones by informing EMSA in advance and provided that they comply with the selection criteria and have same or equivalent experience requirements. Replacements of the team members are subject to an amendment to the Contract.

## 15. Declaration of Honour (DoH)

Please note that the tenderer shall provide information with regards its situation and on the natural or legal persons that are members of the administrative, management or supervisory body or that have powers of representation, decision or control and beneficial owners.

Upon request and within the time limit set by EMSA, the tenderer shall provide the following evidence concerning itself, the natural or legal persons as listed under the first paragraph, and concerning the natural or legal persons which assume unlimited liability for the debt of the tenderer:

For the exclusion situations described in points (a), (c), (d), (f), (g) and (h) of the Declaration of Honour, production of a recent extract from the judicial record is required or, failing that, an equivalent document recently issued by a judicial or administrative authority in the country of establishment of the tenderer showing that those requirements are satisfied.

For the exclusion situations described in (a) and (b) of the Declaration of Honour, production of recent certificates issued by the competent authorities of the country of establishment is required. These documents must provide evidence covering all taxes and social security contributions for which the tenderer is liable, including for example, VAT, income tax (natural persons only), company tax (legal persons only) and social security contributions. Where any document described above is not issued in the country concerned, it may be replaced by a sworn statement made before a judicial authority or notary or, failing that, a solemn statement made before an administrative authority or a qualified professional body in its country of establishment.

The successful tenderer must provide the documents mentioned as supporting evidence before signature of the contract and within the deadline given by EMSA. This requirement applies to each member of the group in case of joint tender.

If the tenderer already submitted such evidence for the purpose of another procedure, its issuing date does not exceed one year and it is still valid, the person shall declare on its honour that the documentary evidence has already been provided and confirm that no changes have occurred in its situation.

## 16. Award criteria

The contract will be awarded to the tenderer who submits the most economically advantageous bid (the one with highest score) based on the following quality criteria and their associated weightings:

Quality criterion 1 ( $W_1 = 10\%$ ) - **Quality of the project plan**: the proposed Project Plan shall describe how to achieve the project goals within the maximum duration of the project and the approach for the consultations, analysis, demonstrations and report drafting. Please refer to Section 4 (Project plan) above.

Quality criterion 2 ( $W_2 = 10\%$ ) - **Quality of the Methodology (ies)** to be used for

- Elaborating specific topics, identification of the existing AI and ML solutions, feasibility analysis, demonstrations, identification of the new use cases, business requirements drafting and report drafting, and
- Identifying sources of information for the on-going AI and ML projects in the maritime or transport domain(s).

Please refer to Section 2.2 (Scope) above.

Quality criterion 3 ( $W_3 = 30\%$ ) - **Quality of the initial analysis** of the use cases provided by EMSA. Tenderers shall include in their offer the initial analysis of the use cases provided by EMSA in terms applicability to specific AI and ML solutions. Please refer to Appendix 1 to these tender specifications.

Quality criterion 4 ( $W_4 = 20\%$ ) – **Quality of the proposed team structure** in terms of break-down of tasks, involvement and interaction of each team member within the project to fulfil the activities requested by the Agency.

and the price criterion and associated weighting:

Price of the bid ( $W_{price} = 30\%$ ).

For all bids evaluators will give marks between 0-10 (half points are possible) for each quality criterion.

The score is calculated as

$$S = SQ + SP$$

where:

The average quality for quality criterion  $i$  is

$$Q_i = \frac{1}{\text{number of evaluators}} * \sum_{\text{evaluator}} \text{mark of the evaluator for quality criterion } i$$

The overall weighted quality is

$$Q = \sum_i Q_i * W_i$$

The score for quality is

$$SQ = \frac{Q}{Q \text{ of the bid with highest } Q} * 100 * \sum_i W_i$$

The score for price is

$$PP = \sum_i \frac{\text{lowest } Price_i \text{ of all bids}}{Price_i} * 100 * W_{Price_i}$$

Only bids that have reached a minimum of 50 % for  $Q_1$ , a minimum of 50 % for  $Q_2$ , etc. will be taken into consideration when calculating the score for quality  $SQ$ , score for price  $SP$  and score  $S$ .

Only bids that have reached a minimum of 60 % for the score  $S$  will be taken into consideration for awarding the contract.

## 17. Rejection from the procedure

Contracts will not be awarded to tenderers who, during the procurement procedure, are in one of the following situations:

- A. are in an exclusion situation;
- B. have misrepresented the information required as a condition for participating in the procedure or have failed to supply that information;
- C. were previously involved in the preparation of procurement documents used in the award procedure where this entails a breach of the principle of equality of treatment, including distortion of competition that cannot be remedied otherwise.

## 18. Intellectual Property Right (IPR)

Please consult the contract for IPR related clauses.

If the results are not fully created for the purpose of the contract this shall be clearly pointed out by the tenderer in the tender. Information shall be provided about the scope of pre-existing rights, their source and when and how the rights to these rights have been or will be acquired.

In the tender all quotations or information originating from other sources and to which third parties may claim rights have to be clearly marked (source publication including date and place, creator, number, full title etc.) in a way allowing easy identification.

## List of Appendixes to the Tender Specifications

The following appendixes contain information relevant for this procurement procedure.

No.	Name
1	Use cases
2	Business Requirements definition guidelines
3	Data sets available at EMSA – abstract from the TWA TSC1
4	EMSA's corporate identity guidelines