

Tender Specifications

attached to the Invitation to tender

Invitation to tender N° EMSA/NEG/44/2015 for the “Preparation of the tender specifications for the design and implementation of the new European Marine Accident Investigation Platform (EMCIP)”

1. Introduction

The European Maritime Safety Agency (EMSA) was established under Regulation 1406/2002/EC of the European Parliament and of the Council to contribute to the enhancement of European maritime safety.

According to the provisions of its founding Regulation, as amended, the Agency shall facilitate cooperation between the Member States and the Commission [...] in the field of the investigation of marine casualties and incidents in accordance with Directive 2009/18/EC of the European Parliament and of the Council of 23 April 2009 establishing the fundamental principles governing the investigation of accidents in the maritime transport sector; and shall [...] carry out analysis of safety investigation reports with a view to identify added value at Union level in terms of any relevant lessons to be drawn. On the basis of data provided by the Member States, in accordance with Article 17 of that Directive, the Agency shall compile a yearly overview of marine casualties and incidents.

Directive 2009/18/EC states that data on marine casualties and incidents shall be stored and analysed by means of a European electronic database to be set up by the Commission, which shall be known as the European Marine Casualty Information Platform (EMCIP). Furthermore, it states that investigative bodies of the Member States shall notify the Commission on marine casualties and incidents in accordance with the format in Annex II; that they shall provide the Commission with data resulting from safety investigations in accordance with the EMCIP database scheme; and that the Commission and the Member States shall develop the database scheme and a method for the notification of data within the appropriate timescale (article 17).

In accordance with EMSA's 2015 Work Programme, the Agency is charged with the management of EMCIP, it shall ensure the proper running of the system and it shall explore possible linking to other EMSA hosted information and exchange systems.

Since 2008 the EMCIP database has been hosted, maintained and developed by the Joint Research Centre (JRC) of the European Commission within the framework of the European Coordination Centre for Accident and Incident Reporting System (ECCAIRS). The current cooperation agreement with JRC will expire in December 2016.

Through this contract EMSA intends to draw up the specifications for the future EMCIP platform (hereinafter refer to as 'EMCIP') that will be integrated in the Agency's ICT landscape of existing maritime applications.

2. Objective, scope and description of the contract

The purpose of the contracted service is the preparation of the tender specifications needed for the development of the future EMCIP system. The result will be used as the functional and technical specifications to launch a future call for tender for the implementation of the new platform.

In order to ensure equal treatment and non-discrimination, the company awarded this contract cannot participate in the future tender for the implementation of the new EMCIP.

The contracted services should achieve the following objectives:

2.1. System design and function

- a. Set down the requirement specifications and functional specifications for the marine casualty information database application, taking into account the input of EMSA experts and capitalising on the existing EU expertise and common practices. The requirements should be documented, actionable, measurable, testable, traceable, related to identified business needs or opportunities, and defined to a level of detail sufficient for the future EMCIP's design, development and implementation;
- b. Consider the impact and define a strategy for the migration of the existing EMCIP database into the future EMCIP system;
- c. Revise the existing EMCIP taxonomy to support the future EMCIP implementation.

2.2. System architecture, technical and non-functional

- a. Set down the technical specifications;
- b. Set down the technical scenarios for the system's integration with other EMSA maritime applications;
- c. Set down the non-functional requirements;
- d. Consider operability, maintainability and scalability and characterise HW/SW scenarios and hosting criteria.

2.3. Tender development

The EMCIP tender specifications that must be prepared by the contractor will be used at a later stage as a basis to write tender specifications for the implementation of the system. In order to launch this related call for tender the following points should be covered:

- a. Identify critical requirements and risks;
- b. Provide a cost indication for the development process of the future EMCIP's core application modules and enhanced modules, as indicated in sections 2.3.1 and 2.3.2 below;
- c. Provide elements to be taken into consideration by EMSA when defining the tender evaluation matrix for the development of the future EMCIP's core and enhanced modules;
- d. Consider iterative, incremental and evolutionary development methods (e.g. "Agile" software development methods).

To achieve these objectives EMSA will favour the use of state of the art and proven methodologies and tools based on the "User Centred Design" philosophy or equivalent.

2.3.1. Core application

The future EMCIP Core Application modules will contain the basic functions that are necessary for the daily work of a casualty investigator. These will include:

- a) Authentication, authorization, user management and provisioning, considering EMSA corporate identity management implementation;
- b) Human/machine web interface;
- c) Community portal and content management;
- d) Data entry, to create, modify and delete occurrences in the future EMCIP database;
- e) Data query and extraction, to retrieve data from the future EMCIP database;
- f) Data transfers (e.g. internal, external and to IMO);
- g) System workflow management;
- h) Data quality control and enforcement;
- i) Taxonomy management;
- j) Basic GIS interface;
- k) Ship reference repository.

2.3.2. Enhanced modules

The future EMCIP Enhanced modules will consist of additional modules deemed necessary for the improvement of the user experience and system performance. These will include:

- a) Enhanced GIS interface;
- b) Interfaces with other maritime applications;
- c) Integration with business intelligence tools;
- d) Integration with customized reports and reporting layouts;
- e) Enhanced human/machine web interface;
- f) Enhancement of other Core Application modules.

2.3.3. Analysis and validation of Core and Enhanced Modules

The contractor shall analyse the proposed grouping of core and enhanced modules and validate their feasibility and operability for the successful implementation, and operation, of the future EMCIP software. Otherwise, the contractor will suggest alternative combinations of core and enhanced modules that, due to justified efficiency, cost and/or risk based criteria, will be considered more suitable for the better implementation of the project.

2.4. Deliverables

The contractor will provide the following key deliverables:

- a. Project Management documentation;
- b. Requirement and functional specifications;
- c. Technical specifications;
- d. Risk analysis;
- e. Cost indications;
- f. Elements to be taken into consideration to define the Tender evaluation matrix for the development of the future EMCIP's core and enhanced modules.

The contractor shall describe the methodologies and tools proposed to build-up the deliverables and include additional documentation considered relevant. The contractor should also ensure that the deliverables are suitable for use as the base documents of a future tender for the implementation of the future EMCIP. The working language, working documents and all deliverables must be in English. Their structure and content is outlined hereafter.

2.4.1. Project Management documentation

- a. Project plan: a complete project plan must be created and maintained for the whole duration of the contract. This project plan must include the following items at least: project charter, project management approach, scope, Work Breakdown Structure (WBS), scheduling, deliverables milestones, working locations, meetings planning and reports, completion percentage to date, reporting on decisions taken and pending.
- b. Fortnightly status report: after ten working days a brief status report shall be sent within three working days. This report must be presented and attached to the Project plan.
- c. Monthly review points: once every month the contractor and EMSA will undergo a joint monthly review to verify that the project remains on track with respect to scheduling, delivery milestones, objectives and scope.

In order to support the monthly review, the contractor shall provide an update against the last fortnightly review or interim reports (as applicable).

Any updates and reviews of the project plan mentioned in point 2.4.1.a. will be agreed at this stage.

- d. The contractor shall propose a template of the fortnightly status report and for the interim reports and will agree with EMSA as to their final structure and content.

2.4.2. Requirement and functional specifications

On the basis of the existing drafts the following documents should be either completed or produced:

- a. User Profiles: a description of the different roles that will have to work with the system;
- b. User Scenarios: a description of the different ways users will interact with the future EMCIP based on the key processes that have to be supported;
- c. User Interaction Diagrams: flows and detailed interaction with the system based on User Scenarios;
- d. Use Case Model: detailed description based on how the system should behave based on the user interaction. Special requirements and business rules should also be mapped into use cases. Beside use cases diagrams and their description, each use case must be detailed using activities diagrams and/or sequence diagrams;
- e. Style Guide: description of the look and feel requirements that have to be met by the system to facilitate ease of use;
- f. Conceptual Database model: including a Create, Read, Update and Delete (CRUD) matrix;
- g. Traceability Matrix, to verify the consistency between requirements, use cases and business processes;
- h. Impact and strategy for data migration from the existing EMCIP platform to the future EMCIP;
- i. Data model adaptation, considering the use of the existing EMCIP taxonomy in the future EMCIP.

2.4.3. Technical specifications

The contractor shall analyse, design and describe the new EMCIP technical architecture which will be represented through the following elements:

- a. **Architecture Overview:** a high level description of the main conceptual elements, that shall indicate core and enhanced modules;
- b. **Architectural Decisions:** a description of the key underlying assumptions the solution is based upon, including advantages and disadvantages. The analysis outcome of core and enhanced modules shall be reflected in the architectural decisions.
- c. **Component Model:** a design of the components that will have to be part of the system;
- d. **Interface Specifications:** detailed description of all interfaces between the future EMCIP and EMSA maritime applications which the future EMCIP will be interfaced to, including data to be exchanged, technology, volume, frequency, etc.;
- e. **Non-Functional Requirements:** detailed description of non-functional requirements such as operability, maintainability, scalability, availability, security (including recommendations and decisions in-line with ISO/IEC 27002:2005), performance (including response time from a user viewpoint);
- f. **Technical Infrastructure:** detailed description and sizing of hardware and software scenarios for production, pre-production and testing/quality environments and hosting scenarios. In all cases traceability between this proposed technical architecture and the future EMCIP must be justified. In other words, evidence that the architecture and all technical aspects are the right ones for the future EMCIP should be supplied. The contractor can suggest alternative technical architecture(s) to the existing one. In this case advantages and disadvantages should be clearly indicated.

2.4.4. Risk analysis

The contractor shall produce a detailed Risk Analysis including qualitative and quantitative risk assessment, providing a complete list of prioritised risks related to the future EMCIP implementation project and recommended actions to avoid, mitigate and minimize those risks.

2.4.5. Cost indications

In order to evaluate the costs for the future implementation of the future EMCIP the following points must be covered by the contractor:

- a. **Work Breakdown Structure (WBS)** detailing the tasks to be carried out;
- b. The description of roles required for each task related to Core Application modules and each of the individual Enhanced modules shall be presented, and the effort required for their execution will be measured in man days;
- c. **Hardware costs**, for the 3 environments (production, pre-production and testing/quality);
- d. **Software costs**, for the development project and additional software licences;
- e. **Maintenance effort and cost** over a period of 5 years.

2.4.6. Tender evaluation matrix

The contractor must provide elements to elaborate a specific matrix that will be used at a later stage to evaluate the bids received by EMSA for the implementation of the future EMCIP system. It should include the

requirements and evidence to evaluate the technical and professional capacity of the tenderers as well as the awarding quality criteria of the bids.

2.5. Quality

For the duration of the project the contractor shall adhere to an appropriate internal quality management system and evaluate and take appropriate measures on quality with respect to:

- a. project management and project plan;
- b. adherence to the overall contract objectives;
- c. content of the deliverables and services provided;
- d. delivery approach;
- e. periodic reporting and reviews.

3. Contract management responsible body

The European Maritime Safety Agency – Unit B.2, in charge of Ship Safety – will be responsible for managing the contract.

4. Project Planning

The kick-off meeting shall take place within 15 working days from the signature of the contract.

Monthly and fortnightly reviews will be scheduled to monitor the work proceeding and allow some time for problem solving.

The contractor shall issue an Interim Report within 3 calendar months from the kick-off meeting. EMSA will approve the Interim Report within 10 working days from its delivery.

The Final Report of the **“Preparation of the tender specifications for the design and implementation of the new European Marine Accident Investigation Platform (EMCIP)”** shall be delivered to EMSA within 6 calendar months following the kick-off meeting.

EMSA will approve the Final Report within 10 working days from its delivery.

A provisional timetable is presented in section 5. below.

5. Timetable

The estimated date for signature of the contract is 28 October 2015.

The contract will respect the following provisional timetable (meetings to be held only where indicated):

Kick-off meeting	Mid November 2015
Fortnightly reviews	See point 2.4.1.b)
Monthly reviews	Mid December 2015 Mid January 2016 Mid March 2016 Mid April 2016
Interim report	Mid February 2016

Final delivery meeting Mid May 2016

Approval final delivery End May 2016

6. Estimated Value of the Contract

The maximum budget available for this contract is of 60,000 Euro excluding VAT.

7. Terms of payment

Payment will be made in accordance with the provisions of the draft contract available in the Procurement Section under the call to tender EMSA/NEG/44/2015 on the EMSA website at the following address:

www.emsa.europa.eu

8. Terms of contract

In drawing up a bid, the tenderer should bear in mind the terms of the draft contract.

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

9. Subcontracting

If the tenderer intends to either sub contract part of the work or realise the work in co-operation with other partners he shall indicate in his offer which part will be subcontracted, as well as the name and qualifications of the subcontractor or partner. (NB: 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 criteria¹. 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.

10. Requirements as to the tender

Bids can be submitted in any of the official languages of the EU. The working language of the Agency is English. Bids must include an English version of the documents requested under point 13.5 & 14 of the present tender specifications.

The tenderer shall complete Tenderer's checklist.

¹ To rely on the capacities of a subcontractor means that the subcontractor will perform the works or services for which these capacities are required.

If the tenderer intends to either sub contract part of the work or realise the work in co-operation with other partners (Join Offers) he shall indicate in his offer by completion of the form – Information regarding joint offers and subcontracting.

The tender must be presented as follows and must include:

Signed cover letter indicating the name and position of the person authorised to sign the contract/Purchase Order and the bank account on which payments are to be made.

Financial Form completed, signed and stamped; available on the Procurement Section (Financial Form) on the EMSA Website at the following address: www.emsa.europa.eu

Legal Entity Form completed, signed and stamped and requested accompanying documentation, available on the Procurement Section (Legal Entity Form) on the EMSA Website at the following address: www.emsa.europa.eu

Tenderers are exempt from submitting the Legal Entity Form and Financial Form requested if such a form has already been completed and sent either to EMSA or any EU Institution previously. In this case the tenderer should 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 **9, 12 and 13.2** of these specifications (**Exclusion criteria**)

Part B: 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 **13.4** 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 **Award Criteria** set out under point **0** of these specifications;

Part D: setting out **prices** in accordance with **point 11** of these specifications.

11. Price

- a. Price must be quoted for the **“Preparation of the tender specifications for the design and implementation of the new European Marine Accident Investigation Platform (EMCIP)”**.
- 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 Communities, 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.

12. 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 (or consortia) 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 consortium 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 consortium will be checked to ensure that the consortium as a whole fulfils the criteria.

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

13. Information concerning the personal situation of the service provider and information and formalities necessary for the evaluation of the minimum economic, financial, technical and professional capacity required

13.1. 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 on the EMSA Website at the following address: www.emsa.europa.eu

13.2. Grounds for exclusion – Exclusion criteria

To be eligible to participate in this contract award procedure, tenderers must not be in any of the following exclusion grounds:

- (a) they are bankrupt or being wound up, are having their affairs administered by the courts, have entered into an arrangement with creditors, have suspended business activities, are the subject of proceedings concerning those matters, or are in any analogous situation arising from a similar procedure provided for in national legislation or regulations;
- (b) they have been convicted of an offence concerning their professional conduct by a judgement which has the force of res judicata;
- (c) they have been guilty of grave professional misconduct proven by any means which the contracting authority can justify;
- (d) they have not fulfilled obligations relating to the payment of social security contributions or the payment of taxes in accordance with the legal provisions of the country in which they are established or with those of the country of the contracting authority or those of the country where the contract is to be performed;
- (e) they have been the subject of a judgement which has the force of res judicata for fraud, corruption, involvement in a criminal organisation or any other illegal activity detrimental to the Communities' financial interests;
- (f) following another procurement procedure or grant award procedure financed by the Community budget, they have been declared to be in serious breach of contract for failure to comply with their contractual obligations.

13.3. Evidence to be provided by the tenderers

For this purpose the Declaration on Honour available on the Procurement Section on the EMSA Website (www.emsa.europa.eu) shall be completed and signed.

13.4. Technical and professional capacity – Selection criteria

Requirements:

The tenderer must have:

- The technical and professional capacity to perform the contract;
- Experience in projects related to maritime applications;
- Knowledge in maritime legislation;
- Knowledge of accident investigation processes;
- Experience in the proposed methodology;
- Experience in information systems architectures based on web technologies and products;
- Experience in developing projects with high data-analysis needs.

Evidence:

Evidence of the knowledge and experience in the fields mentioned above shall be provided on the basis of a list of related services in which the tenderer has participated and worked. This shall include a description of the services with indication of the objectives, contracting parties, duration and budget. The tenderer should also provide, within their bid, detailed curriculum vitae of each member of the team responsible to carrying out each part of the work, including his or her educational background, degrees and diplomas, professional experience (including references to previous studies and projects), research work, publications and linguistic skills.

14. Award criteria

Only the tenders meeting the requirements of the exclusion and selection criteria will be evaluated in terms of quality and price.

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:

Q₁: Quality, relevance and description of the methodology proposed for the project, including tools proposed to support the methodology, project work, communication and storage of the deliverables ($W_1 = 50\%$);

Q₂: Quality of the proposed team based on professional merits of the team, team structure and the distribution of the tasks within the team ($W_2 = 20\%$).

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

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

Only bids that have reached a minimum of 60% for each of the quality criteria Q_1 and Q_2 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 70% for the score S will be taken into consideration for awarding the contract.

14. Contracts will not be awarded to tenderers who during the procurement procedure:

- (a) are subject to a conflict of interest;
- (b) are guilty of misrepresentation in supplying the information required by the contracting authority as a condition of participation in the contract procedure or fail to supply this information.

15. False declarations

Without prejudice to the application of penalties laid down in the contract, tenderers and contractors who have been guilty of making false declarations concerning situations referred to in points 12 and 13 above or have been found to have seriously failed to meet their contractual obligations in an earlier procurement procedure or grant shall be subject to administrative and financial penalties set out in Article 145 of Commission Delegated Regulation of 29.10.2012 on the rules of application of Regulation (EU) No 966/2012 of the European Parliament and of the Council on the financial rules applicable to the general budget of the Union.

17. 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 should be clearly pointed out by the tenderer in the tender. Information should be provided about the scope of pre-existing rights, their source and when and how the 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.