

**Tender specifications**  
**Attached to the Invitation to tender**

**Invitation to tender N° EMSA/OP/09/2015 for IT Consultancy Services for EMSA's Horizontal IT Components: Portal, Identity Management, Integration and Non-Functional Capabilities, Data Warehouse and Geographic Information Systems**

**1. Introduction**

The European Maritime Safety Agency (EMSA) was established under Regulation 1406/2002/EC, as amended, for the purpose of ensuring a high, uniform and effective level of maritime safety. Among its tasks, the Agency should facilitate cooperation between Member States and the European Commission in the field of European Vessel Traffic Monitoring and Information System in the context of Directive 2002/59/EC.

EMSA contributes to the enhancement of the overall maritime safety system in the European Union. Its goals are, through its tasks, to reduce the risk of maritime accidents, marine pollution from ships and the loss of human lives at sea.

The Agency develops and operates software applications that support member states in implementing European maritime legislation. In order to achieve its tasks the Agency has the need to be supported by a solid ICT infrastructure.

Further information about EMSA can be obtained on its website: [www.emsa.europa.eu](http://www.emsa.europa.eu)

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

The purpose of this procurement is to establish an acquisition channel for the IT technical domains presented in each of the following lots:

- Lot 1: Portal Technology
- Lot 2: Identity Management and Single Sign-On
- Lot 3: Integration and Non-Functional Capabilities
- Lot 4: Data Warehouse, ETL and Related Technologies
- Lot 5: Geographic Information Systems

This will enable EMSA to acquire high quality services to support the ICT Sector of EMSA in:

- Supporting the development, enhancement, maintenance and operations of EMSA horizontal software components and modules in line with EMSA technical architecture that will be integrated and/or worked together with existent or new Maritime Applications;

- Performing studies, assessments, recommendations and other types of investigations in the different fields and components defined in the EMSA System Landscape present in the General Conditions of the ICT Framework Contract;

This procurement will result in the following:

- For Lot 2 and Lot 5 will result in the award of **Framework IT Contract** with one (1) contractor per Lot;
- For Lot 1, Lot 3 and Lot 4 will result in the award of a **Multiple Framework IT Contract with re-opening of competition** with three (3) successful contractors per Lot.

It should be stressed that the Framework Contract involves no direct commitment and, in particular, does not constitute an order per se. Instead, it lays down the overarching legal, financial, technical and administrative provisions governing the relationship between EMSA and the Contractors during its period of validity. Actual orders will be placed after the Framework Contract is signed and in force, through "specific contracts" concluded under performance of the Framework Contract. The draft Framework Contract specifies the basic conditions applicable to any assignment placed under its terms. The signing of a Framework Contract does not pose to EMSA any obligation to place specific contract.

Please note that tenderers may submit a bid for one or several lots.

## 2.1. Lot 1: Portal Technology

The portal concept is to present the user with a single web page that brings together or aggregates content from a number of other systems or servers. For portals that present application functionality to the user, the portal server is in reality the front piece (presentation tier) of a server configuration that includes some connectivity to the application server. The underneath application server is part of the Service Oriented Architecture (SOA) tiers which perform the actual functions of the application.

The server hosting the portal may only be a "pass through" for the user. By use of portlets, application functionality can be presented in any number of portal pages. For the most part, this architecture is transparent to the user.

The main features of a common portal are:

- Single Sign-On (SSO): portals can provide single sign-on capabilities between their users and various other systems. This requires a user to authenticate only once.
- Integration: the connection of functions and data from multiple systems into new components/portlets/web parts with an integrated navigation between these components.
- Federation: the integration of content provided by other portals, typically through the use of WSRP (Web Services for Remote Portlets) or similar technologies.
- Customization: the look and feel of the user environment is customizable. Also refers to the ability to prioritize most appropriate content based on attributes of the user and metadata of the available content.

- Personalization: personalization is more about matching content with the user. Based on a user profile, personalization rules are used to match the "services", or content, to the specific user.
- Access Control: the ability for the portal to limit specific types of content and services just or the users that are supposed to have access to it. For example, it can be used to distinguish between an application user profile from an administrator one. Please note that EMSA Access Control is fully integrated with IdM.
- Enterprise Search: search enterprise content.

Contractors can be invited to provide services in the Portal technical domain, like (but not limited to) the following ones:

- Design, implementation, test and deployment of new portlets;
- Default portal configuration for the addition of new organizational entities (e.g. communities, organizations, roles, user groups, permissions and its relationships);
- Configuration of default portlets (e.g. Web Content, Wiki, Announcements, Messages, Content Management) to support new requirements;
- Extension of the default portal implementation or default portlets implementation to answer new business requirements;
- Specific developments and configurations related with the integration of new or existent systems or infrastructures;
- Specific configurations related with EMSA's technical environments;
- Look and feel improvements and creation of new themes, including graphic design, web design and user experience (UX) of the portal framework.
- Version upgrades.

EMSA Portal technology
• Liferay Enterprise Edition, version 6.2

Note that the versions presented for these tools are the ones EMSA is using at the time of writing this document. These versions might be upgraded following EMSA's internal plans and are not to be considered as definitive for the entire contract timeline.

Further information on portal technology can be found on the System Landscape present in the General Conditions of the ICT Framework Contract and Appendix E: Access and Identity Management Guide.

## 2.2. Lot 2: Identity Management and Single Sign-On

User access requires each user to assume a unique digital identity across applications and networked infrastructures, which enables access controls to be assigned and evaluate against this identity.

Single sign-on (SSO) is a mechanism whereby a single action of user authentication and authorization can permit a user to access all computers and systems where he has access permission, without the need to enter multiple passwords. A service providing co-ordination and integration at (single) sign-on level conveys benefits to an enterprise through:

- reduction of human errors, a major component of systems failure, therefore highly desirable but difficult to implement;
- reduction in the time taken by users in sign-on operations to individual domains, including reducing the possibility of such sign-on operations failing;
- improved security due to the reduced need for a user to handle and remember multiple sets of authentication information;
- reduction in the time taken, and improved response, by system administrators in adding and removing users to the system or modifying their access rights;
- improved security through the enhanced ability of system administrators to maintain the integrity of user account configuration including the ability to inhibit or remove an individual user's access to all system resources in a co-ordinated and consistent manner.

Related to identity management and single sign-on technical domains, tenderers might be invited to provide services like the following ones but not limited to:

- Analysis of new requirements and design of technical integration strategy for new components, systems and/or applications;
- Integration of both existent and new components, systems and/or applications with the identity management platform part of EMSA's System Landscape present in the General Conditions of the ICT Framework Contract;
- Analysis, design, configuration, implementation, test and deployment of new user provisioning processes into specific systems;
- Design and implement improvements and/or changes in the existent provisioning processes to answer new business requirements.
- Improvement and upgrades of EMSA IdM platform

EMSA IdM and SSO technology
<ul style="list-style-type: none"> <li>• Oracle Access Manager 10gR3 (10.1.4.3.0)</li> <li>• Oracle Identity Management 10gR3</li> <li>• Oracle Internet Directory 11g R1 (11.1.1.3 – 11.1.1.5)</li> <li>• Oracle Virtual Directory 11g R1 (11.1.1.3 - 11.1.1.5)</li> </ul> <p><b>IMPORTANT :</b> EMSA is currently in the migration process to Oracle IdM suite 11gR2</p>

Note that the versions presented for these tools are the ones EMSA is using at the time of writing this document. These versions might be upgraded following EMSA's internal plans and are not to be considered as definitive for the entire contract timeline.

Further information on identity management and single sign-on can be found on the System Landscape present in the General Conditions of the Framework Contract.

## **2.3. Lot 3: Integration and Non-Functional Capabilities**

### **2.3.1.ESB - Enterprise Service Bus**

An Enterprise Service Bus (ESB) consists of a software architecture construct which provides fundamental services for complex architectures via an event-driven and standards-based messaging-engine (the bus). ESBs are typically implemented using middleware technologies based on recognized standards.

An ESB generally provides an abstraction layer on top of an enterprise messaging system implementation lying between the business applications and enabling communication among them. Ideally, the ESB should be able to replace all direct contact with the applications on the bus, so that all communication takes place via the ESB.

In order to achieve this objective, the ESB must encapsulate the functionality offered by its component applications in a meaningful way. This typically occurs through the use of an enterprise message model. The message model defines a standard set of messages that the ESB will both transmit and receive. When the ESB receives a message, it routes the message to the appropriate application. Often, because that application evolved without the same message-model, the ESB will have to transform the message into a format that the application can interpret. An adapter fulfils the task of effecting that transformation.

With regards to ESB, the tenderers might be invited to provide services like, but not limited to, the following ones:

- Design, implementation, test, configuration and deployment of business services, proxy services, business rules and processes orchestration;
- Design, implementation, test, configuration and deployment of composite applications.
- Design, implementation, test, configuration and deployment of integration and messaging components including services for messaging transformation, routing and enrichment;
- ESB administration, monitoring and optimization.

EMSA ESB technology
• Oracle Service Bus, version 11.1

Note that the versions presented for these tools are the ones EMSA is using at the time of writing this document. These versions might be upgraded following EMSA's internal plans and are not to be considered as definitive for the entire contract timeline.

Further information on enterprise service bus can be found on the System Landscape present in the General Conditions of the ICT Framework Contract.

Other related components that EMSA will be considered in a near future are depicted below

- Oracle CEP (Complex Event Processor)

Knowledge and/or experience with these components are desirable.

### **2.3.2.BPM - Business Process Management**

A business process is a series or a network of added value activities, performed by their relevant roles or collaborators, to purposefully achieve the common business goal. Business process management (BPM) activities can be grouped into five categories:

- Design: encompasses both the identification of existing processes and the design of "to-be" processes. Areas of focus include representation of the process flow, the actors involved on it, alerts and notifications, escalations, Standard Operating Procedures, Service Level Agreements, and task hand-over mechanisms.
- Modelling: takes the theoretical design and introduces combinations of variables, which determine how the process might operate under different circumstances.
- Execution: one of the ways to automate processes is to develop or purchase an application that executes the required steps of the process. However, in practice, these applications rarely execute all the steps of the process accurately or completely. Another approach is to use a combination of software and human intervention, this more complex approach making the documentation process more difficult.
- Monitoring: encompasses the tracking of individual processes, so that information on their state can be easily seen, and statistics on the performance of one or more processes can be provided. An example of the tracking is being able to determine the state of a user request (e.g. request received, waiting processing, already dispatched) so that problems in its operation can be identified and corrected.
- Optimization: process optimization includes retrieving process performance information from modelling or monitoring phase; identifying the potential or actual bottlenecks and the potential opportunities for cost savings or other improvements; and then, applying those enhancements in the (re)design of the process.

Tenderers can be invited to provide services in the BPM technical domain, like (but not limited to) the following ones:

- Defining an architecture for the SOA Suite components, including defining deployment diagrams and operational procedures;
- Functional analysis of new and/or existent business processes;
- Design and modelling of new business processes in accordance to the BPM implementation framework;

- Implementation of new business processes and/or BPM composite applications;
- Monitoring, adaptation and optimization of deployed business processes and/or BPM composite applications.

EMSA SOA key components
• Oracle SOA Suite 11g (includes OSB 11.1)

Note that the versions presented for these tools are the ones EMSA is using at the time of writing this document. These versions might be upgraded following EMSA's internal plans and are not to be considered as definitive for the entire contract timeline.

Other related components that will be considered in a near future are depicted below:

- Oracle BAM (Business Activity Monitoring)
- Oracle CEP (Complex Event Processor)
- BPEL

Knowledge and/or experience with these components are desirable.

### 2.3.3.Non-Functional Assessments

Non-functional analysis of a system encompasses, at least, the following set of activities:

- Capacity Analysis and Planning: generally, capacity estimations are required when a new application is developed; current applications are consolidated; and/or applications are downsized from a powerful server with a large number of CPUs and many Gigabytes of memory supporting a large number of users. Capacity planning shall encompass, at least, the following areas of analysis: CPU consumption; Memory usage; Network throughput and bandwidth; Storage capacity; Application workload.
- Performance Review: reveal obvious performance issues in systems or applications by walking through common user scenarios and analysing what is happening on the front and back ends.
- Network Analysis: diagnose network performance delays from large data transfers and high number of network round-trips. Provide end-user response time projections for any network line speed and latency.
- Load, Scalability and Performance Assessments: identify and isolate performance bottlenecks in an application under a simulated workload. Report metrics such as the number of concurrent users, transaction throughputs and end-user response times. Determine the impact on application performance as a result of hardware scale up or scale out, 64-bit operating system migrations, database server upgrades or other changes. Monitor real-time performance in the target environment and measure transaction response times which are outside of service level agreements.

The outcome of the aforementioned non-functional analysis related activities shall be:

- Prioritizing the issues that were found.

- Improving application/system performance through tuning and optimization of services.
- Providing suggestions based on best practices and optimization strategies.

In what concerns to the non-functional analysis technical domain, the tenderers may be invited to provide to EMSA, as a minimum, services in the field of:

- Execute non-functional assessments over existent system/applications to identify existent bottlenecks, possible future problems;
- Provide recommendations to solve or reduce the impacts of the identified problems.
- Execute capacity assessments over existent systems/applications to identify possible optimizations or to anticipate and correct possible future lack of resources that could lead to systems/applications unavailability or crashes;
- Provide recommendations and best-practices to be followed.

#### **2.4. Lot 4: Data Warehouse, ETL and Related Technologies**

Data warehousing is combining data from multiple and usually varied sources into one comprehensive and easily manipulated database. Common accessing systems of data warehousing include queries, analysis and reporting. Because data warehousing creates one database in the end, the number of sources can greatly vary, provided that the system can handle the volume of data involved. The final result, however, is homogeneous data, which can be more easily manipulated.

Data warehousing can be characterized as a subject-oriented, integrated, time-variant and non-volatile collection of data in support of a decision making process.

- Subject-oriented: data that gives information about a particular subject instead of about a company's ongoing operations.
- Integrated: data that is gathered into the data warehouse from a variety of sources and merged into a coherent whole.
- Time-variant: all data in the data warehouse is identified with a particular time period.
- Non-volatile: data is stable in a data warehouse. More data is added but data is never removed. This enables management to gain a consistent picture of the business.

ETL (Extract Transformation and Loading) technology is used to extract data from source databases, transform and clean the data and load it into a target database. The typical life cycle of an ETL process consists of the following execution steps:

- Cycle initiation
- Build reference data
- Extract (from data sources like databases, files, applications, Web Services, emails, etc.)
- Validate
- Transform (clean, apply business rules, check for data integrity, create aggregates or disaggregates)



- Stage (load into staging tables, if used)
- Audit reports (for example, on compliance with business rules. Also, in case of failure, helps to diagnose/repair)
- Publish (to target tables)
- Archive
- Clean up

In the scope of DW, ETL and related technologies, tenderers might be invited to provide services like the following ones but not limited to:

- Analysis, design, implementation, test and deployment of new data extraction, transformation and loading processes using different data sources;
- Analysis, adaptation, testing and deployment of existent DW and ETL processes;
- Design, implementation, test and deployment of new reporting processes;
- Analysis, adaptation, testing and deployment of existent reporting processes;
- Integration of business processes with ETL processes.

BI technologies
<ul style="list-style-type: none"> <li>• Jasper BI, version 5.5</li> <li>• Talend</li> </ul>

Note that the versions presented for these tools are the ones EMSA is using at the time of writing this document. These versions might be upgraded following EMSA's internal plans and are not to be considered as definitive for the entire contract timeline.

## 2.5. Lot 5: Geographic Information Systems

A geographic (or geographical) information system (GIS) information system is any system that captures, stores, analyses, manages, and presents data that is linked to location being a merge of cartography and database technology. GIS systems are used in cartography, remote sensing, land surveying, photogrammetry, geography, urban planning, emergency management, navigation and localized search engines.

Therefore, the term describes any information system that integrates, stores, edits, analyses, shares and displays geographic information. In a more generic sense, GIS applications are tools that allow users to create interactive queries (user-created searches), analyse spatial information, edit data, maps, and present the results of all these operations.

Specifically for EMSA, the usage of GIS applications encompasses the following main functionalities:

- manage (captures, store, process, presents) the position of the vessels;
- manage (captures, store, process, presents) earth observation data (satellite, in-situ, and airborne);

- perform geospatial analysis and statistics;
- Creation and edition of maps (vector and raster data);

GIS systems in EMSA support several maritime applications, some examples are:

- electronic nautical charts;
- vessels monitoring;
- oil spill detection and monitoring;

In what concerns to geographic information systems technical domain, tenderers might be invited to provide services within the following, but not limited, EMSA's project:

- Electronic Nautical Charts:

EMSA is currently using an Electronic Nautical Charts distribution system for usage on the EMSA Maritime Applications. This system is providing ENC's, using a standard WMS interface, that are used as the base layer on the EMSA Maritime Applications.

EMSA is considering the possible rebuild of this system, either by enhancing the current one or by building a new system that provides further performance, availability and easy of management.

### **GIS competences**

In what concerns to geographic information systems technical domain, tenderers might be invited to provide services like the following but not limited technical competences:

- Creation and editing of maps;
- Managing map layers and associated labelling;
- Integration of geospatial data;
- Creation of reports based on geospatial data;
- Execute and automatize spatial analysis;
- Development of geospatial applications;
- Installation, configurations and troubleshooting of geospatial applications using the EMSA referenced GIS tools;
- Knowledge of referenced geospatial standards like OGC and INSPIRE;
- Capabilities to analyse EMSA's geospatial applications in terms of quality of service (performance, availability and capacity) and associated data;
- Database expertise with spatial data schemas including optimization of queries / schemas using Oracle spatial;
- Expertise in the Electronic Nautical Charts domain and related distribution systems.

### **GIS tools**

In what concerns to geographic information systems technical domain, tenderers might be invited to provide services like the following but not limited technical geospatial tools:

GIS technologies
<ul style="list-style-type: none"><li>• ArcGIS Server 9.3.1 SP2; 10 SP3; 10.2.1</li><li>• Geoserver 2.2</li><li>• Jeppesen C-MAP Professional +</li></ul>



Note that the versions presented for these tools are the ones EMSA is using at the time of writing this document. These versions might be upgraded following EMSA's internal plans and are not to be considered as definitive for the entire contract timeline.

Further information on geographic information systems can be found on the System Landscape present in the General Conditions of the ICT Framework Contract.

## 2.6. General Conditions for the Provision of Services

### General Working Methods/Procedures

EMSA has a pre-defined set of working methods/procedures that are defined in the following Appendixes:

- Appendix B: Project Delivery;
- Appendix C: Working procedures and service requirements;
- Appendix D: Initial quality gate for java projects.

These documents are templates that will be tailored for each specific contract according to their characteristics.

Tenderers are encouraged to take this set of working methods/procedures in attention while preparing their answers to this procurement.

### Used products and infrastructure

The technologies and tools used for the provision of services and products will be the ones listed in the System Landscape present in the General Conditions of the ICT Framework Contract. The personnel providing the service will use only the standard software packages in use at EMSA, and no other software may be installed or used without the prior written authorisation of EMSA.

### Language

The English language shall be used throughout the projects duration for all communication, reports and other documentation.

### Place of performance

The place of performance of the tasks shall be the EMSA premises in Lisbon or the contractor premises. In exceptional cases part(s) of the work may be carried out at other agreed venues if stipulated in the Specific Contracts.

#### Work time

As a rule, the work shall be carried out within the normal working hours and on normal working days of EMSA. Normal working days are from Mondays to Fridays inclusive, excepting only Agency holidays.

#### Work outside of normal working hours and normal working days

In exceptional cases and only on written demand of the Agency, the necessity to deliver services outside of the normal working days and the normal working hours may occur.

For these exceptional situations the following surcharges will be applied:

- Service delivery on normal working days, but outside of normal working hours: surcharge of 50% of the applicable day rate.
- Service delivery outside of normal working days: surcharge of 100% of the applicable day rate.

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

The European Maritime Safety Agency – Unit A.3, in charge of Operations Support – will be responsible for managing the contract.

### **4. Meetings**

The following meetings are envisaged:

- **Signature of the contract:** Work shall not start before the signature of the framework contract.
- **Kick-off meeting:** After the signature of each specific contract, a kick-off meeting may be held in order to present a work break down structure of the tasks and to define the details of the work to be undertaken.
- **Final meeting:** Prior the end of the specific contract a final meeting shall be held to mark the end of the contract and enable the contracting parties to discuss the work accomplished.
- **Regular management meeting:** regular meetings to be held between EMSA and the contractor. The regularity of these meetings is to be agreed for each specific contract and to be defined in the respective kick-off meetings.

EMSA may call for additional meetings if this should be considered necessary for the better execution of the project.

Meetings will be held in EMSA premises in Lisbon, Portugal; although some meetings could be held on the contractors premises or take another form (e.g. virtual) if mutually agreed by EMSA and the contractor. EMSA will not reimburse any travel and subsistence expenses to the contractor, which may be incurred in relation to the attendance of the above meetings.

## **5. Duration and timetable for signature of the Contract**

The Framework Contract will have a maximum duration of 4 years.

The estimated date for signature of the contracts is 4<sup>th</sup> quarter 2015.

The estimated date for the start of the service, i.e. launch of the first specific contract(s) is 4<sup>th</sup> quarter 2015.

## **6. Value of the Contract**

The estimated budget available for this procurement is of 3,900.000€ excluding VAT for the entire duration of the framework contracts.

The estimated budget per Lot is as follows:

- Lot 1: Portal Technology – 720,000€
- Lot 2: Identity Management and Single Sign-On – 1,020,000€
- Lot 3: Integration and Non-Functional Capabilities – 600,000€
- Lot 4: Data Warehouse, ETL and Related Technologies – 720,000€
- Lot 5: Geographic Information Systems – 840,000€

## **7. Terms of payment**

Payments shall be issued in accordance with the provisions of the **draft Framework IT Contracts** available on the Procurement Section under the call to tender EMSA/OP/09/2015 on the EMSA website at the following address: [www.emsa.europa.eu](http://www.emsa.europa.eu)

Service non-compliance, which will be the basis for reduction of payments, will be evaluated against:

- Timeliness of the deliveries;
- Quality of the deliverables;
- Successfulness of the maintenance activities.

EMSA reserves the right to pay only according to the fulfilment of the service, e.g. if the development of a certain component is only concluded by 85%, the foreseen payment will be reduced accordingly.

For each of the Lots the following reductions shall apply:

- When the deliverables are delayed from the original deadline as agreed by the two parties, the following reductions shall apply:

- 5 % reduction in payment for a delay of more than 21 calendar days.
  - 10% reduction in payment for a delay of more than 30 calendar days.
  - 15% reduction in payment for a delay of more than 45 calendar days.
  - 20 % reduction in payment for a delay of more than 60 calendar days.
- If a deliverable doesn't present an acceptable quality, this will be rejected. Upon this rejection, time continuous to count from the time of the deliverable initial delivery and, as such, reductions based on time parameter may be applied. The quality of a software deliverable will follow the Appendix D - Initial Quality Gate for Java Projects.
    - The quality parameters may be further refined in each Specific Contract.
    - For non-software deliverables, their quality will be defined upon their specific requests in each Specific Contract.
- For the definitions of faults presented here, please check the Appendix C - Working procedures and service requirements. Regarding possible maintenance activities, the following reductions shall apply:
    - 20% reduction for non-compliances related to at least one "Urgent" fault.
    - 10% reduction for non-compliances related to more than 4 "Critical" OR more than 9 "Standard" faults.
    - 5% reduction for non-compliances related to more than 14 "Standard" faults.

## 8. Terms of contract

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

### **EMSA, as the contracting authority, will conclude the following:**

- For Lot 2 and Lot 5, a Framework IT Contract with one (1) contractor;
- For Lot 1, Lot 3 and Lot 4, a Multiple Framework IT Contract with re-opening of competition with three (3) successful contractors.

For Lot 2 & 5, a Framework IT Contract with one tenderer will be concluded since the exact nature, quantities, subject and precise timing of delivery are known from the outset. A specific Contract shall be awarded within the limits of the terms laid down in the Framework Contract.

For Lot 1, 3 & 4, "Multiple Framework IT Contracts with reopening of competition system" will be concluded, since the exact nature, quantities, subject and the precise timing of delivery or execution of the services cannot be specified in advance.

The purpose of this system is to put contractors of the Multiple Framework Contracts into competition at later stages. The Multiple Framework Contracts, as the result of the present public procurement

procedure – if successful – will be awarded without any declared or effective priority or ranking amongst them.

The terms of the Multiple Framework Contracts will be the same for each contractor. When preparing the offers tenderers must take it into consideration the conditions laid down in the draft Framework Contract and its annexes, submitting an offer means that tenderers accept them.

#### **Procedure for Specific Contracts applicable for the Multiple Framework Contracts:**

The present tender specifications for awarding Framework Contracts set out a general description of the tasks. According to the detailed needs, when EMSA would like to purchase specific supplies (or associated services), a '*Request for offer with reopening of competition*' shall be sent (by email) to all Contractors of the Multiple Framework Contract specifying the following:

- supplies or services needed;
- the deadline for submitting a specific offer;
- the terms of reference for the service to be provided (if applicable);
- the deliverables to be provided (if applicable);
- the duration of the service and the performance deadlines (if applicable);
- the number of meetings between EMSA and the contractor (if applicable);
- the exact form of reporting (if applicable);
- payment instalments (if applicable).

Within the deadline specified in the request for offers, the contractors will provide EMSA with a written specific offer (by email).

In case the contractor does not provide any answer according to the deadline specified, it is considered that the contractor is not in the position to make a specific offer.

EMSA will examine the specific offers received, and the Specific Contract shall be awarded in accordance with the award criteria stated in Point 14.2.1 of these Tender Specifications.

## **9. Sub-contracting**

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

If the tenderer intends to either sub contract part of the work or realise the work in co-operation with other partners (Joint 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 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](http://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](http://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, 13.2 and 13.3** of these specifications (part of the Exclusion criteria)

**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 **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 **Technical and professional capacity** (part of the Selection Criteria) set out under point **13.5** 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 **14** of these specifications;

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



## 11. Price

Prices shall include all costs e.g. travelling.

Prices shall be provided for the following profiles:

Profile	Price per person day
Technical manager	
Business analyst	
System architect	
Software architect	
User Experience Designer	
Senior developer / Senior product expert	
Developer / Product expert	
Application Tester	

The minimum requirements for each profile are presented in 13.5 - Technical and professional capacity – Selection criteria

Prices must be quoted in Euro.

Prices must be fixed amounts.

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 and the selection criteria for “economic and financial capacity” will be assessed in relation to each economic operator individually. Concerning the selection criteria for “technical and professional capacity”, 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 and technical 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** and requested accompanying documentation, available on the Procurement Section (Legal Entity Form) on the EMSA Website at the following address: [www.emsa.europa.eu](http://www.emsa.europa.eu)

#### **13.2. Grounds for exclusion - Exclusion criteria**

To be eligible for participating 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 Union financial interests;
- f) they have been the subject of the administrative penalty for being guilty of misrepresentation in supplying the information required by the contracting authority as a condition of participation in the procurement procedure or failing to supply an information, or being declared to be in serious breach of his obligation under contract covered by the budget.

### **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](http://www.emsa.europa.eu)) shall be completed and signed.

Please note that the tenderer to whom the contract is to be awarded shall provide additional proof evidencing eligibility.

For situations described in (a), (b) and (e), production of a recent extract from the judicial record is required or, failing that, a recent equivalent document issued by a judicial or administrative authority in the country of origin or provenance showing that those requirements are satisfied. Where the tenderer is a legal person and the national legislation of the country in which the tenderer is established does not allow the provision of such documents for legal persons, the documents should be provided for natural persons, such as the company directors or any person with powers of representation, decision making or control in relation to the tenderer.

For the situation described in point (d) above, recent certificates or letters issued by the competent authorities of the State concerned are 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.

For any of the situations (a), (b), (d) or (e), where any document described in two paragraphs above is not issued in the country concerned, it may be replaced by a sworn or, failing that, a solemn statement made by the interested party before a judicial or administrative authority, a notary or a qualified professional body in his country of origin or provenance.

If the tenderer is a legal person, information on the natural persons with power of representation, decision making or control over the legal person shall be provided only upon request by the contracting authority.

When the tenderer to be awarded the contract has already submitted relevant evidence to EMSA, it remains valid for 1 year from its date of submission. In such a case, the reference of the relevant project(s) should be mentioned and the Contractor is required to submit a statement of confirmation that their situation has not changed.

### **13.4. Economic and financial capacity – Selection criteria**

Requirements:

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

Evidence:

- Financial statements for the last three years for which accounts have been closed.
- Statement of overall turnover and turnover relating to the relevant services for the last three financial years.

- 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 still complies with the requirements. In this case the tenderer should simply indicate on the cover letter the procurement procedure where the evidence has been provided.
- If, for some exceptional reason which EMSA considers justified, a tenderer is unable to provide one or other of the above documents, he may prove his 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 any other document enabling it to verify the tenderer's economic and financial capacity.

### **13.5. Technical and professional capacity – Selection criteria**

Requirements:

- The tenderer must have a very good level of technical and professional capability in the provision of the requested services, namely know-how, efficiency, experience and reliability in the requested technical domains presented in each Lot.

Evidence:

- Overview of the company departments mentioning the currently allocated number of staff and levels.
- Description of the relationship of this company and those of the group if relevant/applicable.
- The Curriculum Vitae (CV) with the educational and professional qualifications of the proposed team for implementation of the contract. The CVs must be detailed per profile requested, according to the list of profiles specified under point 11 “Price” of the tender specifications;
- The mandatory technical and professional capacity of the team members are:
  - Technical Manager:
    - 5 years of relevant IT professional experience
    - 5 projects in relevant technologies (see the description of the specific lot(s) you indicated above for a list of technologies considered relevant)
    - 3 projects as technical lead using relevant technologies (see the description of the specific lot(s) you indicated above for a list of technologies considered relevant)
  - Business Analyst:
    - 5 years of relevant IT professional experience
    - 3 projects in the same role, using relevant technologies (see the description of the specific lot(s) you indicated above for a list of technologies considered relevant)
  - System architect:
    - 5 years of relevant IT professional experience

- 5 projects in relevant technologies (see the description of the specific lot(s) you indicated above for a list of technologies considered relevant)
- Software architect:
  - 5 years of relevant IT professional experience
  - 5 projects in relevant technologies (see the description of the specific lot(s) you indicated above for a list of technologies considered relevant)
- User Experience Designer:
  - Minimum 3 years of relevant IT professional experience
  - 2 projects in relevant technologies (see the description of the specific lot(s) you indicated above for a list of technologies considered relevant)
  - 4 projects in the profile role
- Senior developer / Senior product expert :
  - 5 years of relevant IT professional experience
  - 5 projects in relevant technologies (see the description of the specific lot(s) you indicated above for a list of technologies considered relevant)
  - Experience with Agile Development methodology, preferably SCRUM
- Developer / Product expert:
  - 2 years of relevant IT professional experience
  - 2 projects in relevant technologies (see the description of the specific lot(s) you indicated above for a list of technologies considered relevant)
  - 2 projects in the profile role
- Application Tester:
  - 2 years of relevant IT professional experience
  - 2 projects in relevant technologies (see the description of the specific lot(s) you indicated above for a list of technologies considered relevant)
  - 2 projects in the profile role
- **For each of the Lots to which the company is bidding**, it should be presented:
  - The last four major contracts performed during the past three years similar to the services previously described in this tender specification. Each reference must at least include the following information: Contract number or reference; Start and finish date; Client name; Volume in Euros; Short description of the services covered by the contract
  - Experience in systems similar to those of EMSA, in terms of business logic and used architectures.
  - Experience in mission-critical trans-national systems.

**Bids that do not comply with the selection criteria specified on 13.4: Economic and financial capacity – Selection criteria and 13.5: Technical and professional capacity – Selection criteria will not be taken into consideration for the award of the contract.**

## 14. Award criteria

**The tenderers are requested to submit the technical solutions to the respective scenario of the Lots to which they are tendering. Please take special notice that the scenarios for evaluation are present in the Appendix A – Scenarios for Evaluation.**

### 14.1. Criteria for the award of the Framework contract for Lot 2 and Lot 5

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

For Lot 2 and Lot 5, as presented above in point 2: “Objective, scope and description of the contract” of the tender specifications, tenderers who wish to apply are requested to present the information detailed below. Please note that if the tenderer is applying to more than one Lot and if the information is the same (e.g. constitution of the team, methodology, etc.) this fact needs to be clearly expressed in the tenderer response.

The award criteria presented in this section will be used to evaluate individually the respective Lot, as presented above in 2: Objective, scope and description of the contract.

The contract will be awarded to the tenderers who submit the most economically advantageous bid (those with highest score) based on the following quality criterion and their associated weightings:

1. **Quality criterion 1 ( $Q_1$ ) ( $W_1 = 20\%$ ) – Quality of the proposed team** - based on the profiles of the proposed team, presented in point 11 and detailed in 13.5, and the description of the responsibilities of each member within the team.
2. **Quality criterion 2 ( $Q_2$ ) ( $W_2 = 10\%$ ) – Quality and suitability of the technical approach, methodologies, techniques and tools** - used to deliver projects and services in this Lot technical area.
3. **Quality criterion 3 ( $Q_3$ ) ( $W_3 = 40\%$ ) – Quality of scenario technical solution** - based on the response to the standard scenario presented in Appendix A – Scenarios for Evaluation for the respective Lot. The technical solution to be presented for the scenario should include:
  - a. A detailed description of the project and technical management methodology (including further breakdown and description of the activities identified in the scenario).
  - b. Description of the means, tools that the tenderer shall use to conduct the activities.
  - c. Provision of templates for the key deliverables (e.g. use cases, software design descriptions, functional specification, etc.) taking into account the proposed tasks based on the scenarios described in Appendix A – Scenarios for Evaluation and explaining how a high quality of the services and deliverables (software, documentation or both) can be guaranteed.
  - d. Concrete reference to standards applicable in the production of documentation.

- e. Project Plan and estimation of the effort (total and per profile).

and the price criteria and associated weighting:

**4. Price of the team ( $W_{\text{Team}} = 30\%$ )** - based on the prices per profile presented in point 11;

The price of the team is calculated as the price for a standard development team for one day.

$$\begin{aligned} \text{Price of the team} = & \text{price per man day of one Technical manager} \times 0.8 \\ & + \text{price per man day of one Business analyst} \times 0.8 \\ & + \text{price per man day of one System architect} \times 0.6 \\ & + \text{price per man day of one Software architect} \\ & + \text{price per man day of one User Experience Designer} \times 0.5 \\ & + \text{price per man day of one Senior developer / Senior product expert} \times 1.2 \\ & + \text{price per man day of one Developer / Product expert} \times 1.5 \\ & + \text{price per man day of one Tester} \times 1.2 \end{aligned}$$

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

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

Only bids that have reached a minimum of 60 % for  $Q_1$  ,  $Q_2$  and  $Q_3$  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.

#### **14.2. Criteria for the award of the Multiple Framework contract for Lot 1, Lot 3 and Lot 4**

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

For Lot 1, Lot 3 and Lot 4, as presented above in 2: “Objective, scope and description of the contract” of the tender specifications, tenderers who wish to apply are requested to present the information detailed below. Please note that if the tenderer is applying to more than one Lot and if the information is the same (e.g. constitution of the team, methodology, etc.), this fact needs to be clearly expressed in the tenderer response.

The award criteria presented in this section will be used to evaluate individually each of the respective Lot, as presented above in 2: Objective, scope and description of the contract.

The contract will be awarded to the tenderers who submit the most economically advantageous bid (those with highest score) based on the following quality criterion and their associated weightings:

- 1. Quality criterion 1 ( $Q_1$ ) ( $W_1 = 20\%$ ) – Quality of the proposed team** - based on the profiles of the proposed team, presented in point 11 and detailed in 13.5, and the description of the responsibilities of each member within the team.
- 2. Quality criterion 2 ( $Q_2$ ) ( $W_2 = 10\%$ ) – Quality and suitability of the technical approach, methodologies, techniques and tools** - used to deliver projects and services in this Lot technical area.
- 3. Quality criterion 3 ( $Q_3$ ) ( $W_3 = 40\%$ ) – Quality of scenario technical solution** - based on the response to the standard scenario presented in Appendix A – Scenarios for Evaluation for the respective Lot. The technical solution to be presented for the scenario should include:
  - a. A detailed description of the project and technical management methodology (including further breakdown and description of the activities identified in the scenario).
  - b. Description of the means, tools that the tenderer shall use to conduct the activities.
  - c. Provision of templates for the key deliverables (e.g. use cases, software design descriptions, functional specification, etc.) taking into account the proposed tasks based on the scenarios described in Appendix A – Scenarios for



Evaluation and explaining how a high quality of the services and deliverables (software, documentation or both) can be guaranteed.

- d. Concrete reference to standards applicable in the production of documentation.
- e. Project Plan and estimation of the effort (total and per profile) .

and the price criteria and associated weighting:

- 4. **Price of the team ( $W_{\text{Team}} = 30\%$ )** - based on the prices per profile presented in point 11;

The price of the team is calculated as the price for a standard development team for one day.

**Price of the team =** price per man day of one Technical manager x 0.8  
 + price per man day of one Business analyst x 0.8  
 + price per man day of one System architect x 0.6  
 + price per man day of one Software architect  
 + price per man day of one User Experience Designer x 0.5  
 + price per man day of one Senior developer / Senior product expert x 1.2  
 + price per man day of one Developer / Product expert x 1.5  
 + price per man day of one Tester x 1.2

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

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

Only bids that have reached a minimum of 60 % for  $Q_1$  ,  $Q_2$  and  $Q_3$  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.

#### 14.2.1. Criteria for the award of the Specific Contract

The following criteria and procedure will be used in case of awarding the Specific Contract:

- **Admissibility**

Only admissible specific offers will be evaluated. The criteria of admissibility of the offers are the following:

- the deadline for submission of offers has been respected;

- **Award criteria**

Taking into account the use of Multiple Framework Contracts with reopening of competition, the following award criteria are set to determine the best offer to which the Specific Contract will be awarded:

1. **Quality criterion 1 ( $Q_1$ ) ( $W_1 = 30\%$ ) – Quality and organization of the proposed team for the specific tasks requested** based on the description of the responsibilities of each member within the team.
2. **Quality criterion 2 ( $Q_2$ ) ( $W_2 = 10\%$ ) – Quality and suitability of the specific methodology** for the tasks being requested.
3. **Quality criterion 3 ( $Q_3$ ) ( $W_3 = 30\%$ ) – Quality of the solution proposed** for the tasks being requested.
4. **Price of the solution ( $W_{\text{Solution}} = 30\%$ )** with detailed breakdown of price per person day in line with FWC

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

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

Only bids that have reached a minimum of 60 % for  $Q_1$ ,  $Q_2$  and  $Q_3$  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.

The specific offers must respect the conditions stated in the Framework contract (including Annex V – tenderer's offer).

#### **15. 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.

#### **16. 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 14 and 15 above or have been found to have seriously failed to meet their contractual obligations in an earlier procurement 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 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.