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OPEN CALL FOR TENDERS

Tender Specifications

for the provision of:

"New functionalities for Open Cyber Situational Awareness Machine (OpenCSAM)"

Proof testing in Aviation Cyber Crisis Management"

ENISA D-COD-19-T08

Part 1	**Introduction to ENISA**
Part 2	**Terms of Reference**
Part 3	**Tender Specifications**

Annex I	Legal Entity & Financial ID Forms
Annex II	Declaration on honour on exclusion criteria and selection criteria
Annex III	Financial Offer form
Annex IV	Draft Service contract
Annex V	Power of Attorney for Consortium Form
Annex VI	Sub-Contractors Form
Annex VII	eSubmission_Quick reference guide for the Economic Operators

e-Submission

*Offers via e-Submission portal **ONLY***

CONTENTS

PART 1 INTRODUCTION TO ENISA

1. Background on ENISA

1.1 Introduction

E-communication infrastructures and online services are essential factors, both directly and indirectly, in economic and societal development. They play a vital role for society and have in themselves become ubiquitous utilities in the same way as electricity or water supplies and also constitute vital factors in the delivery of electricity, water and other critical services. Communications networks function as social and innovation catalysts, multiplying the impact of technology and shaping consumer behaviours, business models, industries, as well as citizenship and political participation. Their disruption has the potential to cause considerable physical, social and economic damage, underlining the importance of measures to increase protection and resilience aimed at ensuring continuity of critical services. The security of electronic infrastructures and services, in particular their integrity, availability and confidentiality, faces continuously expanding challenges which relate, inter alia, to the individual components of the communications infrastructure and the software controlling those components, the infrastructure overall and the services provided through that infrastructure. This is of increasing concern to society not least because of the possibility of problems due to system complexity, malfunctions, systemic failures, accidents, mistakes and attacks that may have consequences for the electronic and physical infrastructure, which delivers services critical to the well-being of European citizens.

1.2 Scope

The European Union Agency for Network and Information Security (ENISA, hereinafter 'the Agency') was established in order to undertake the tasks assigned to it for the purpose of contributing to a high level of network and information security within the Union and in order to raise awareness of network and information security and to develop and promote a culture, of network and information security in society for the benefit of citizens, consumers, enterprises and public sector organisations in the Union, thus contributing to the establishment and proper functioning of the internal market.[1]

1.3 Objectives

The Agency's objectives are as follows:

- The Agency shall develop and maintain a high level of expertise.
- The Agency shall assist the Union institutions, bodies, offices and agencies in developing policies in network and information security.
- The Agency shall assist the Union institutions, bodies, offices and agencies and the Member States in implementing the policies necessary to meet the legal and regulatory requirements of network and information security under existing and future legal acts of the Union, thus contributing to the proper functioning of the internal market.
- The Agency shall assist the Union and the Member States in enhancing and strengthening their capability and preparedness to prevent, detect and respond to network and information security problems and incidents.
- The Agency shall use its expertise to stimulate broad cooperation between actors from the public and private sectors.

2. Additional Information

Further information about ENISA can be obtained on its website: www.enisa.europa.eu.

[1] Regulation (EU) No 526/2013 of the European Parliament and of the Council of 21 May 2013 concerning the European Union Agency for Network and Information Security (ENISA) and repealing Regulation (EC) No 460/2004.

PART 2 TERMS OF REFERENCE

I. SCOPE OF THIS TENDER

Within the framework of this Open tender procedure, ENISA would like to find a suitably qualified contractor to provide the services as stipulated in the Terms of Reference outlined below.

Subject of the tender	Maximum budget
Open Cybersecurity Situation Awareness Machine (Open CSAM) prototype	**€100.000,00 (one hundred thousand euro)**
PLEASE NOTE: *This tender procedure is limited to tenderers which are legally incorporated in a member state of the European Union/EEA, or which have an incorporated subsidiary in one of the EU/EEA member states. (The Agreement on Government Procurement (GPA) does not apply to EU Regulatory Agencies.)* **IMPORTANT!** **Provisions relating to BREXIT** *For British candidates or tenderers:* *Please be aware that after the UK's withdrawal from the EU, the rules of access to EU procurement procedures of economic operators established in third countries will apply to candidates or tenderers from the UK depending on the outcome of the negotiations.* *In case such access is not provided by legal provisions in force candidates or tenderers from the UK could be rejected from the procurement procedure.*	

Method of submitting tenders:	***e-Submission portal***	***YES***
	Courier or postal service	*NO*
	By hand	*NO*
	By email	*NO*

II. e-Submission application guide

You must submit your tender electronically via the e-Submission application available from the e-Tendering website before the time limit for receipt of tenders.

The e-Submission application allows economic operators to respond to calls for tenders by preparing their tenders electronically in a structured and secured way, and submitting their tenders electronically. The e-Tendering is the starting point for launching the e-Submission application.

Make sure you submit your tender on time: you are advised to start completing your tender early. To avoid any complications with regard to late receipt/non receipt of tenders within the deadline, please ensure that you submit your tender at least several hours before the deadline. A tender received after the deadline indicated in the procurement documents will be rejected.

1. How to Submit your Tender in e-Submission

You can access the e-Submission application via the corresponding call for tender in TED e-Tendering. To have access to e-Submission, you will need to "Subscribe to call for tenders" on TED e-Tendering first. To subscribe, you will need to login with your an EU Login[2]. In case you don't have an EU Login, you can create an account anytime. For more information see the EU login help. After logging in with your EU Login password, the e-Tendering page for the specific tender will then display a button 'submit your tender' from which you will be able to access the e-Submission application.

1(a) Information to be filled in

In the e-Submission application, fill in and upload all necessary fields and documents as appropriate. All tenders must be clear, complete and consistent with all the requirements laid down in Part 2 of this document, including:

- **Signed declaration on Honour(s).** The tenderer, and all members of a joint tender, including subcontractors – if applicable – must upload the signed and dated declaration on honour(s) using the template provided in annex to this document,
- **Exclusion criteria**. If requested in Part 2 Section 3.1 of this document, the tenderer and all members of a joint tender including subcontractors – if applicable – must provide the documentary evidence for exclusion criteria,
- **Selection criteria.** If requested in Part 2 Section 3.2 of this document, the tenderer and all members of a joint tender including subcontractors – if applicable –, must provide the documentary evidence for selection criteria
- **Technical tender.** It must address all the requirements laid down in the Terms of Reference or Technical Specification,
- **Financial tender** The complete financial tender, including the breakdown of the price as provided in the Tender Specifications,

For detailed instructions on how to submit your tender, see Annex VII - 'Quick Reference Guide for Economic Operators', where you will find:

[2] Previously called European Commission authentication system (ECAS)

- Technical requirements for using e-Submission,
- Step-by-step guide to help you submit your tender,
- A link to the test environment for submitting call for tenders,
- Important advice and information,
- How to get technical support

***Please make sure all required documents and evidence are submitted with your tender*.**

1(b) Documents to be signed and dated while creating your Tender

The following documents must be signed and dated during the creation of your tender in e-Submission:

- **Declaration on honour(s).** The tenderer, and all members of a joint tender, including subcontractors must sign and date this declaration. The declaration on honour must be converted to PDF format and then signed by an authorised representative of each member with advanced electronic signature based on qualified certificates, or by hand.
- **Tender Report.** This report is generated by e-Submission while you are completing your tender and it contains the list of documents that you submit. The sole tenderer's or leader's authorised representative(s) must sign the report.

The documents must be signed using any of the following 2 methods:

- *Electronically signed,* in this case you must sign with *an advanced electronic signature based on qualified certificates*.

- *Hand signature*, in this case, you must print the documents and the authorised representative must hand-sign and then scan the documents so they can be uploaded into the system.

  In case of a joint tender, the leader must collect all the original declarations signed by hand by the members of the group and keep them on file together with the Tender Report, if the latter was also signed by hand. The Contracting Authority reserves the right to request these hand-signed originals to be sent via postal service/courier to the address shown in point 5 below. The successful tenderer will in any case be formally requested to provide these originals as well as other documentary evidence required before signature of contract.

2. Re-submission or alternative tender

After submitting a tender, but within the time limit for receipt of tenders, you may still submit a new version of your tender. You must formally notify by that the previous tender is withdrawn. You are also entitled to send several tenders to one call for tenders.

The notification must be sent to address indicated in 'section 5. Contact the Contracting Authority' (below), stating the reference to the call for tenders and the Tender ID you wish to withdraw.
If you submit a new Tender you must include ALL your Tender documents AGAIN, including the Qualification and Tender documents.

3. Withdrawal of tenders

If after submitting a tender, you wish to completely withdraw your tender, you must formally notify that you wish to withdraw your submitted Tender(s).This notification must be signed by the same authorised legal representative(s) who previously signed the tender(s) in question.

The notification must be sent to address indicated in the section 'section 5. Contact the Contracting Authority' (below), stating the reference to the call for tenders and the Tender ID(s) you wish to withdraw.

4. Deadline for receipt of tenders

The tender (including all documents) must be fully uploaded and received before the deadline for receipt of tenders, as indicated in the invitation to tender.

Please note that you are responsible to ensure that your full tender reaches the destination in due time. In case of problems with the submission of the electronic tender, we recommend that you call the 'helpdesk' in reasonable time before the time limit for receipt. The time it takes to submit the tender and upload all your documents may vary considerably depending on the number of concurrent submissions by other economic operators, the size of your tender and the type of internet service you are using.

If the contracting authority detects technical faults in the functioning of the electronic equipment used for submitting and receiving tenders due to which it is impossible to electronically submit and receive tenders, you will be informed of the extension of the time limit by the contracting authority at the e-Tendering link for this particular tender.

5. Contact the Contracting Authority

- When requested, original hand signed documentation must be sent by postal service/courier, to the following address:

  [*Insert tender title and reference*]
  ENISA
  For the attention of the Procurement Officer
  1 Vasilissis Sofias Street,
  Maroussi 15124,
  Greece
- Notifications for re-submission or withdrawal of tenders must be sent to:
  procurement@enisa.europa.eu
  When communicating state the reference to the call for tenders and if applicable, the Tender ID.

6. Get Technical help

In order to get technical help please consult the Quick Reference Guide for Economic Operators or directly contact us by consulting the footer section on e-Submission application.

7. TEST environment for e-Submission application

In order to familiarise yourself with the system and to test whether your workstation configuration is working correctly with our environment, you are invited to access the ***test environment***:

https://webgate.ec.europa.eu/esubmission/index.jsp?CFTUUID=TEST01CFT201706

1. DESCRIPTION of OpenCSAM

The objective of the Open Cybersecurity Situation Awareness Machine (Open CSAM) is to optimize the production of cybersecurity situation awareness reports, by applying Natural Language Processing (NLP) and Machine Learning (ML) techniques that will allow the automatic classification and generation of documents.

The Open CSAM project is expected to run over several years and the initial objective for 2019 is to add several key functionalities in the existing tool. These have already been identified during the beta testing phase of the initial prototype in 2018 by several internal and external stakeholders.

1.1 OpenCSAM current prototype overview

The OpenCSAM prototype developed in 2018 has been the first step towards the development of a tool that will produce situation awareness reports based, as requested by the European Commission. These reports should provide readers with an informed view of cybersecurity events over a certain timeframe.

The OpenCSAM prototype output draws parallels between information related to such events, most likely leveraged from online sources, against background research conducted previously by ENISA and its stakeholders. The OpenCSAM prototype assists the analyst in performing this analysis by presenting relevant data in a simple way.

1.2 OpenCSAM architecture

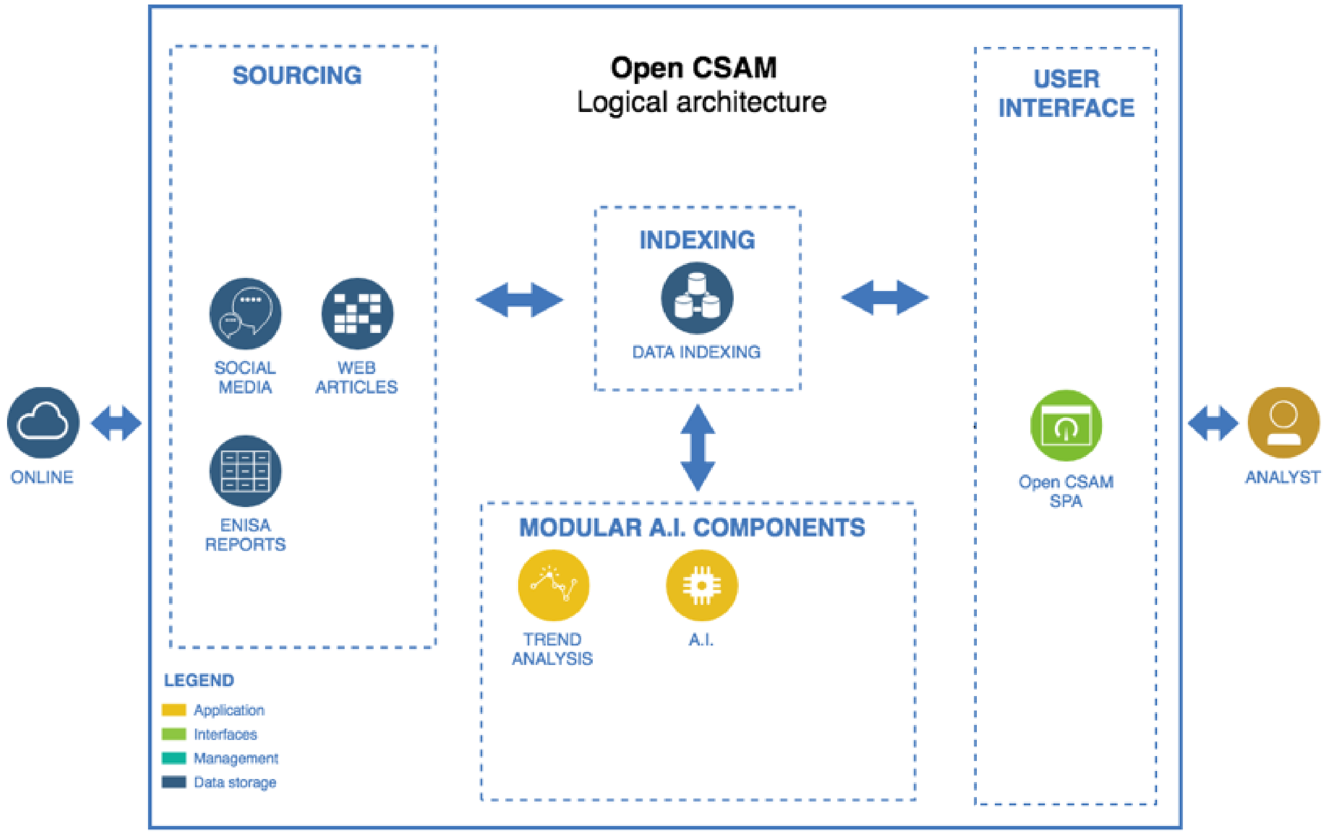
The following apply to the existing OpenCSAM prototype:

- Uses Nginx, ELK stack[3], Jenkins, Covalent, Ansible, Jupyter Notebooks, and a series of specialised Python libraries
- Is able to parse pdf file types and a limited number of internet sources (web portals, RSS aggregator, RSS feeds, and Twitter
- Offers search engine capabilities, i.e. the ability to query with simple keywords with the option to search over a specifc timeframe and use different searching filters
- Relies on an embedded and predefined cybersecurity taxonomy ("Knowledge Graph") embedded, which allows the tool to search for relative keywords within its sources. The knowledge graph provided by ENISA is the backbone of the cyber security taxonomy that has been implemented in Elasticsearch. Elasticsearch makes it possible to define synonyms which serve well for the purposes of the cyber security categorisation understanding[4]
- Implements a thumbs up/down feedback mechanism that allows the users to affect the scoring of the sources, which reflects their trustworthiness.
- Has a built-in report editor for viewing selected articles, for notetaking, and with exporting capabilities

[3] https://www.elastic.co/elk-stack
[4] More information about the structure of the knowledge graph can be found in https://github.com/enisaeu/OpenCSAM

- Can search through a hardcoded repository of past ENISA publications and ENISA recommendations
- Is opensource and available on Github for everyone to access.

The OpenCSAM architecture is presented below:



Its main components are:

Back-end: Nginx, ElasticSearch, Jenkins
Front-end: Kibana, Covallent (OpenCSAM, Single Page Application-SPA), front-end

1.3 Software ownership

Software development will take place on the existing OpenCSAM prototype source code. Additional code and modifications that will be developed by the contractor are to be supplied to the contracting agency under the following terms and conditions:

- The software may be used by the agency for any purpose it sees fit;
- The contractor will provide the complete source code and documentation for the software so that the software can be studied by the contracting authority or any third party or parties of its choice;
- The software may be modified by the contracting authority or any third party or parties of its choice;
- The contracting authority may distribute the software, with source code and modifications, to any party of its choice, under terms and conditions of the EU Public Licence[5].

[5] https://joinup.ec.europa.eu/page/eupl-text-11-12

1.4 OpenCSAM inputs

The current implemented sources of information are described below.

- PDFs

  OpenCSAM currently is using approximately 300 ENISA publications in PDF format that are being embedded inside the tool. ENISA sources should be available to the tool directly from the ENISA's publications repository found at:

  https://www.enisa.europa.eu/publications

- Web Sources
  - Websites
  - RSS feeds
  - Twitter accounts

2. DESCRIPTION OF TASKS & SERVICES TO BE PROVIDED

2.1 Task 1 (on-going): Project management

We expect the prospective contractor to carry out appropriate project management, and to adopt a sound planning of time and resources for all the phases of the project, according to proven expertise and prior knowledge of the subject. Backup plans in case of lack of resource or any non-predicted change, need to be described in the offer.

Every second week (at its end or beginning) the contractor should update ENISA via e-mail, informing on what was done during the week and what is planned to be done the following week. We expect the prospective contractor to interact with ENISA staff regularly through short audio- or video-conferences as often as it is required in order to resolve issues and discuss the way forward.

Minutes of these meetings should drafted by the contractor and should be sent to ENISA after each meeting. ENISA should review and amend them if necessary.

The prospective contractor will need to send to ENISA a brief monthly progress report explaining the status of tasks and issues if any. Early warning notifications must be provided to ENISA at any time, if emerging risks threaten key milestones of the project.

As noted above, backup plans in case of lack of resources or any non-predicted changes, need to be described in the offer. In case there is lack of resources or any other non-predicted change from the contractor's side, ENISA should be informed timely in regards the contractor's course of action.

Moreover, any delays due to such circumstances would mean that project management and time planning should be re-adjusted accordingly by the contractor to facilitate the flawless progression and completion of the project, according to ENISA's standards and requirements.

A kick-off meeting will be organised at the start of the project either at contractor's premises, or at ENISA's premises should this be more convenient for the contractor. Mission costs related to the contractor if the latter chooses to travel should be included in the offer bid.

The prospective contractor is expected to submit a detailed Gantt chart, describing the project plan in detail. These will be discussed with ENISA in the kick-off meeting before confirmed as final. The project plan should include and clearly define a period for ENISA to review, test and provide feedback on the deliverables of the contractor, based on which the contractor will make further development to meet ENISA's requirements.

The project management documentation submitted by the prospective contractor should include:

- Scheduling of all tasks, activities and deliverables;
- Identification of milestones and critical activities;
- Identification of possible risks and suggestions to mitigate them;
- Quality assurance and peer review measures to ensure high quality results;
- Detailed information on the expertise of the prospective contractors on the tasks and topics of this tender including references to previous relevant projects;
- Detailed justification for subcontracting tasks or parts of them. In that case, ENISA requires additional information on the:
  - Tasks undertaken by the sub-contractor;
  - Expertise of the prospective contractor and its experts;
  - Resources allocated to him/her;
  - Co-ordination mechanisms among the prime and the sub-contractors;
  - Risk management method in case of delayed and/or low quality delivery of sub-contractor's outcomes;
  - Official statement of overall responsibility for the whole project and its results by the prime contractor.

2.2 Task 2: Development of new functionalities for OpenCSAM

The prospective contractor is expected to build on top of the existing development of OpenCSAM located at the ENISA's dedicated github account: https://github.com/enisaeu/OpenCSAM. All the new features and functionalities must be adapted accordingly in order to be compatible with the existing version from the repository.

SubTask 2.1 - Develop OpenCSAM user types

To materialize OpenCSAM the new functionalities described in Task 2, two user types are required to be developed:

- *The **Analyst user*** is the typical user who is using the tool to search, select search results, get a summary of selected items and compile a report.

  In addition this user will have the following rights:

  a). Add new sources (web, twitter)

  b). Be able to propose new terms and synonyms to the knowledge graph

  c). Rank the search results (Thumbs Up/Down)
- The ***ENISA user*** on top of the above capabilities should also be able to:

  a). Receive suggestions from analyst users and the machine for new terms and synonyms to the knowledge graph b). Add/Delete/Amend terms and synonyms to the knowledge graph.

c). Manage the user credentials of both the analyst user and ENISA user from the front-end.

SubTask 2.2 - Develop a dynamic knowledge graph

OpenCSAM is currently using a hardcoded, static cybersecurity knowledge graph based on ENISA's taxonomy. This task requires the creation of a dynamic knowledge graph. This should have the following characteristics:

1. Manual addition/deletion/amendment of terms, synonyms to existing terms, categories and subcategories to the knowledge graph through the single page application/front-end (by ENISA user).
2. Periodically, the system should be able to propose to ENISA user, a list of candidate terms to be added to the knowledge graph. The identification of proposed terms should be based on:
   - trending cybersecurity terms from daily web crawling
   - most popular terms used by the users of the tool for their searches

   ENISA should be able to choose under which category/subcategory the new candidate terms will be added and whether they will be added or discarded.
3. Each term in the knowledge graph should have a score (visible by ENISA user) based on the occurences of the term in the user searches and in the web sources that the tool monitors. The parent nodes in the knowledge graph should also receive a score if a new term is identified and inserted by ENISA. For example, if the candidate term "wannacry" is inserted in the knowledge graph, its parent terms' "ransomware", "malware", and "threats" should also receive a score accordingly to reflect that this branch of the knowledge graph is gaining attention.
4. The knowledge graph should keep a history of its evolution (snapshots) and a "rollback feature" should be available for the ENISA user to reset it back to a desired time.

SubTask 2.3 - Develop a dynamic pool of sources

OpenCSAM is currently using a total of thirty-seven (37) websites, five (5) twitter profiles and about three hundred (300) ENISA publications embedded in pdf format.

The expected outcome from this task is the development of a dynamic pool of sources for OpenCSAM. More specifically,

1. <u>Manual source management</u>

The **analyst user** and **ENISA user** should be able to easily add or remove new sources and assign them an initial trustworthiness score through the main dashboard (SPA). The **ENISA user** should also be able to delete sources. After that, the source should be available for data extraction by the machine like the rest of the sources in the repository. Users should also have the capability to assist the machine in the identification and extraction process.

2. <u>Automatic source management</u>

   It is expected that the tool will have the capability to propose new sources to be added in its initial pool as it parses the already existing web sources. The user will be able to review the suggestions of the tool and decide whether the new source will be added to the list or not. The tool will present the proposed source to be added and where the source was referenced.

3. The tool should also crawl and process data from ENISA's publications found at:

   https://www.enisa.europa.eu/publications

SubTask 2.4 - NLP summarization

The prospective contractor is expected to leverage NLP algorithms in order to summarize the given text of an article/document. In the report editor section of OpenCSAM, together with the full text of the article, a short summary of each selected article will be present leveraging NLP algorithms and libraries.

The summary as well as the full text should present highlighted the search terms as well as the relevant terms from the knowledge graph.

SubTask 2.5 - Deep learning functionality

One of the main functions of OpenCSAM is to identify trending terms and topics out of the data it processes from its input sources (web sources, tweets, ENISA documents). The tool automatically creates clusters of relevant data/terms and presents search results according to these clusters and the embedded taxonomy/knowledge graph. However, training of the embedded AI algorithms is based on the knowledge graph data, which are very limited and static. Therefore, deep learning is essentially inhibited by the limited amount of training data.

This task requires the leverage of all available data (web sources, tweets, ENISA repository and the dynamic knowledge graph) in order to train the AI classifiers. The contractor is expected to develop and implement a methodology for the identification of training features (use of meta data, analysts' inputs, twitter hashtags, external CTI sources etc) in order to create a sufficient size, and of good quality, training datasets for the improvement of the classification performance of the AI engine giving OpenCSAM a deep learning functionality.

SubTask 2.6 - Dashboard enhancement

The main frontend functionality currently available for the analyst is that of search engine and a report editor. It is expected that the prospective contractor will add a dashboard feature for presenting additional information from the backend to the analyst (specifics will be discussed between ENISA and the contractor).

2.3 Task 3: Testing and validation plan

The contractor should set a testing and validation plan for its work and allow 3 weeks of testing by ENISA before the expiration date of the contract. ENISA can ask for changes/refinements of the tool during the validation period in order to meet its expectations according to the specs of this tender.

3. EXPECTED SKILLS

For the correct development of the work plan included in this document, the skills of the following profiles are deemed relevant and the tenderer will be required to demonstrate experience in all or a subset of these.

General skills:

- Excellent project management skills including quality assurance;
- Excellent communication and presentation skills;
- Proficient in both written and spoken English.

Web application development:

- Frontend technologies HTML5, CSS3, and JavaScript.
- Architectures oriented to the Front-end and web products (ex. Angular, NodeJs, Flask).

Integration engines and Big Data infrastructures.

- Working experience with container technology (Docker, Docker-compose).
- Working experience with microservice technology (ex. REST api, etc.).
- Experience with continuous integration systems (Jenkins, etc.).
- Working experience with ElasticSearch/Logstash/Kibana (ELK stack)
- Experience with manipulation of exchange formats (XML, JSON), SOAP web services.

NLP and ML algorithms:

- Experience in Machine Learning, Deep Learning, Natural Language Processing, Natural Language Generation, Text Summarization, Text Simplification, etc.
- Experience working with NLP and ML libraries such as NTLK, Stanford NLP, Spacy, Sklearn and other toolkits.
- Experience with unstructured textual data.

4. DURATION AND DEADLINES

The Prospective contractor is required to make a proposal in their tender for the time schedule of the activities in order to carry out the project (e.g. including a Gantt chart). In its offer the Prospective contractor should indicate the estimated amount of person days required to accomplish all tasks associated with this Call for Tenders.

The duration of this work is foreseen between **March 2019 and 27th of September 2019**

More specifically, assuming the objectives described in Section 2 “DESCRIPTION OF TASKS & SERVICES TO BE PROVIDED” will be part of the final project plan (X = contract signature date):

- Task 1 should be finished X + 1 month.

- Task 2 should be finalized no later the 6th September 2019
- Task 3 should be finalized no later than the 27th of September 2019

5. LIST OF DELIVERABLES

ENISA will provide the contractor all available documentation on OpenCSAM (user manuals, deployment manuals) as well as administration access to the tool and relative VMs. The following deliverables are expected:

- **Deliverable 1**: a project management document, including a Gantt-chart of the project and regularly updated with monthly progress reports (part of Task 1)
- **Deliverable 2**: new functionalities for OpenCSAM as described in Task 2
- **Deliverable 3**: a manual describing the theoretical approach, its technical implementation, the tool deployment and user manual, and the maintenance/troubleshooting manual. (part of task 2)
- **Deliverable 4**: a validation plan, including performance indicators and a user satisfaction questionnaire (part of task 3)
- **Deliverable 5**: the prototype code duly commented (part of Task 2)

NOTE: It is expected from the prospective contractor that all the new functionalities and features are properly documented and are accompanied by their respective Jupyter Notebook containing the explanations and the proof of concept code.

English is the language to be used for all the documents produced

6. PLACE OF EXECUTION OF THE ACTIVITIES AND COMMUNICATIONS

The execution of the activities will take place at the Contractor's premises. Network based collaborative tools (i.e. videoconferencing) will be used as working methods.

A minimum of one physical meeting is envisaged for this project, at the contractors' or ENISA's premises.

It should be mentioned that the costs of potential business trips of the contractor - if any was needed - should be included in the total offer. ENISA will not additionally reimburse the contractor for taking part in these meetings

7. CONTENT AND PRESENTATION OF THE TECHNICAL OFFER

The Tenderer should submit a **Technical Offer** containing relevant documents and information, which enables ENISA to assess its quality and compliance with the specifications above (the technical description).

The Technical Offer shall include the following:

- Presentation of tender proposal;
- Evidence demonstrating expertise in the fields covered by this call for tender;
- Management practices, planning and resource allocation to tasks;

- Project management method that will be used for this contract, explaining how it will be carried out efficiently and effectively;
- In the case of a tender being submitted by a consortium, a description of the input from each of the consortium members and the distribution and interaction of tasks and responsibilities between them;
- A description of sub-contracting arrangements foreseen, if any, with a clear indication of the tasks that will be entrusted to a sub-contractor and the quality assurance methods to be used in relation to these tasks. A statement by the tenderer guaranteeing the eligibility of any sub-contractor shall be included as well, in case the subcontractor/s are not known at the moment of the tender submission.

In addition to the above the tenderer must provide the information concerning subcontracting as requested in Part 3; article 1.4.

8. CONTENT AND PRESENTATION OF THE FINANCIAL OFFER

The Financial offer must be drawn up using the **Financial Offer form (see Annex III)**.

9. TENDER RESULT AND ESTIMATED CONTRACT VALUE

The result of the evaluation of tenders will be the awarding of a Service Contract. The total estimated budget cannot exceed **€100.000,00 (one hundred thousand Euro)** covering all tasks executed and including all costs.

10. DATA PROTECTION AND TRANSPARENCY

While personal data mainly includes professional contact data, specific conditions may apply depending on the context and the type of personal data collected.

Regarding personal data, the EU data protection applicable on the Agency and its Contractors includes the following instruments:

- Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data.

- Regulation (EC) No. 45/2001 of the European Parliament and of the Council of 18 December 2000 on the protection of individuals with regard to the processing of personal data by the Community institutions and bodies and on the free movement of such data.

  Particular attention needs to be paid to transparency conditions that are applicable in the Agency, as they emanate from the following instrument:
- Regulation (EC) No. 1049/2001 of the European Parliament and of the Council of 30 May 2001 regarding public access to European Parliament, Council and Commission documents.

11. MARKING OF SUBMITTED DOCUMENTS

The tenderer SHOULD NOT mark tender documents (for e.g. the header or footer) with any of the following words: RESTRICTED, CONFIDENTIAL, SECRET or TOP SECRET. If the tenderer considers that such markings are required, a prior approval from the ENISA Procurement Officer should be attained BEFORE sending the tender documents. The tenderer should be aware that the information sent to ENISA for procurement purposes is handled in accordance with the governing rules for EU Public Procurement and the EU Financial Regulation framework.

12. PRICE

Prices submitted in response to this Tender must be inclusive of all costs involved in the performance of the contract. Prices shall be submitted only in Euro and VAT excluded.

13. PRICE REVISION

Price revision does not apply to this tender procedure.

14. COSTS INVOLVED IN PREPARING AND SUBMITTING A TENDER

ENISA will not reimburse any costs incurred in the preparation and submission of a Tender. Any such costs must be paid by the Tenderer.

15. PERIOD OF VALIDITY OF THE TENDER

Tenderers must enclose a confirmation that the prices given are valid for (90) ninety days from the date of submission of the tender.

16. PROTOCOL ON PRIVILEGES AND IMMUNITIES OF THE EUROPEAN COMMUNITIES

ENISA is exempt from all taxes and duties, including value added tax (VAT), pursuant to the provisions of Articles 3 and 4 of the Protocol on the Privileges and Immunities of the European Communities. Tenderers must therefore give prices, which are exclusive of any taxes and duties and must indicate the amount of VAT separately.

17. PAYMENT ARRANGEMENTS

Payments under the Contract shall be carried out within 60 days of submission of an invoice accompanying the final report or deliverable based on the conditions set out in the draft contract. One single payment will be made after receipt and approval of the deliverables by ENISA. An invoice must specify the specific deliverables covered. A note that accompanies the final deliverables must present the resources used for each of the deliverables presented. Time sheets should be submitted as appropriate.

18. CONTRACTUAL DETAILS

A model of the Service Contract is proposed to the successful candidate - see Annex IV.

PART 3 TENDER SPECIFICATIONS

1. INFORMATION ON TENDERING

1.1 Contractual conditions

In drawing up their offer, the tenderer should bear in mind the provisions of the draft contract (Annex IV) attached to this invitation to tender particularly those on payments, performance of the contract, confidentiality, and checks and audits. Submission of a tender by a potential contractor implies acceptance of this contract and all of the terms and conditions contained therein. Any limitation, amendment or denial of the terms of contract will lead to automatic exclusion from the procurement procedure.

It is strongly recommended that you have this draft contract checked and passed by your legal representative before committing to submitting an offer.

Before the contract is signed, the Agency may decide to abandon the procurement procedure or cancel the award procedure without the tenderers being entitled to claim any compensation.

1.2 Joint Tenders (if applicable)

A joint tender is a situation where a tender is submitted by a 'group' of economic operators (consortium). Joint tenders may include subcontractors in addition to the joint tenderers.

Tenders can be submitted by groupings of service providers/suppliers who will not be required to adopt a particular legal form prior to the contract being awarded. However, the Agency will require the grouping:

- Either to have the contract signed by all members (partners) of the grouping. In this case, one of them, as 'Lead Partner', will be responsible for the receipt and processing of payments for members of the grouping, for managing the service administration and for coordination of the contract;
- Or to have the contract signed by the 'Lead Partner' only, who has been duly authorised by the other members to bind each of them (a fully completed 'power of attorney' form for each member of the Group will be attached to the contract according to the template provided by the Agency).

In addition, the composition and constitution of the grouping, and the allocation of the scope of tasks amongst the members, shall not be altered without the prior written consent of the Agency, which can be withheld at its discretion.

In case of a joint offer, each member of the grouping shall provide the following:

- a **Legal Entities form** and a **Power of Attorney of each consortium partner**, must be filled in, signed by (an) authorised representative(s), scanned and uploaded in the corresponding section.

- a **Declaration of honour with respect to the Exclusion Criteria and absence of conflict of interest** must be filled in, signed by (an) authorised representative(s), scanned and uploaded in the corresponding section.

Hand written or electronic signature of the consortium leader who submits the tender is not required, since the signature of the ***e-Submission 'Tender Preparation Report'*** implies that all included documents are signed by this party.

1.3 Liability of members of a group

Partners in a joint offer assume **joint and several liability** towards the Agency for the performance of the contract as a whole.

Statements, saying for instance:

- That one of the partners of the joint offer will be responsible[6] for only one part of the contract and another one for the rest, or
- That more than one contract should be signed if the joint offer is successful

are thus incompatible with the principle of joint and several liability. The Agency will disregard any such statement contained in a joint offer, and reserves the right to reject such offers without further evaluation, because they do not comply with the tendering specifications.

1.4 Subcontracting

Subcontracting is permitted in the tender but the contractor will retain full liability towards the Contracting Authority for performance of the contract as a whole.

If the tenderer intends to subcontract part of the service, they shall indicate in their offer which part will be subcontracted and to what extent (% of the total contract value).

Tenderers must ensure that Article II.7 of the contract (Annex IV) can be applied to subcontractors.

Tenderers must give an indication of the proportion of the contract that they intend to subcontract.

Tenderers are required to identify all subcontractors.

During contract execution, any change of a subcontractor identified in the tender will be subject to prior written approval of the Contracting Authority.

2. STRUCTURE AND CONTENT OF THE TENDER

2.1 General

Tenders must be written in **one of the official languages** of the European Union. The working language of ENISA is English.

Tenders must be written in a clear and concise manner, with continuous page numbering. Since tenderers will be judged on the content of their written bids, they must make it clear that they are able to meet the requirements of the specifications/terms of reference.

2.2 Structure of the tender

Based on the ***e-Submission*** environment, all tenders must provide information and supporting documentation in three sections:

1) Company identification - data and documentation
2) Qualification - data and documentation;
3) Tender offer - data and documentation.

[6] not to be confused with distribution of tasks among the members of the grouping

2.3 Qualification data

a) Identification of the Tenderer

The tenderer must fill in all required fields in the qualification section. In case of a joint tender the consortium name has to be provided and an identification of every party in the consortium needs to be added.

The following information should also be provided:

(i) Legal Entities

In order to prove their legal capacity and their status, all tenderers and identified subcontractors must provide a Legal Entity Form with its supporting evidence. The Legal Entity Form needs to be signed by participating parties that are not signing the '***Tender Preparation Report'***.

However, the subcontractor(s) shall not be required to fill in or provide those documents when the services represent less than 20% of the overall contract value.

The Legal Entity Form can be generated via the e-Submission application. Alternatively, a standard template in each EU language is available at:
http://ec.europa.eu/budget/contracts_grants/info_contracts/legal_entities/legal_entities_en.cfm

Tenderers must provide the following information if it has not been included with the Legal Entity Form:

- For **legal persons**, a legible copy of the notice of appointment of the persons authorised to represent the tenderer in dealings with third parties and in legal proceedings, or a copy of the publication of such appointment if the legislation, which applies to the legal entity concerned, requires such publication. Any delegation of this authorisation to another representative not indicated in the official appointment must be evidenced.
- For **natural persons**, where applicable, a proof of registration on a professional or trade register or any other official document showing the registration number.

(ii) Financial identification

The tenderer (or the single point of contact in case of joint tender) must provide a Financial Identification Form and supporting documents. Only one form per offer should be submitted (no form is needed for subcontractors and other joint tenderers). The form is available at:
http://ec.europa.eu/budget/contracts_grants/info_contracts/financial_id/financial_id_en.cfm

Remark: Tenderers that are already registered in the Agency's accounting system (i.e. they have already been direct contractors in the past) must provide the filled in form but are not obliged to provide the supporting evidence.

The form needs to be printed, filled in and then scanned and uploaded in the Qualification section. In case of a joint tender, it has to be uploaded in the ***"Documents"*** section of the Consortium Leader.

(iii) Power of Attorney

In case of a joint tender, an Agreement / Power of Attorney for each partner must be filled in, signed by (an) authorised representative(s), scanned and uploaded. Please choose 'Model A' for an ad hoc grouping or 'Model B' for a legally constituted consortium - see templates in Annex V (a) and (b)

(iv) Lots interested in ***(only in case the tender has multiple lots)***

The tenderer must indicate for which lots the tender is applicable, by ticking the relevant boxes in the section: ***"Interested in the following lots".***

b) Information regarding exclusion and selection criteria:

The tenderer is requested to submit the following documents:

1. Declaration by the Tenderer relating to the exclusion criteria (see 3.1 below)

   The filled-in Declaration form.

   In case of a joint tender, each member of the consortium has to submit a declaration under the respective party name (see template in Annex II)

2. Documents certifying economic and financial capacity (see 3.2.2 below)

   In case of a joint tender, each member of the consortium has to submit the documents under the respective party name.

3. Proof of technical and professional capacity (see 3.2.3 below)

   In case of a joint tender, each member of the consortium has to submit the documents under the respective party name.

If any of the above documents are associated with a specific Lot, please indicate for which Lot it is applicable inside the document AND in the Description field of the attachment *(only in case the tender has multiple lots).*

2.4 Tender data

a) Technical proposal

The technical section is of great importance in the assessment of the bids, the award of the contract and the future execution of any resulting contract.

The technical offer must cover all aspects and tasks required in the technical specification and provide all the information needed to apply the award criteria. Offers deviating from the requirements or not covering all requirements may be excluded based on non-conformity with the tender specifications, and will not be evaluated.

The technical tender needs to be uploaded in the relevant section:

The tenderer selects the "Technical Tender" document from the dropdown box ("Financial Tender or Technical Tender"). The e-Submission application allows attachment of as many documents as necessary.

b) Financial proposal

All tenders must contain a financial proposal, to be submitted **using the form attached as Annex III.**

The tenderer's attention is drawn to the following points:

- Prices must be quoted in **euros**, including the countries that are not in the euro-zone. As far as the tenderers of those countries are concerned, they cannot change the amount of the bid because of the evolution of the exchange rate. The tenderers choose the exchange rate and assume all risks or opportunities relating to the rate fluctuation.

- **Prices must be fixed amounts**.
- **Estimated travel and daily subsistence allowance expenses must be indicated separately**. *(only if applicable to this procedure)*

  This estimate should be based on Articles I.5 and II.22 of the draft framework contract (Annex IV). This estimate will comprise all foreseen travel and will constitute the maximum amount of travel and daily subsistence allowance expenses to be paid for all tasks.
- **Prices must be quoted free of all duties**, taxes and other charges, including VAT, as the European Union is exempt from such charges under Articles 3 and 4 of the Protocol on the privileges and immunities of the European Union. The amount of VAT may be shown separately.
- Prices shall be fixed and not subject to revision during the performance of the contract.

The total price needs to be encoded in the e-Submission application. The completed Financial Offer form, MUST ALSO be uploaded in the relevant section:

The tenderer selects the "Financial Tender" document from the dropdown box ("Financial Tender or Technical Tender"). The e-Submission application allows attachment of as many documents as necessary.

3. ASSESSMENT AND AWARD OF THE CONTRACT

The assessment will be based on each tenderer's bid. All the information will be assessed in the light of the criteria set out in these specifications. The procedure for the award of the contract, which will concern only admissible bids, will be carried out in three successive stages.

The aim of each of these stages is:

1) to check on the basis of the ***exclusion criteria***, whether tenderers can take part in the tendering procedure;
2) to check on the basis of the ***selection criteria***, the technical and professional capacity and economic and financial capacity of each tenderer;
3) to assess on the basis of the ***award criteria*** each bid which has passed the exclusion and selection stages.

Only tenders meeting the requirements of one step will pass on to the next step

3.1 EXCLUSION CRITERIA

All tenderers shall provide a ‘declaration on their honour’ (see Annex II), stating that they are not in one of the situations of exclusion listed.

The ‘declaration on honour’ is also required for identified subcontractors whose intended share of the contract is above 20%.

The ‘declaration on honour’ has to be duly signed by parties that are not signing the Tender Preparation Report in *e-Submission*.

<u>The successful</u> tenderer shall be asked to provide the actual documents mentioned as supporting evidence in Annex II before signature of the contract and within a deadline given by the contracting authority. This requirement applies to all members of the consortium in case of joint tender.

<u>Remark</u>:
A tenderer may be waived of the obligation to submit the documentary evidence mentioned above if such evidence has already been submitted for the purposes of another procurement procedure launched by ENISA, provided that the documents are not more than one-year-old starting from their issuing date and that they are still valid. In such a case, the tenderer shall declare on his honour that the documentary evidence has already been provided in a previous procurement procedure, specifying the reference of the call for tender for which the documents have been provided, and confirm that no changes in their situation has occurred.

3.2 SELECTION CRITERIA

The following criteria will be used to select the Tenderers for further evaluation. If the Tender is proposed by a consortium, these criteria must be fulfilled by each partner (unless otherwise stated).

Documentary evidence of the Tenderers’ claims in respect of the below-mentioned criteria is required.

3.2.1 Professional Information

The Tenderer must provide evidence of enrolment (declaration or certificates) in one of the professional or trade registers related to the subject of this tender, in the country of its establishment.

3.2.2 Financial and Economic Capacity

Proof of financial and economic standing shall be furnished by the following documents and minimum requirements:

(a) Copy of the financial statements (balance sheets and profit and loss accounts) for the last two (2) financial years for which accounts have been closed, where publication of the accounts is required under the company law of the country in which the economic operator is established. In case of a consortium, each consortium member shall present their financial statements.

If the tenderer is not obliged to publish its accounts under the law of the state in which it is established, a copy of audited accounts for the last two (2) financial years should be presented. In case of a consortium/grouping, audited accounts for each consortium partner shall be presented.

(b) A statement of the average turnover of the last two (2) financial years for which accounts have been closed. The **minimum annual average turnover** of the tenderer shall be of **50,000.00 EUR**. In case of a consortium/grouping, the annual average turnover for each of the partners shall be presented. The sum of the annual average turnovers of each partner will be taken into account to reach the annual average turnover of 50,000.00 EUR.

(c) If tenderers will call on the competences of another entity (for example, a parent company), a written undertaking by the said entity certifying that it will make available to the tenderers the resources required to implement the contract.

If for some exceptional reason which the Contracting Authority considers justified, the tenderer is unable to provide the documentary evidence requested above, he may prove his economic and financial capacity by any other means which the Contracting Authority considers appropriate, but only following a formal request for clarification before the tender expiry date.

3.2.3 Technical and professional capacity criteria and evidence

These criteria relate to the Tenderer's (and if applicable) partner's/subcontractor's skill, efficiency, experience, reliability and similar circumstances. Tenderers are required to prove that they have sufficient technical and professional capacity to perform the contract by providing the following documentation:

a) Criteria relating to tenderers

These criteria relate to the Tenderer's (and if applicable) partner's/subcontractor's skill, efficiency, experience, reliability and similar circumstances. Tenderers are required to prove that they have sufficient technical and professional capacity to perform the contract by providing the following documentation:

A detailed description of the resources (hardware & software) to be made available for this contract, subject to the contractual clause on subcontracting;

- Curriculum Vitae (CV) of the project manager and other staff related to the provision of services requested;
- Quality control and assurance methodology;
- List of the similar services performed in the past 3 years, with details of the values, dates and public or private recipients and providing, where possible, documents concerning reliability and efficiency of the services performed issued by the beneficiaries of the service.

b) Evidence:

The following evidence should be provided to fulfil the above criteria:

- Details of the structure of the organisation
- List of relevant services provided in the past three years, with sums, dates and recipients, public or private. The most important services shall be accompanied by certificates of satisfactory execution, specifying that they have been carried out in a professional manner and have been fully completed;
- The educational and professional qualifications of the experts who will provide the services for this tender (CVs), including the management staff. Each CV provided should indicate their intended function in the delivery of the service.

3.3. AWARD CRITERIA

3.3.1 Quality of the Offer

Once the Tenderer has demonstrated the appropriate capacity to perform the Contract on the grounds of the selection criteria, the offer will be assessed based on the award criteria.

No	Qualitative award criteria		Weighting (max. points)
1.	**Technical compliance**	Compliance with the technical descriptions (Part 2 of this document)	30/100
2.	**Quality and accuracy of content and structure**	Quality of the proposal and accuracy of the description to provide the requested services	25/100
3.	**Project Team**	Composition of project team (ratio senior/juniors), relevant experience of the team, work flows and review cycles of the output, direct involvement of senior staff, and distribution of tasks amongst experts; quality reviews of deliverables.	25/100
4.	**Methodology**	Selected methodology and project management	20/100
Total Qualitative Points (QP)			**100**

Tenderers shall elaborate in the technical offer on all points addressed in the technical specifications, bearing also in mind the above indicated award criteria, in order to score as many points against the quality award criteria as possible. The mere repetition of mandatory requirements set out in the technical specifications, without going into detail or without giving any benefit in the technical offer, will only result in a very low score.

Minimum attainment per criterion

Offers scoring less than 50% for any criterion will be deemed to be of insufficient quality and eliminated from further consideration.

Minimum attainment overall

Offers scoring less than 70% after the quality award criteria evaluation process will be considered to be of insufficient quality and eliminated from the following phase.

The sum of all criteria gives a total of 100 points. The respective weighting between the different award criteria depends on the nature of the services required and is consequently closely related to the terms of reference. The award criteria are thus quantified parameters that the offer should comply with. The **qualitative award criteria** points will be weighted at **70%** in relation to the price.

3.3.2 Price of the Offer

Tenders must state a total fixed price in Euro. Prices quoted should be exclusive of all charges, taxes, dues including value added tax in accordance with Article 3 and 4 of the Protocol on the Privileges and Immunities of the European Communities. Such charges may not therefore be included in the calculation of the price quoted.

ENISA, in conformity with the Protocol on the Privileges and Immunities of the European Community annexed to the Treaty of April 8th, 1965, is exempt from all VAT.

Offers exceeding the maximum price set in Part 2; Article 7 will be excluded. The cheapest offer will receive the maximum points and the rest of the candidate's offers will be awarded points in relation to the best offer as follows

PP = (PC / PB) x 100

where;

PP = Weighted price points
PC = Cheapest bid price received
PB = Bid price being evaluated

3.3.3 Award of the contract

The contract will be awarded to the offer that is the most cost effective (offers the best value for money) which obtains the highest number of points after the final evaluation, based on the ratio between the **quality criteria (70%) and the price (30%).** The following formula will be used:

TWP = (QP x 0.7) + (PP x 0.3)

where;

QP = Qualitative points
PP = Price points
TWP = Total weighted points score

In case the successful tenderer is unable to sign the contract for any reason, the Contracting Authority reserves the right to award the contract to other tenderers as per the ranking order established following the evaluation procedure.

4. TENDER OPENING

The public opening of received tenders will take place on **25th February 2019** **at 11:00 EET Eastern European Time (Greek local time)** at ENISA Athens office, 1 Vasilissis Sofias Street, Maroussi 151 24 Attiki, Greece.

A maximum of one legal representative per participating tenderer may attend the opening session. Tenderers shall inform the Agency in writing of their intention to attend, by email to procurement@enisa.europa.eu **at least 3 working days** prior to the opening session.

5. OTHER CONDITIONS

5.1 Validity

Period of validity of the Tender: 90 days from the closing date stated in Invitation to Tender. The successful Tenderer must maintain its Offer for a further 120 days from the notification of the award.

5.2 Lots

This Tender is not divided into Lots.

5.3 Additional Provisions

- Changes to tenders will be accepted only if they are received on or before the final date and time set for the receipt of tenders.
- Expenses incurred in respect of the preparation and presentation of tenders cannot be refunded.
- No information of any kind will be given on the state of progress with regard to the evaluation of tenders.
- All documents submitted by Tenderers will become the property of ENISA and will be regarded as confidential.

5.4 No obligation to award the contract

Initiation of a tendering procedure imposes no obligation on ENISA to award the contract. Should the invitation to tender cover several items or lots, ENISA reserves the right to award a contract for only some of them. ENISA shall not be liable for any compensation with respect to Tenderers whose Tenders have not been accepted. Nor shall it be so liable if it decides not to award the contract.

6. SPECIFIC INFORMATION

6.1 Timetable

The timetable for this tender and the resulting contract is as follows:

Title: "**New functionalities for Open Cyber Situational Awareness Machine (OpenCSAM)"**

ENISA F-COD-19-T08

Summary timetable comments

Launch of tender: Contract notice to the Official Journal of the European Union (OJEU) Uploaded to e-Tendering website Uploaded to ENISA website	15th January 2019	
Deadline for request of information to ENISA	13th February 2019	
Last date on which clarifications are issued by ENISA	15th February 2019	
Deadline for **electronic reception** of offers via ***e-Submission***	**21st February 2019**	**18:00 CET** Central European time
Opening of offers	25th February 2019	**11:00 EET** Eastern European **(Greek local) Time**
Date for evaluation of offers	TBA	TBA
Notification of award to the selected candidate	Early March 2019	Estimated
Contract signature	Early/mid-March 2019	Estimated