Appendix TS.A to the Tender Specifications

Scenarios for Evaluation

EMSA

The present document specifies the Scenarios for Evaluation to be used as part of the Award Criteria as specified in the Tender Specifications. The tenderers are requested to submit the technical solutions to the respective scenario.

The scenarios are purely for evaluation reasons and will not necessarily be launched under a specific contract under the FwC contract, although EMSA reserves this possibility for future decision.

The document also describes the requirements for presenting the response in the bid. Tenderers should adhere to these presentation requirements in their proposal to address each of the scenarios.

1. Evaluation Scenarios

1.1. Scenario 1: MET Programme/Course Selection Assistant

Starting from the existing STCW public user interface accessible from the EMSA portal (https://portal.emsa.europa.eu/web/stcw), a selection assistant (search engine) shall be designed based on the following requirements:

The Course Selection Wizard shall find the MET institution/course pairs that meet certain conditions. The search conditions must be grouped at least into three sections, further described below, to be grouped together as a menu. When in one of the sections, none of the fields of the form within it is picked, the whole section is not used in the search.

Input: The available sections are:

Section 1. Programme/Course including the following search fields:

- Programme/Course name - shall allow the search to be done through a string of characters included in an existing programme/course name. (The search should not be case or accentuation sensitive and should use the auto-complete functionality) - Single Selection attribute
- Study area - one or more study areas may be selected. Areas may be divided, taking into account the chapters of the STCW Convention and Code, into: Deck; Engine; Radio; Special Training, or Emergency and occupational safety; Multiple selection attribute
- Level of education and training - one or more levels may be selected. Levels may be: University; Secondary Education; Vocational Education, or Ancillary Training - Multiple selection attribute

Section 2. MET Institution including the following search fields:

- Type of institution - one or more types may be selected. Types may be: public or private - Multiple selection attribute
- Location – one or more locations may be selected - Multiple selection attribute

Section 3. Other conditions

- Entry requirements - one or more requirements may be selected. Requirements may be divided into pre-existing education requirements, pre-existing certification requirements, physical condition, or age - Multiple selection attribute

Attributes not filled in shall not be considered. If more than one attribute is filled in, the filter condition shall apply the logical AND operator. Also between sections the logical AND operator shall be applied.

When cliking on the “Apply” button, the system shall execute the search that satisfies the selection criteria and displays the results as discribed below.

To start a new search, a "Clear Choices" button shall be made available to cancel all previously entered choices.

Output: the results shall be displayed in a page containing the list of MET institution/course pairs that satisfy all the selected fields (cumulatively).

Choosing one of the MET institutions/course pair included into the results page will lead the user to the information available in the system regarding his/her choice.

The final resulting chosen MET institution/course pairs shall be displayed in the screen with the possibility of exporting the information into a pdf format.

The tenderer shall propose a solution, bearing in mind that the existing information in the system does not include some of the above mentioned fields such as study area, level of education and training, type of institution or entry requirements. How the missing fields should be included into the system shall be part of the solution to be proposed.

Bids shall detail, as a minimum, the below listed topics:

- Project Plan, including:

  - Workbreakdown and tasks (small overview shall be included)
  - Effort proposed per Profile (please refer to the Profiles table presented in the Tender Specifications)
  - Total project time
  - Total effort
  - Total cost
- Description of the proposed solution, as detailed as possible, including:

  - Project delivery approach taking into consideration the Project Delivery template document provided in appendix TS.B
  - Clear and detailed description of the project scope
  - Context diagram including the major components
  - Solution and architecture proposed (identify changes if needed)
  - Impact at database tier, business tier, presentation tier (if necessary, if not please mention that fact)
  - User interface mock-ups
  - Automation approach
  - Test approach and plan
- Complete list of deliverables including documentation

Towards the evaluation of the bid, description of the above topics must be as detailed as possible to allow a clear and comprehensive understanding of the services that are being proposed and how they will be addressed.

1.2. Scenario 2: Restructuring the implementation for better operationality on the use of JASPER when producing Ad-Hoc reports

The Seafarer’s Statistical annual reviews (please refer to https://portal.emsa.europa.eu/web/stcw/documents) have been produced based on the numbers retrieved from crosstabs (164 crosstabs, up to this day) configured in JASPER Reports Server software.

Each crosstab, of an ad hoc view type, links different table fields (up to 21 such as Country, Seafarer ID, Seafarer Gender, Seafarer Nationality, etc.) of the database and makes use of different calculated fields (up to 5). One of these calculated fields is the count distinct that counts the seafarers as unique individuals. Since the same seafarer can hold certificates issued by different countries, entitling him/her to serve under different departments or different capacities, the total number of seafares is never the sum of the number of seafarers certified by each country.

Moreover, depending on the filtering (by Valid Year, Issuing Country, Department, etc.) done by the EMSA or the public users the numbers displayed in the crosstabs can also differ because of that filtering, most especially the total number of seafarers per columns and rows of the crosstabs.

As can be seen in the annual report, seafarers can be analysed:

- As a whole - on average, 390.000 individual seafarers are analysed per valid year implying almost 2 million records being processed when trends are performed (5 years analysis);
- Per country issuing the certificate – this includes Member States (29 including Norway and Iceland) and non-EU countries (up to 100 countries);
- Per department in which the seafarer can serve - deck or engine
- Per capacity in which the seafarer can serve - Master, Chief Mate… up to 26 capacities;
- Per gender – male, female or unknown;
- Per nationality - including Member States (29 including Norway and Iceland) and non-EU countries (up to 100 countries); or
- Per age – which includes up to 9 levels of ages from -25 to 60+.

Taking into account the volume of information included in the database[1] (which tends to increase year by year) and the way the database is structured, some of these ad hoc views take a long time to be processed as Jasper goes directly to the operational database to read all the records before processing the information.

EMSA internal ad hoc views such as the one in the figure below can take up to 8 minutes to be processed. Ideally, EMSA users should not wait more than 1 minute for the information to be displayed.

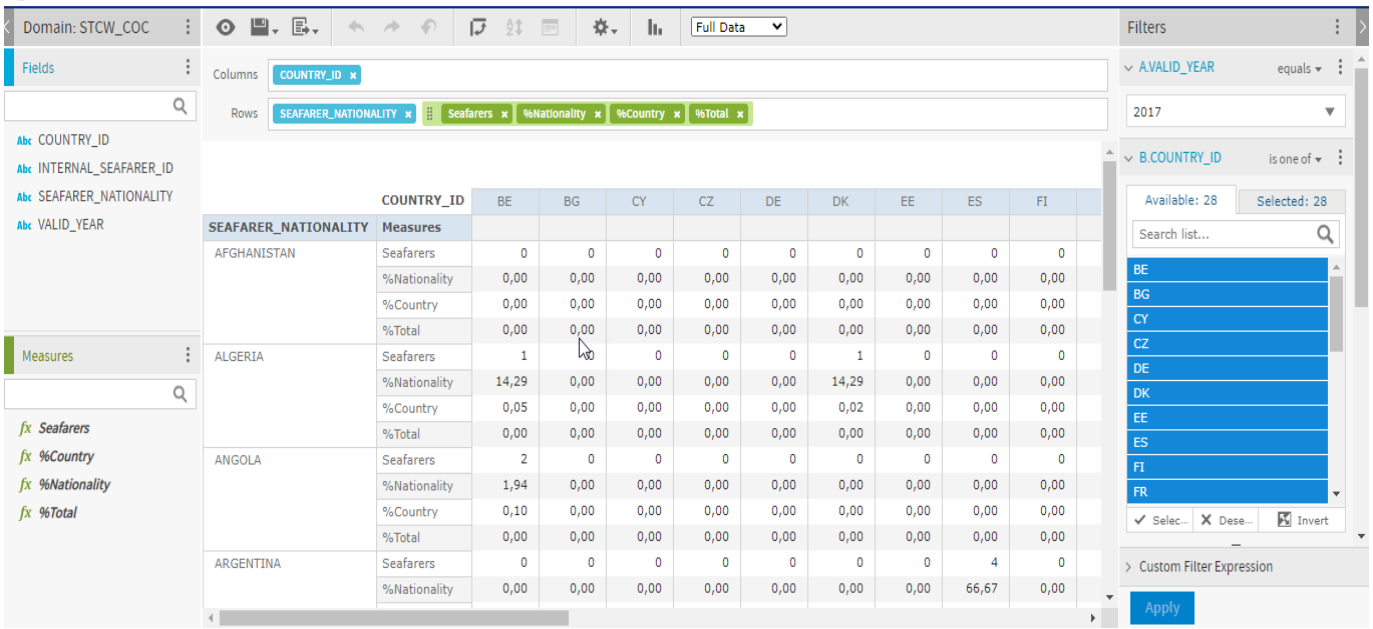

Figure 1 - Counting of the number of distinct seafarers holding a certificate of competency (CoC) per EU Member State issuing the certificate while displaying the nationality of the seafarer

[1] Table COC, 38 columns, 1539914 rows; Table COP, 29 columns, 401154 rows; Table EAR, 41 columns, 1001397 rows

The tenderer shall propose a solution to improve the time consumed with the processing of the information from the database to the ad hoc views.
Based on the STCW Statistics database schema tenderes shall propose and describe, as detailed as possible, how a new ETL process as well as other JASPER elements (e.g. domains, ad-hoc views, …) should be designed and implemented and how the final database model should be fine tuned for generating the above mentioned report.

Bids shall detail as a minimum the below listed topics:

- Project Plan, including:

  - Workbreakdown and tasks (small overview shall be included)
  - Effort proposed per Profile (please refer to the Profiles table presented in the Tender Specifications)
  - Total project time
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  - Total cost
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  - Impact at database tier, business tier, presentation tier (if necessary, if not please mention that fact);
  - User interface mock-ups
  - Automation approach
  - Test approach and plan
- Complete list of deliverables including documentation

Towards the evaluation of the bid, description of the above topics must be as detailed as possible to allow a clear and comprehensive understanding of the services that are being proposed and how they will be addressed.

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