Establishment of Eastern Mediterranean Regional Network: pooling, sharing, development of innovative face-to-face and digital training/mentoring tools for the maritime sector

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[1] **R**=Document, report; **DEM**=Demonstrator, pilot, prototype; **DEC**=website, patent fillings, videos, etc.; **OTHER**=other

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Acronyms and Abbreviations

Executive Summary

This document presents the design concepts and functional elements of the sharing-pooling e-platform.

The platform will be developed as an integrated software application – an IT system - that will allow the design, monitoring and administration of mentoring / coaching projects.

The system will be offered as a web application that will be accessible by all parties that are involved (directly or indirectly) in a mentoring / coaching project.

The purpose of the system is to provide the necessary functionalities that will support the procedures and processes that are part of a mentoring / coaching project.

All the supported procedures and processes will be manageable via a unified, adaptable and intuitive interface. The design team will place efforts in order to ensure that the system will be device independent where possible (accessible and usable via smartphones, tablets, etc.)

1. Introduction

1.1. Background

This document addresses the requirements of the deliverable "D3.2 Modules of the sharing-pooling e-platform" as per Work package 3: The Sharing – Pooling Platform.

It provides a detailed breakdown of the functionalities and operations that will be included within each module and can be utilized as a "roadmap" for the development of the sharing-pooling e-platform.

1.2. Purpose and scope

The purpose and scope of the current deliverable is to provide an insight on the modules that will be developed in order to provide the sharing – pooling platform with the necessary functionalities that will support the desired needs and specifications.

The following sections of this document attempt an analysis and more detailed description of the procedures and processes associated with each module.

1.3. Approach

The sharing-pooling e-platform will offer numerous functionalities and workflows regarding the creation, overview and management of various innovative learning and training mentoring / coaching activities.

These functionalities and workflows will be assembled in operational groups and developed accordingly. These groups can be perceived as units that contain similar functionalities, or functionalities that are related to the same logical procedures.

Systemically, these groups will be developed as modules of the system. All modules, although discreet in their functionalities will be fully integrated within the system and accessible via a unified interface.

The data that will be produced from all modules will be stored in a single database.

Access to functionalities and data within each module will be dynamically adapted according to the system role of each connected user.

2. User Management

2.1.   User access

Each user will be able to access the system using his personal login credentials (username & password). The user's personal email address can be utilized as the username.

2.2.   User authentication

The system will produce a UserID property which will be transparent to the end users and will only be used as the unique identifier of the user. The user authentication process will utilize a password which will be randomly generated by an algorithm.

2.3.   Password complexity policies

The system will be able to support various levels of password complexity. Rules that can be set include password length, necessity for capital or lower-case letters, numerical characters, special characters, etc.

2.4.   Password reminder procedures

The users will be able to reset their passwords on demand (by having access to their personal email accounts). This process will be fully automated, will not necessitate any involvement from the system administrators. The system will generate automated notifications that will be sent to the end users in every step of the password reset process.

2.5.   Roles management (Permissions & functionalities)

The system will be able to support the creation and management of various user roles. These roles can cover all the needs of a mentoring – coaching project. Indicative roles can be mentee, mentor, coordinator, supervisor, project manager, administrator, et al.

Each role will be associated with a series of permissions. Permissions are used to control access to specific functionalities and to control data viewability. As a result, access to data and features will be customizable and role controlled. A system role can be further customized via adding or removing permissions.

A system user can be associated with multiple roles. For example, a mentoring-coaching coordinator can also be a mentor. In this case, the user will be able to "toggle" between roles without the necessity for a logout/login procedure using an extra set of credentials. When the user switches to another role, the user interface will be modified to display the related menus, data, content, etc.

2.6.   User profiles

The system will support all the procedures related to the creation and management of an extensive profile for all its users (mentors, mentees, etc.). The user profiles will offer customization and enrichment capabilities depending on the specific needs of the project. A user's profile will be able to include multiple properties of various field types (text, numerals, single choice selection from list, multiple choices selection from list, validators, etc.)

The "full documentation" of each user will allow the system to offer combined search capabilities via filters. These features will enhance and accelerate searching for a single user or for a group of users with specific characteristics.

2.7. Mentors' Registry management

All registered mentors will be stored within a related registry within the system. The system will provide support for additional mentors at any time during the project. The mentors' registry will include all the descriptive fields (and their respective data) that are included in a mentor's profile.

2.8. Mentees' Registry management

All registered mentees will be stored within a related registry within the system. The system will provide support for additional mentees at any time during the project. The mentees' registry will include all the descriptive fields (and their respective data) that are included in a mentee's profile.

3. Applications Management

The system will offer a multitude of features regarding applications management and candidates' selection for participation in a project.

All procedures and processes regarding the applications will be fully embedded within the system (thereby eliminating the necessity for an external application management software). The system will be able to support all the related workflows (ranging from the submission of an application to a user's accession in the proper registry).

Applications management procedures will be executed in an automated fashion. However, the system will provide functionalities that will allow error correction and resetting certain values. These functionalities will only be available to users with administrative roles.

The system will comprise several application management features, some of which are listed in the following paragraphs.

3.1. Development and publishing of application forms (for mentees and mentors).

This feature regards the ability to create / develop online application forms. Each form will be able to incorporate various fields as per the needs of the project. Several forms can be developed (e.g. an application form for mentees and a different application form for prospective mentors).

The forms will then be made available in the system's UI and published. The forms will be accessible either via the system or they can be embedded in another website.

Once a form becomes available, all interested parties will be able to fill and submit it. Several workflows will be triggered upon submission of a form. An example of a workflow is the process that the candidate must complete in order to verify ownership of the email address he or she has selected.

3.2. Ability to include selection criteria based on variables and scoring.

This feature regards the ability to define evaluation criteria that will be associated with each application. The criteria can be either specific numerals, coefficients, or other numerical variables and they will be associated with specific values of a field in the application form. For example, in a field called "Work

Experience" the value "Less than 2 years" might add 5 points, the value "Between 2 and 5 years" might add 10 points, and the value "More than 5 years" might add 20 points.

The system UI will display scoring per field and total scoring for each submitted application, thereby facilitating the selection process.

3.3. Ability to incorporate application management workflows and processes.

This feature regards the ability to create and support the selection processes that will follow the applications' procedures. Different (discreet) processes can be implemented for the selection of mentees and mentors. Examples of such processes are: combined searching for submitted applications, automated forwarding of applications, application status updating, application approvals, etc.

3.4. Applications related Documents

This feature regards the ability to submit documents as part of the application procedure. Candidates will be able to upload documents in specified sections of the application form. Administrative users will be able to overview these documents, verify that they have been properly received, and proceed with the pre-specified workflow accordingly. These procedures will be executable within the system (no external software will be required).

Administrative users will have a clear overview of all the status of documents that are associated with each application.

Applicants will be able to receive automated notifications that will inform them regarding the status of their application. As a result, the administrative overhead is greatly reduced.

3.5. Integration with User Registries

The Application management module will be fully integrated with the user registries modules. Upon approval of an application, the applicant will become a user, the user will be joined with a specified role (e.g. mentees and mentors), and the user will be inserted in the Mentors or Mentees Registry respectively. The applicant will also receive an automated notification that his login is enabled. No administrative involvement will be necessary for these processes.

4. Content Management

The system will offer content management and content publishing procedures. Informative material will be easily made available and viewable by selected users.

4.1. Creation and uploading of rich content (HTML 5)

The system will pose no limitations on the type of content that can be published. Virtually any HTML content, including multimedia resources can be inserted and published.

4.2. Files uploading

The system will offer file uploading capabilities as part of the content management module.

4.3.   Support for announcements, news, etc.

The system will basically incorporate an internal content management system. Therefore, administrative users will be able to create and publish announcements, news, updates, etc. that will be displayed to the participants.

5. Mentor – Mentee Matching

This feature regards the ability to associate mentors and mentees.

5.1.   User Matching based on selective criteria (e.g. Mentor Fields of Specialty)

Users with administrative roles will be able to search within the Mentors' Registry using combined criteria and pinpoint a desired mentor. This mentor will then be associated with one or more mentees. The selection of these mentees can also come as a result of a search within the Mentees' Registry.

System Administrators will be able to easily display the associated mentees for each mentor, disassociate mentees to associate them with another mentor, view the stored "history" of each mentor/mentee association, et al.

5.2.   Ability to match a mentee with multiple mentors in order to cover a mentee's variable needs for mentoring.

System administrators will also be able to associate multiple mentors to a mentee. For example, a mentee will be able to receive mentoring from Mentor A who is an expert on a specific subject; additionally, the mentee will be able to receive mentoring from Mentor B who is an expert on another subject.

This feature assists the project managers in always assigning the most suitable mentor (the one that most closely matches the mentee's specific needs).

5.3.   Mentors have both a detailed and an aggregated view of the progress made by their associated mentees.

Mentees will be able to display the information of every mentor they are associated with.

Respectively, mentors will be able to display their associated mentees, their information, and all data that is generated from the mentees' participation and involvement in mentoring activities.

6. Training/Mentoring Management

6.1.   Ability to define "projects" with specific goals, milestones and workflows.

One of the basic concepts of the system will be the ability to provide functionalities that will assist in the creation and management of various types of mentoring / coaching activities. This will be achieved by utilizing an open architecture when designing and implementing an array of mentoring actions.

The system will adopt the basic principles of project management. Project managers will be able to construct a mentoring project using a hierarchical structure. They will be able to input the specific goals and properties of the project, to define targets, to set workflows for the offered mentoring activities, and to define milestones / checkpoints.

6.2.   Ability to overview the structure of all training/mentoring activities.

The system interface will be designed in order to provide project managers with a thorough overview of the project's progress. The UI will also allow for "drilling down" views, thereby enabling project managers to display detailed information about each mentoring activity or a participant's progress.

The system will provide a unified, intuitive UI so that the mentees will be able to view the mentoring/coaching project in which they participate, their upcoming activities and the activities they have already completed.

Within this UI, the mentors will be able to view more details and data regarding each specific mentoring activity.

Similarly, mentors will have a UI to overview the progress towards completion of the project for each one of their assigned mentees. Mentors will also have access to display or download any document or report that is produced from each mentoring activity.

The results of each mentoring activity – when applicable - will be exportable and downloadable as a properly formatted document or report.

6.3.   Ability to define various types of training/mentoring actions

The system will support the creation and management of multiple types of mentoring actions / activities. Mentoring activities will become part of a project's hierarchy as mentioned above and will be assignable to groups or specific mentees.

Each mentoring action type will possess specific characteristics and will support discreet workflows. For example, mentoring actions that include a time dimension will support time-scheduling workflows.

6.3.1.   Meetings

The system will support the creation and management of meetings (both F2F and Online) between mentors and mentees. An analysis of related functionalities is provided in the following sections of this document.

6.3.2.   Psychometric tools

The use of psychometric tools within a mentoring / coaching project is a widespread and scientifically recognized methodology.

The system will be able to support the delivery and administration of such tools. These tools will be delivered to specifiable groups of mentees as online questionnaires.

System support for Psychometric tools will include the ability to contain multiple variables and differentiated algorithms that are used to calculate points (scores) based on combinations of given answers.

When a psychometric tool is completed and submitted, the system will produce a personalized report for each mentee. This report will contain a predefined rendering of results based on how each answer is interpreted. The report will be made available as a preformatted, downloadable document.

Psychometric tools will be considered as mentoring activities and as such will be parts of the project's structure.

Mentees will be able to display the psychometric tools that have been assigned to them and complete them within the system UI (no external software will be needed). Mentees will also be able to display the answers they have provided to each psychometric tool.

6.3.3. Online questionnaires

The system will support the creation and management of online questionnaires and forms that can be utilized for numerous purposes such as gathering feedback, evaluation procedures, and more. An analysis of related functionalities is provided in the following sections of this document.

6.3.4. Reading material

The system will support procedures for publishing and management of educational / informative material. Specifically, these needs will be addressed via the sharing capabilities of the messaging module and the functionalities of the E-Library module.

7. Collaboration

This module regards the ability of the system to support one of the most widely used methodologies in mentoring / coaching, which is the collaboration between mentors and mentees in order to collect data that is used to mutually produce material that will be useful to the mentee. Examples of this procedure is the composition of a proper Curriculum Vitae (CV document) or the authoring of a business plan.

7.1. Collaborative production of documents or material

The system will allow mentors and mentees to collaborate in completing forms or preformatted documents. Both mentors and mentees will be able to input their content. Their work will be automatically saved in the system UI. These procedures will be perceived by mentors and mentees as parts of a mentoring activity. The whole process will be fully integrated within the system UI (no external software will be needed).

7.2. Support for approval and finalization workflows

Alternatively, and depending on the specifications of the mentoring activity, the mentee will be able to input his content in forms or documents. At any time during this process the mentee can ask his/her mentor for guidance. When the work is considered complete, the mentor will be able to review the document and finalize it in the system (mark it as complete).

7.3. Versioning capabilities

The system will provide versioning functionalities, allowing interested parties to revert to previous saved versions and ensuring that no work will be lost.

7.4. Ability to export produced documents.

The completed, finalized forms and/or documents will be exportable and downloadable in the format of PDF files.

8. Meetings Management

This feature will allow the organization and management of meetings between mentors and mentees. Meetings will be considered as one of the types of mentoring actions and will be integrated within the structure of mentoring activities of a project.

8.1. Time scheduling

The system will offer a UI so that each mentor can schedule his/her meetings. The project coordinators will have a clear view of the meetings that are pending to be scheduled, the meetings that have been scheduled, the meetings that have already taken place, etc.

8.2. Conflicts management

The system will be able to include rules (e.g. a mentor cannot conduct meetings with more than one mentee at the same time, a mentee cannot participate in more than 1 meetings at a given time, etc.).

The system will locate conflicts and help the users resolve them as necessary.

8.3. Calendar views

The system will provide a calendar-based UI to facilitate the organization, display, and management of multiple meetings.

8.4. Automated notifications (they can be sent to each involved party)

The system will be able to send automated notifications to both mentors and mentees when a meeting has been scheduled (or rescheduled).

8.5. Meeting status workflows

The system will support workflows for defining the meeting status (scheduled, completed, cancelled, etc.). The meeting status will include an intuitive visual indication in order to provide an easier overview to all involved users.

8.6. Online forms for meeting notes, results / outcome, suggested actions, etc.

The meetings UI will also include functionalities that will allow the mentor and/or the mentee to fill forms, online documents or upload files. This feature can cover the needs for inputting meeting summaries, notes, next action steps, etc.

The content of the completed forms will be exportable and downloadable in the format of PDF files.

9. E-Meetings Management

The system will enhance its open architecture regarding types of mentoring activities by providing support for online meetings.

Online meetings eliminate the need for physical presence, thereby saving time, resources, and effort. Additionally, they will allow the engagement of mentors that are geographically dispersed and therefore could not be utilized.

9.1.   Virtual meeting environment with live audio/video

The virtual meeting (e-meeting) environment will offer 2-way, live audio and video conferencing. Mentors and mentees will be able to use an intuitive, user-friendly UI.

Participating in an e-meeting will only require basic audio/video hardware (microphone, headset, webcam).

9.2.   Fully integrated E-Meeting UX/UI

The virtual meeting (e-meeting) environment will be fully integrated in the system. Some of the advantages of this approach will be:

- There is no necessity for an additional user database
- Users do not have to access an external system (no need to login again)
- There is no need for an external software (the e-meeting utilizes the participants' browser)

9.3.   Time scheduling

The system will offer a UI so that each mentor can schedule his/her meetings. The project coordinators will have a clear view of the meetings that are pending to be scheduled, the meetings that have been scheduled, the meetings that have already taken place, etc.

9.4.   Conflicts management

The system will be able to include rules (e.g. a mentor cannot conduct meetings with more than one mentee at the same time, a mentee cannot participate in more than 1 meetings at a given time, etc.).

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The system will provide a calendar-based UI to facilitate the organization, display, and management of multiple meetings.

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The system will be able to send automated notifications to both mentors and mentees when a meeting has been scheduled (or rescheduled).

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The system will support workflows for defining the meeting status (scheduled, completed, cancelled, etc.). The meeting status will include an intuitive visual indication in order to provide an easier overview to all involved users.

9.8.   Online forms for meeting notes, results / outcome, suggested actions, etc.

The meetings UI will also include functionalities that will allow the mentor and/or the mentee to fill forms, online documents or upload files. This feature can cover the needs for inputting meeting summaries, notes, next action steps, etc.

The content of the completed forms will be exportable and downloadable in the format of PDF files.

10.   Messaging

This module will ensure that mentors and mentees will have easy access to a communication "channel".

The messaging module will be fully embedded within the system UI thereby providing a seamless user experience. (Users will not have to rely on external messaging / chatting applications).

10.1.   Direct communication between a mentor and his/her mentee(s).

All mentors will be able to see their mentees, select a mentee and send them a message. Mentees will also have the ability to send messages to their mentor(s). The system will store all conversations and will be able to display new (unread) and older messages.

10.2.   Ability to operate as a chat/messaging application.

The interface of this module will simulate a chat / messaging application. When a mentee and a mentor are both logged in, their user experience will be that of a standard instant messaging application, much like the popular messaging applications that are available on mobile platforms.

10.3.   File sharing functionality within the messaging application.

Mentors and mentees will be able to attach files to their messages and share them. All files that are shared via messages will be stored in the system.

Mentors and mentees will be able to easily view the shared files in a separate area of the UI (without having to go through their message history).

11.   Questionnaires / Surveys Engine

11.1.   Integrated Online evaluations.

This feature regards the ability to design, deliver and report on integrated online questionnaires. These questionnaires can serve as evaluations, surveys, assessments, needs analysis tools, feedback gathering tools, etc.

The questionnaires will be able to incorporate multiple variables or coefficients. Each question or statement in a questionnaire will be associated with a specific variable, and each answer will provide a predefined value against this variable.

A project manager will be able to associate each questionnaire with the desired system users, include a questionnaire as an activity within the hierarchical structure of a mentoring project, or embed a questionnaire as part of an activity.

11.2.   Receive feedback on the provided training/mentoring activities

Questionnaires in the form of evaluations can provide valuable feedback on the effect of training/mentoring activities, how these activities are perceived by the mentees, etc. All gathered data will be made available to users with the role of project manager in order to assist them in taking corrective actions, etc.

11.3. Gather data on the quality / efficiency of each mentor

Questionnaires will be designed in such a way as to allow association with system users. This feature will provide the ability to evaluate specific users (such as each mentee or each mentor).

As an example: 200 mentees submit an evaluation on their mentors. In this case, the gathered data:

- Will be accumulated in each mentor's profile
- Will be available as an aggregated report for each parameter of the evaluation (e.g. mentor's expertise rating)
- Can be used as a criterion for mentor selection
- Can be extracted as a .csv or Excel file for further processing.

12. Automated Notifications

Notifications can greatly assist in the implementation of a mentoring / coaching project. Automated notifications can also reduce the related administrative overhead and ensure that all interested parties are notified in a standardized way and in a timely fashion.

12.1. Workflow based notifications

This type of notifications will be triggered based on predefined stages of specific workflows (e.g. triggered on change of application status). These notifications will automatically be sent to the related recipients. No administrative involvement will be required.

12.2. Time based notifications

This type of notifications will be triggered based on the time dimension of specific mentoring activities. The system will not require the use of an external email application for these notifications.

As an example: a notification will be sent in order to provide meeting or other event reminders. This notification can be set to be triggered 4 hours before the meeting. The notification will be received by both the mentor and the mentee, and the notification body will include dynamic fields as the participants' names, the date and time, etc. If a meeting is rescheduled, the participants will receive a new notification informing them regarding the update.

12.3. Ad hoc notifications

This feature regards the ability for batch notifications that are sent to selected groups of users based on specific criteria.

An example: a project manager searches and views the mentees that have not yet completed a specific questionnaire. He then proceeds to send them a notification to suggest that they should complete it soon.

13. E-Library

The purpose of this module is to provide a digital repository for high quality material that can be used to provide information, further insight, provoke discussions, etc. on any subject deemed necessary.

This material can either collected from virtually any source, and it can be organized, dissipated, shared and reused using the E-Library.

Access to the E-Library and its subsequent sections will be system controlled.

The E-Library module will be fully integrated in the system and offer specific functionalities.

13.1. Categorization and documentation of e-library "items"

This feature regards the ability to create hierarchical thematic categories (with unlimited levels). Each library item will be associated with one or more specific categories.

Each library item will be properly documented using an array of descriptive fields and related metadata. The metadata will vary according to the item type and format.

Users will be able to conduct filter-based searches and locate the desired material.

13.2. Digital asset types

Some of the item types that will be supported for inclusion in the E-Library are listed below:

- Document files
- Images
- Videos
- Links (URLs)

13.3. Approval workflows to control each item that is included in the library.

This feature regards the provision of workflows for evaluating each item prior to its inclusion in the library and approval workflows.

An example: a mentor submits a resource to the library and provides an initial documentation for it → A Library administrator views the resource and decides to approve it → The administrator provides additional metadata and associates the item with a specific section → The item is now searchable and available in the library.

13.4. Ability to share items with mentees and/or mentors.

As mentioned above, the E-Library will be thoroughly integrated within the system and therefore should not be considered as a "mere" file storage area.

Based on the above concept, mentors will be able to point out specific items and share them with one or more of their associated mentees. As a result, they will be able to further evolve a mentoring action by enhancing it with additional activities. Furthermore, these sharing functionalities provide the ability to offer truly personalized mentoring activities.

14. Reports Engine

The system will incorporate a reporting engine. This engine will provide the necessary functionalities for the creation, administration and viewability control of all needed reports.

Access to each report will be controlled by the system role of each user. All reports will be dynamically created at the moment when the request is placed. This includes reports that will be formatted as documents.

14.1. Aggregated and incremental reporting.

The reports will provide valuable insight to the progress of the project by extracting analytical or aggregated data, as this data is stored during the implementation of the project.

The data will be gathered from user registries, results from psychometric tools, questionnaires, evaluations, assessments, mentoring activities, etc.

14.2. Fast creation of custom reports.

The system will offer administrators the ability to produce ad hoc reports by inserting their custom queries. This feature will also be used to modify the contents of an existing reports by modifying its respective query.

14.3. Ability to display reports as web views or downloadable files.

Reporting will be accessed in two ways: either as data displayed on a page in the system (web view) or as data that is gathered in a document that can be extracted / downloaded from the system.

The report file can be in the form of a PDF document, which can be formatted as needed (including logos, headers, footers, etc.)

An example: a mentor - using the system UI – will be able to navigate to the profile of one of his/her associated mentees. The mentor will be able to view the psychometric tools that the mentee must complete, and the data that has been gathered already. The mentor will also be able to view an analysis of this data in the form of a well formatted PDF file that can be downloaded.

Another type of a report file is in the form of an Excel document. This format will obviously offer abilities for further formatting, statistical analysis, insertion of graphs, etc. Excel based reports can also be inserted to external tools (e.g. SPSS) for further statistical analysis.