



# Plan for the exploitation of the action results

**Deliverable 5.1**

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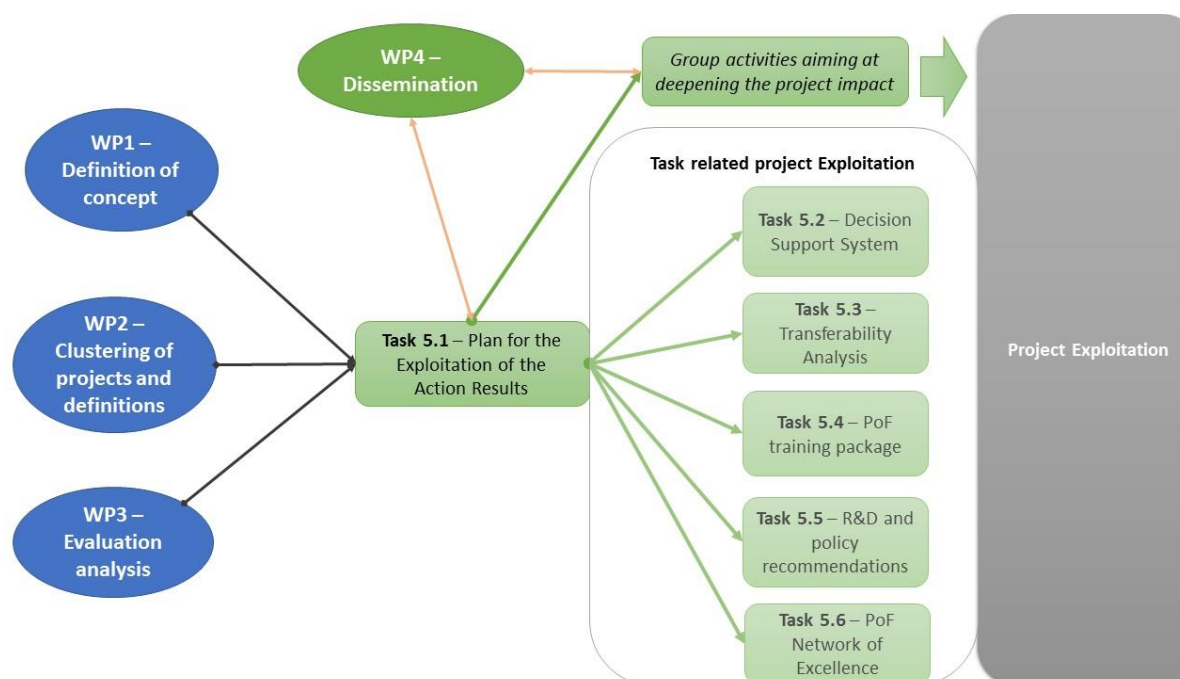
## 1. Work organisation and exploitation approach

The final goal of the WP5 is to ensure the transfer of project results beyond its life, with a series of activities developed to ensure the maximum impact in terms of both public dissemination and exploitation of results. In order to increase the effectiveness of the WP5 outcomes, the strategy will be regularly updated throughout the Project duration, with all main core activities that will begin in the second year of the project (i.e. at the end of the main desk research activities).

The current report is intended to describe the Exploitation tasks of the project, planning main actions, as well as defining key milestones of the project that will ensure a long-lasting benefit for main port stakeholders, listing the measures for exploitation of results during and beyond the lifetime of the project. The exploitation strategy is linked to the progress of the project, using main outcomes of previous WPs in order to target activities that can maximise their impacts.

Figure 1 shows the general strategy behind the WP5, linking different steps of the overall project. Main research outcomes are coming from the first three WPs, and all the most relevant results will be central for every further exploitation activity. Thus, each of the relevant tasks of the WPs aims at building upon previous activities, making the knowledge available for a wider audience. Moreover, WP5 is linked with WP4 (i.e. Dissemination) given the potential common activities that have a double impact (i.e. both exploitation and dissemination). While some of the deliverables within WP5 will then be the focus for dissemination activities (i.e. publications), specific public events will have a joint strategy in order to achieve both WPs' goals (e.g. fairs). Moreover, most of the group activities organised by the consortium will serve this double purpose.

Figure 1 – Exploitation strategy



Thus, the present report aims at describing the exploitation strategy of the DocksTheFuture project. The exploitation plan will then be updated at month 30 (approaching the end of the project) in order to guarantee the feasibility of all planned actions, as well as the lasting impact of the achieved outcomes. In order to achieve its aim, the plan will be structured in two different parts:

- I. The first part of this report focuses on the general exploitation plan, discussing group actions targeted for increasing the visibility of the project outcomes;
- II. The second part of the document focuses on the specific tasks included in WP5, highlighting their expected outcome and how this will result in an effective exploitation activity.

WP 5, overall, is organised in the following six tasks:

- Task 5.1 – Plan for the exploitation of the action results
- Task 5.2 – Decision Support System
- Task 5.3 – Transferability Analysis
- Task 5.4 – Port of the future training package
- Task 5.5 – R&D and Policy recommendations
- Task 5.6 - Port of the future network of excellence

Task 5.1 is the one related to exploitation planning and it will deliver two distinct exploitation plans: the current “provisional” one (month 15) and the final document (i.e. D5.8, month 30). All other tasks will provide specific exploitation related deliverables (shown in Table 1) that will generate the long-lasting heritage of the DocksTheFuture project.

Table 1 – Deliverable plan

#	TITLE	TASK	DUE DATE (IN MONTHS)
<b>D5.1</b>	Plan for the Exploitation of the action Results (PER) - updated version	5.1	16
<b>D5.2</b>	Port of the Future DSS Tool	5.2	28
<b>D5.3</b>	Transferability analysis	5.3	28
<b>D5.4</b>	Port of the Future training package	5.4	30
<b>D5.5</b>	R&D and Policy recommendations	5.5	29
<b>D5.6</b>	Port of the Future Network of Excellence	5.6	30
<b>D5.7</b>	Port of the Future Road Map 2030	5.5	30
<b>D5.8</b>	Final report on Exploitation activities	5.1	30

Thus, the current document will briefly describe the preliminary actions that the consortium is undertaking in order to assure the widest impact of the project outcomes. Each of the subsequent tasks (and the overall consortium effort) is therefore representing the project exploitation. Given the possibility for some of the tasks’ outcome to change in respect to WPs’ results, the detailed actions will be included in the final WP deliverable (D5.8) while all the activities described below might be subject to modifications aiming at maximising the outcome of the exploitation. Similarly, the WP5 includes two specific project milestones, i.e. MS8 (Workshop with the EC DGs for DocksTheFuture Results Exploitation and follow up) and MS9 (Port of the future chart signed). Both outputs will be better defined in D5.8 given their interrelation with ongoing project activities.

## 2. The group exploitation activity

DocksTheFuture project's exploitation plan is based on a series of individual (i.e. task related) and group (i.e. consortium partners' actions outside the formal WP tasks) activities. Within the group activities, joint outcomes of the project will be used to increase the awareness of main port challenges (and related studied solutions) to a variety of different stakeholders.

Therefore, within these joint actions, partners will exploit and disseminate a variety of project outputs, discussing them with a wider audience. Among the targeted activities, the following ones will be prioritised:

- **Planned use of the project outcome**, i.e. the different WPs' outcomes will be used in order to increase the awareness of the initiatives underdevelopment that could solve main port challenges. Moreover, in alignment with the consortium definition of Port of the Future, as well as with the main Sustainable Goals, the consortium will try to increase the awareness of the needed strategic activities aiming at turning European ports into Ports of the Future. For instance, as part as the WP1 outcomes, the assessment done among different projects and initiatives will be available to the public, aiming at maximising the possibility for relevant stakeholders to match their strategic activities with what has already been achieved within the European port arena;
- Dissemination among port sector organisations - such as AVIP, ESPO, FEPORT – and other stakeholders, such as Universities, city councils, etc;
- **Outreach activities**, i.e. participation in relevant events and possibility to promote project outcomes among a wider audience. Among main targeted events, Magellan is already targeting the following ones:
  - Transport Research Arena 2022 (tbc – Lisbon);
  - TEN-T Days 2021;
  - European Technology Platforms (in particular, ALICE and Waterborne – TP);
- Moreover, other links (e.g. Inland Navigation Europe; TEN-T Motorways of the Sea Coordinator; Portuguese Ports) will be used to entail the development of close relationships through which the project's results will be promoted;
- **Professional and scientific events**, i.e. exploitation will be also aligned with the participation of main project partners in either professional and industry related events (e.g. PortExpertise regularly participates as coaches in port related hackathons) or scientific events (e.g. Unige participation to the Annual Meeting of the Transportation Research Board 2020 in Washington and International Association of Maritime Economists 2020 Conference in Hong Kong), delivering the main project results to a wider audience;
- **Make a selection of data available to students** writing research papers on port related topics. To this aspect cooperation agreements will be signed with renowned universities, such as University of Genoa, University of Antwerp, and World Maritime University;
- **Data Sharing**, to research and competence centers of international organisations (such as IMO, AIVP, ESPO) active in the port sector will be granted a similar access, based on mutual exchange of content;
- **DSS exploitation and media tools**, i.e. some of the WP5 outcomes (e.g. the Decision Support System) will be advertised through the website and other project media initiatives (e.g. public events, expert meetings) in order to increase the awareness of the results and



increase the possibility for the different stakeholders to use one of the key outputs of the project. Moreover, the DSS interface will be developed in order to allow the user to test different tool configurations according to his characteristics (e.g., by varying the list of input and outputs);

- **Training activities**, i.e. as part of the main project exploitation, a training package will be developed with the aim of driving the stakeholders into the sustainable development of the Port of the Future (Task 5.4). Nevertheless, specific ad-hoc training activities – mainly targeting industry – will be also planned by main consortium partners (e.g. PortExpertise, Unige) in order to increase overall knowledge on specific initiatives, challenges and solutions. Moreover, Unige will use part of the material developed for the project in academic and university lectures, making students and practitioners aware of the changing port future; ISL intends to coach Master Theses in cooperation with universities, like the Jacobs-University in Bremen. The training activities will be aligned with the defined Strategic Objectives in the WP 1-3;
- **Publications for exploitation purposes**, i.e. main project outcomes and deliverables will be included into specific scientific (e.g. conference papers, academic journal) and industry (e.g. public reports) publications, in order to assure both a wider audience and a long-standing dissemination.

Most of the abovementioned activities will be organised within the project duration but they are planned to either ensure long term impacts (e.g. presentations, speeches) or periodic project outcome updates (e.g. lectures). Publications (e.g. conferences, papers) and other public discussion will also ensure the possibility to build further knowledge from the results of the project beyond its duration.

As part of the WP development, different end users will be targeted by different exploitation actions, in order to maximise the benefits as well as the outreach goals of the project. As part of this targeting activity, project outputs of the first three WPs will be mainly discussed with port stakeholders (e.g. Port Management bodies, port operators) and industry associations (e.g. AIVP, ESPO). These categories of actors will be also specifically targeted for the DSS exploitation as well as for the transferability assessment (whose development will be reported in D5.2 and D5.3, respectively). Field experts and other wider stakeholder groups will be the main target for many ancillary outreach activities as well as for the exploitation of published results (e.g. conference papers) and training packages (whose development will be reported in D5.4). The overall set of envisioned target groups will be then invited of being part of the future excellence network (whose realization will be described in D5.6) and they will be the main users of the remaining project exploitation activities (i.e., D5.5 and D5.7). The target groups of end-users will be also taken into consideration in the development of certain activities that will be segmented in order to maximise the information that those users might acquire from the project outcome (e.g. D5.2).

Together with the different consortium actions, all partners will be engaged in using their specific daily activities to improve the exploitation of the project. For instance, the project coordinator (i.e. Circle) due to the intrinsic nature of its business and activities, has particular advantage to carry out the following tasks:

- Get in touch with further port experts, which could become potential users for the exploitation activities (e.g. training courses);
- Initiate further collaborations with industry and academia;
- Be constantly updated on the main innovative trends in the port domain;



- Influence, in turn, the trends in the port domain as for its field and contribution;
- Increase its own visibility thanks to the project;
- Interact with the Commission; be aware of the interests of the commission with reference to the port of the future;
- Participate in applicable future programs as follow-up to DocksTheFuture.

Similarly, other partners will investigate how to exploit project outcomes in alignment with their main mission. As part of this exploitation, Unige will include part of the project (e.g. project and initiatives database, DSS, KPIs) for its own lecturing programmes, in order to improve its learning environment and assuring that perspective students will be aware of the Port of the Future challenges.

### **2.1. Joint Exploitation until April 2019**

As part of the ongoing project activities, project results have been already partially transferred to relevant experts and stakeholders through the use of public events (such as the Workshop with Experts in October 2018 [Porto, Portugal] and April 2019 [Trieste, Italy]) as well as through the participation to joint events organized by the Port of Future Network (e.g. kick-off meeting of COREALIS project) and other relevant international events (i.e. Collaborative Innovation Day 2018, among others). The joint exploitation activities have been also used to discuss with relevant port stakeholders – and future potential end users of the different project outcomes – how to further exploit specific project activities as well as how to increase external partners benefits for the long term exploitation of the project results.

### 3. Exploitation by tasks

Most of the activities carried out for the exploitation are going to start within the second half of the project duration. Because of this time schedule, most of the activities are still in a general form and only the initial planning has been currently developed. This fact is a reflection of the 14 months left to the project and on the fact that most of the planned exploitation activities rely – especially for the detailed description of their structure – on the achievements of the first three WPs. Because of this, what follows is a description of the envisioned organisation of the work although it will be subject to modifications that will be highlighted in the final exploitation plan.

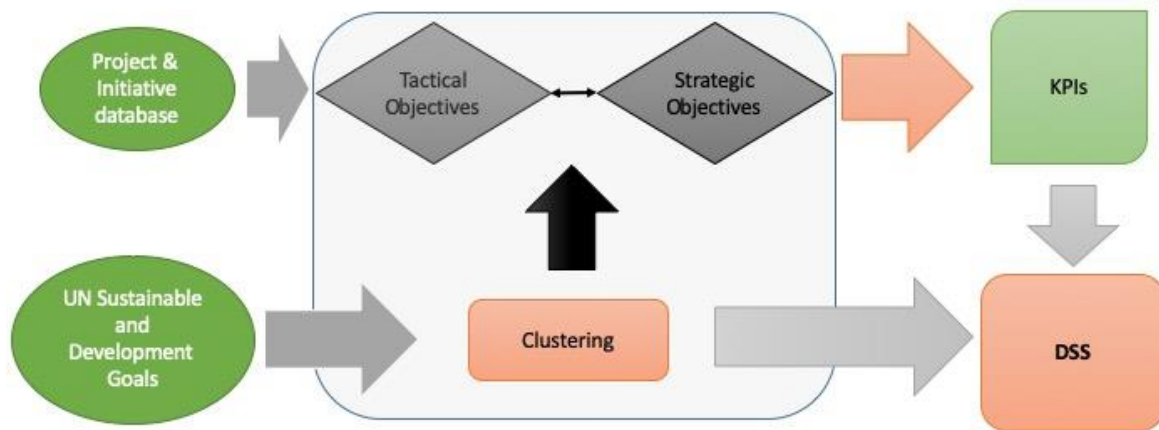
Moreover, in discussing different WP tasks, it is important to highlight that while most of the deliverables are intended to serve a wider audience, especially the DSS and the training package, some of the exploitation activities are targeting specific port stakeholders. The transferability analysis will probably serve more Port Authorities and terminal operators, while the R&D policy recommendations will serve better the public decision maker, especially at European level. This is part of the challenges related to the exploitation of the project results: while the port community is normally quite compact, within the community there is a great heterogeneity in terms of actors and conflicting interests and the exploitation activities will take this into consideration, proposing generalised solutions only when possible. Eventually, all relevant exploitation activities are due to be completed during the final months of the projects and because of this, most of the task details are still under development.

#### 3.1. The decision support system

The first exploitation activity foreseen within the WP5 is related to the development of a Decision Support System (DSS) that will allow the user to interrogate a software in order to understand potential initiatives aiming at achieving specific users' goals. Together with the alternative initiatives, specific KPIs will be released to the user, in order to inform them about potential pros and cons of certain their actions in order to advance on their PortoftheFuture roadmap.

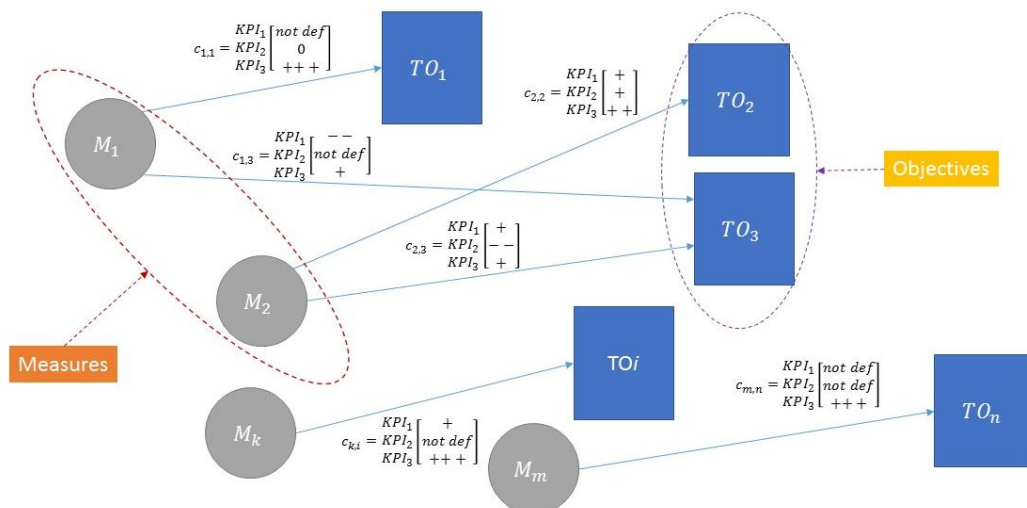
The DSS will be developed as final step of the desk research elaborated during the project. The related deliverable (i.e. Deliverable 5.2 - Port of the Future DSS Tool) will consist on an easy-to-use tool capable of driving future decisions for port stakeholders. Given its connection to the previous WPs, the DSS will be based on the selection of Projects and Initiatives elaborated throughout WP1, as well as on the further assessment of different tactical and strategic objectives achievable by different projects. Different scenarios and initiatives will be then grouped and evaluated in accordance with the clustering activity (i.e. WP2) while the KPIs developed in WP3 will be considered as the basis for the output of the DSS. The relation between the DSS and the different WPs outcomes is represented in Figure 2.

Figure 2 – DSS rationale and link with other project activities



The DSS itself will consider the definition of Measures (i.e. actions to achieve a certain goal) defined in WP1: in order to define the measures, all the projects and initiatives selected and clustered within the DocksTheFuture will be used. Each measure will be therefore linked to specific goals (i.e. tactical objectives /TO and strategic objectives /SO) and is linked to specific KPIs. The result of such activity will be a multi-dimensional decision support tool that will help the various port stakeholders in the evaluation of their (alternative) port strategies. Figure 3 represents a scheme of such DSS.

Figure 3 – DSS structure



Thus, the DSS will generate a qualitative comparison among different measures (M) in order to achieve specific objectives, i.e. tactical objectives (TO) and strategic objectives (SO): based on the Clustering in WP2 and WP3. This approach will make possible the better understanding of overlaps among different actions, potential conflicts, or the possibility to achieve multiple objectives by taking certain actions. The use of specific KPIs will therefore inform the users of potential further

benefits in taking certain options (e.g.  $KP(A+B) \gg KPI(A) + KPI(B)$ ). Therefore, the DSS will provide a “relationship matrix” aimed at highlighting potential achievable incidental objectives, given the chosen measure. This latter element will be based on the WP1 and WP3 findings. Moreover, a qualitative approach will guarantee the transferability of the DSS outcomes: each measure will be linked to TOs and SOs through the evaluation of specific KPIs using a qualitative score scale (–, –, 0, +, ++ ) – (very negative, negative, null/negligible, positive, very positive). This score model will simplify the rankings as well as the potential time and location biases in using specific monetary values.

The envisioned measures and objectives will be aligned with the outcomes of WP1 and WP2 while the KPIs that will drive the preferences within the DSS will be based on WP3 work. Despite this, some misalignments will be necessary in order to make the DSS capable of generating differentiated rankings in respect to:

- Multidimensional decision-making processes (e.g. externalities, economic and social indicators, infrastructure needs);
- Being capable of differentiate preferences in relation with stakeholders’ characteristics (e.g. policy makers, city representative, industrial companies);
- Take into consideration different geographical and political level (e.g. local, regional, national, international);
- Offer alternative solutions that might generate wider benefits (e.g. linking different measures and objectives).

Most of the external elements above will be included in the DSS, differentiating relevant KPIs as well as alternative perspective through an initial set of queries that will allow the user to generate customised rankings in respect to its priorities. This latter element is of particular importance since it will be able to introduce different “generic” end users’ profiles (e.g. terminal operators, Port Authorities, city managers) from which certain KPIs might be weighted differently depending on the specific user characteristics.

The final outcome of the Task 5.2 will be a decision support system capable of showing potential alternative measures to achieve specific objectives, releasing all essential information needed to different stakeholders for better understanding the effects of certain choices in terms of achievability of objectives as well as incidental effects.

### 3.2. Transferability analysis

A key aspect in determining and effectively implement the port of the future concepts (and related measures) is the possibility to transfer an innovative concept – originally applied in a specific situation – to alternative environments. The aim of the Task 5.3 is to identify main issues in the transferability of port related innovative concepts and to assess different ways to implement such concept in differentiated environments. Analysis will therefore be based on:

- the identification of the issues, and particularly the success factors and barriers that will affect the implementation of a new concept in a particular context;
- an assessment of the issues to show if implementation in an adopter port with a different context will be practical.

The final goal of the analysis will be to determine potential barriers to the transfer of different innovative concepts among ports as well as the identification of potential patterns that could facilitate such transfer. Thus, the analysis will show the success factors to implementation and, in particular, if it is practical to try and transfer an innovative concept implemented in one port to another where the context may be different. The assessment will be based on the "Guidelines for assessing the Transferability of an Innovative Urban Transport Concept".

### 3.3. Port of the future training package

As defined within the Grant Agreement, the training package will have the main aim to *"inform, interact with and build synergies between the interested parties, be it port workers, port cities authorities, people from the clustered projects, knowledge centres or policy makers, always with the goal of transferring know-how on the developed concept of Port of the Future, the current state of the art and the impact that such an innovative project could have on the future of European ports and port cities to each and every one of the participants"*.

The training course will end up being a publicly available tool for different port stakeholders that would like to be involved in shaping the Port of the Future, as well as in better understanding main initiatives and projects that are currently defining the future of the European port sector. In order to achieve the Task goal the envisioned training package will have the following characteristics:

- Coincide and capable of being generalised to a multitude of local frameworks;
- As practical as possible;
- Based on the strategic objectives and interconnected with the DSS tool, plan for exploitation of results, Port of the Future Roadmap and R&D and Policy Recommendations;
- Include fact sheets;
- As attractive as possible in order to boost its attractiveness for Ports to implement it;
- Guided by an intellectual sponsor that will be selected from identified renowned experts, that are willing to take the sponsorships for a period. Their task is to overview the content and quality, and promote the use of the packages;
- Offer introduction training packages to specific port training organisations both public and private;
- An indicative test.

The training packages currently under development are mainly web based (e.g. webinar; podcast) but specific classroom training activities (also in relation with the general group work) are under exploration. The objective of this task is to develop the contents for these trainings to then be taken up by Ports. The target audience for the envisioned training activities are mainly constituted by relevant public stakeholders, such as Port Authorities, Maritime Training Centres, and Universities. Moreover, once the planning is finished, INEA and the CEF-T Programme may be used to promote them among industrial partners.

As part of both the exploitation and dissemination strategies, the training packages will be available on the DocksTheFuture website and on the OnTheMosway in order to ensure their availability after the project conclusion. In order to maximise the potential audience, the interconnection with Port of The Future Excellence Network will be investigated and promoted, pushing for its implementation.

### **3.4. R&D Policy recommendations**

As defined within the Grant Agreement, the R&D policy recommendation document will be focused on constituting a foresight report capable of informing the EC DGs Departments (together with TEN-T Sea Ports as discussed) in better understanding policy and research needs to lead European ports into the future. In order to achieve its high-quality goal, the report will provide discussion based on:

- identification and clarification of the policy issue;
- research of relevant background and context;
- identification of the alternatives;
- discussion for potential consultations;
- identification of the good policy option;
- policy recommendation document for deployment;
- Where possible the gap in legislation.

As part of the Task organisation Magellan will conduct a series of interviews with different EC DGs, TEN-T Ports and other relevant stakeholders to get their input on this matter. Some of the needed inputs will be also gathered using an online survey.

The validation of the document will be also ensured through the discussion with relevant stakeholders which have been implementing projects in this domain as well with RIA projects (Ports of the Future projects: COREALIS, PortForward, and Pixel) and gather their inputs. If possible, conversation with the stakeholders will be recorded and uploaded on relevant social media (i.e. podcasts format), such as on DocksTheFuture Social Media. For the development of the report, the Inland Waterway Strategic Agenda's format could be used as an example for the format of the D5.5 deliverable and it will include practical recommendations and operational tools.

As part of the task, a RoadMap to guide Stakeholders towards 2030 objectives related to the Port of the Future will be also produced (D5.7). This deliverable is the main project outcome and it will serve as the basis for the establishment of the Port of The Future Excellence Network: in other words, it will serve as the guidelines and action list to be implemented by these members of the Port of the Future network of Excellence. The final deliverable will therefore identify main elements that will be essential for the future of the ports in order to be sustainable, and competitive, assuring long term benefits for their users.

### **3.5. Port of the Future network of Excellence**

During the final conference on Port of the Future, at least 50 TEN-T Core and Comprehensive Ports will set up a voluntarily network of excellence, a platform aimed at following up the results of the project in order to have a proper unique interface to carry on towards the port of the future targets. The aim of the network will therefore be the possibility to ensure a long-lasting discussion platform focused on the development of the Port of the Future concept as identified within the project.

As part of this activity, the methodology for assuring the formation of the network will be linked to the organisation of the conference as well as to the outcome of the Task 5.5.

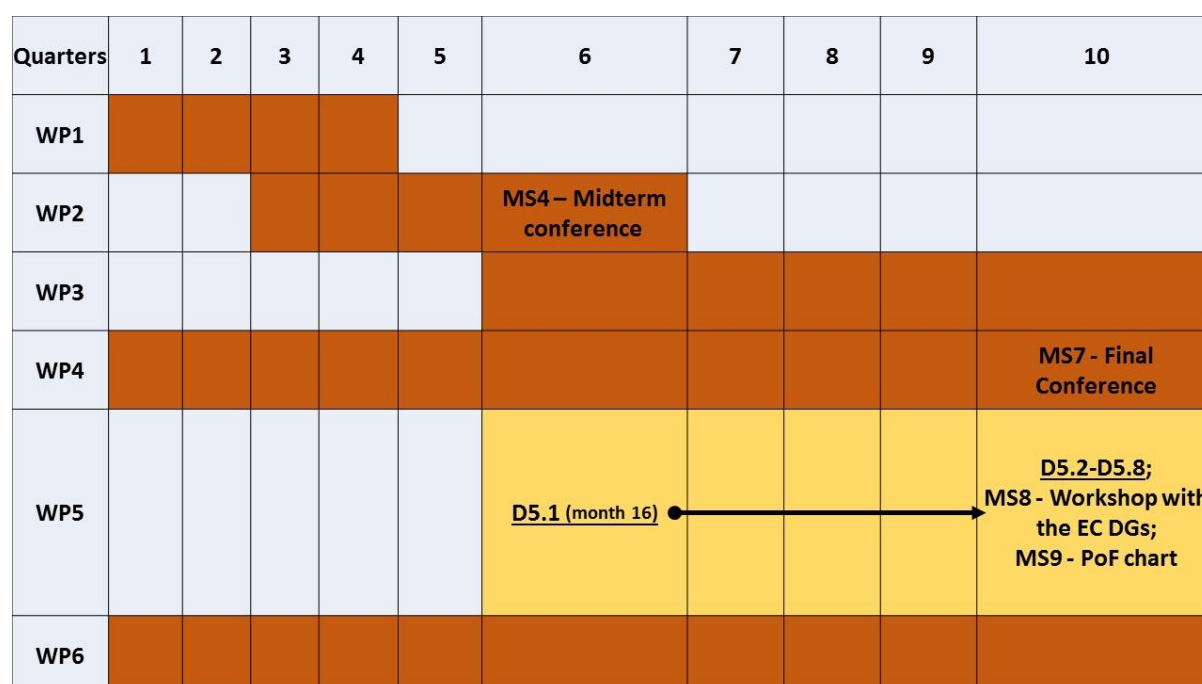


## Conclusive remarks and further activity planning

The current document has briefly introduced the ongoing exploitation actions, as well as the preliminary planning of the future project steps. As mentioned above, most of the activities are currently still under development and they are currently not active. Despite this, the Task leaders are developing their exploitation activities in accordance with the agreed GANTT, and in alignment with the ongoing WPs.

The general activity plan is shown in the figure below (Figure 4), in which main exploitation related deliverables and milestones are highlighted.

Figure 4 – GANTT for exploitation activities



As part of the ongoing exploitation strategy, project partners have attended (and organized) different public events (e.g. project conference, as the ones described in the milestone 4 and 7 of the project plan) and will therefore going on in disseminating and discussing project outputs to a wider audience. These activities assisted the better identifications of specific end users for each of the ongoing project outputs as well as for better identifying different users' needs for specific project results (e.g. differentiation among terminal operators, city managers, port authorities for the DSS interface).

Similarly, during the second year of the project, the exploitation plan will start to be updated, in order to take into consideration tasks modifications and detailed activity planning. All relevant details, as well as a major discussion on activities lasting beyond the project duration, will be included in the final plan for project exploitation (D5.8).