Second Pilot Review Sessions on PAs advancement

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D.5.3.1

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1. Introduction

1.1.Deliverable description

The deliverable 5.3.1 “Second Pilot Review Sessions on pilot actions advancement” aims to describe the advancement status of each Pilot Action (PA) under development. In the introductive section of this deliverable, some generalities are resumed from the consolidated documentation in order to introduce the classification of the PAs, according to which following sections are structured. Then, an overall analysis is carried out to illustrate some considerations about the PAs at general level. In the final sections, results are presented in a disaggregated form, as the reported contents are directly extracted from the document shared by each Project partner (PP) or from the partners’ interventions in occasion of the “Pilot actions session monitoring” which took place on March 8th, 2022. In particular, the following aspects are reported for each PA:

- PA description and aim
- Activities carried out so far
- Intermediate results
- Next activities
- Problems encountered

1.2.Clustering of Pilot Actions

As described in the deliverable 5.1.1 “Pilot action development methodology”, the 25 PAs are classified as follows (Figure 1-1) according to their macro-theme, and, eventually, to their sub-topic:

- ICT application and service development (ICT)
    - Promotion of ports’ resources and territory
    - Monitoring of seaside and landside port areas
    - ICT services for local mobility transport
    - Management of port operations and services
    - Harbour and navigation safety
- Spatial planning and management (P&M)
- Business oriented aspects
- Training and knowledge aspects (T&K)

- Environment and energy aspects (E&E).

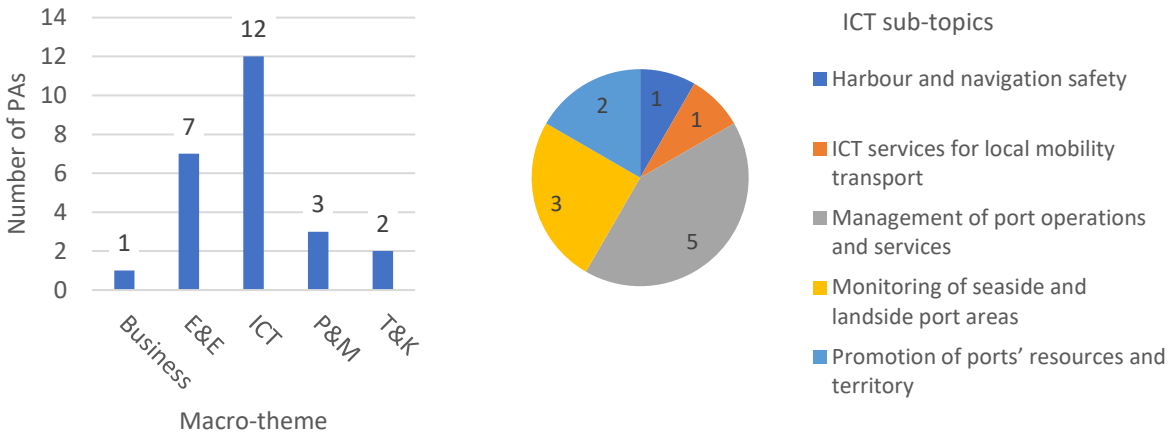

Figure 1.2-1 Macro-themes of the Pilot Actions and ICT sub-topics

2. Overall analysis and considerations

This section contains some considerations which are the result of the documentation provided by project partners and of their participation to project meetings. In particular, the sources of information are:

- Pilot action reports – 2nd stage
- Monitoring tool online
- Pilot actions session monitoring

2.1.Status of advancement

Project partners (PPs) were asked to deliver the "Pilot action report – 2nd stage", namely a document containing the advancement status of each pilot action (PA), and to update the monitoring tool, which is a spreadsheet where main milestones of are summarized for each PA. Milestones can be labelled as "Completed", "In progress", "To do", or "Not needed". Aggregated statistics are shown in Figure 2 1 as they stand in April 2022. Neglecting two PAs that are having some delays with the beginning of the activities, the deliverable production (preparatory report, 1st advancement report, and 2nd advancement report) is going on properly in almost all the cases. The selection of external expertise and the involvement of the stakeholders are completed for about half of the PAs, whereas they are in progress for the rest of the PAs. The procurement process for equipment or expertise and the use of the equipment itself are often even not needed. When necessary, the former phase is in progress, while the latter has often to begin yet.

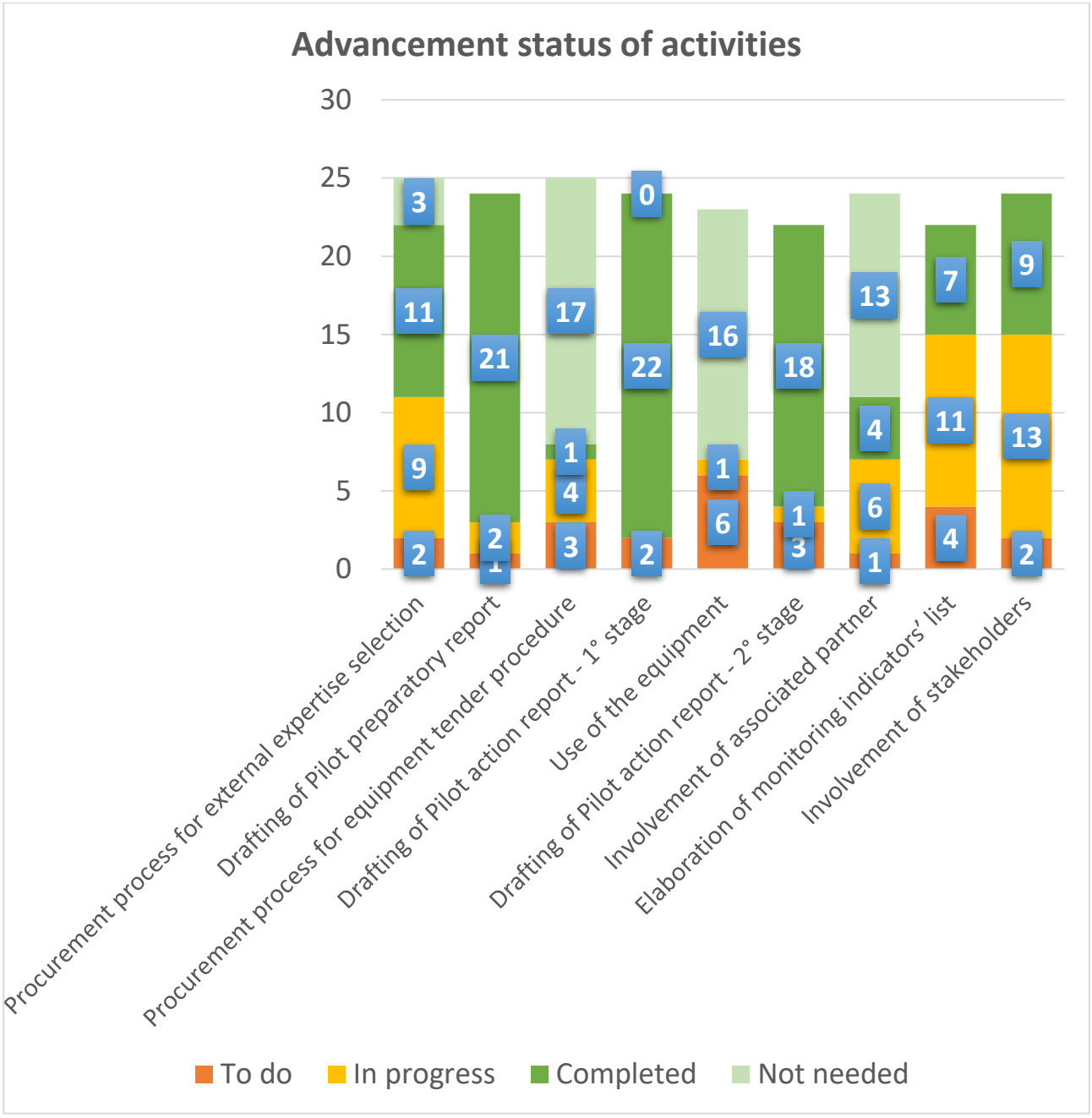

Figure 2.1-1 Aggregated statistic indicating the status of advancement for several milestones

2.2.Connections with the territory

In occasion of the "Pilot actions session monitoring" which took place on March 8th, 2022, partners were asked to answer to the following questions:

- What are the benefits that your initiative is bringing in the territory in which it is implemented? What are the added values expected for the territory, once it will be carried out?
- How may your initiative contribute to the overall strategy of FRAMESPORT project aimed the overall strategy to support the development of small ports?
- Please, illustrate the ongoing results if any that have been recently achieved.

While the second and the third answers provide similar information to those already inserted in the deliverables submitted by the partners, the first one provided interesting unpublished insights about connections that each PA has with the territory where it is carried out.

Obviously, each PA aims to develop small ports by definition, but this objective can be reached from different point of views. Most common reported benefits deal with tourism and port operations, but each macro-theme has its own peculiarities:

- ICT PAs aim to enhance the synergies between ports in the same area and can improve efficiency and safety of the port operations;
- E&E PAs aim to increase the sustainability of the ports and, with benefits both on tourism and on local population;
- P&M PAs are more focused on local population and stakeholders, since the action is expected to improve the quality of the area in terms of permanent interventions;
- T&K PAs target local population as well, and in particular the culture of young generations;
- Business-related is quite transversal and has common aspects with each kind of PA (those dealing with environment in particular).

2.3.General comments

There are some similarities between PAs even when they deal with different macro-themes. In almost each PA calls for tender are necessary in order to get the equipment or the expertise needed, but there could be difference in terms of advancement status: tenders may have been already concluded, can be yet to be launched, or could represent the reason of the delay for the PA advancement. The analysis of the study area is often necessary for the proper evolution of the PA and this step was already concluded in most of the cases since it is a preliminary one. Intermediate results are different according to the kind of analysis carried out. In general, PAs seems to be preparing for approaching to the most operational phase, in which the use of the equipment, the realization of a platform/app, or the organization of targeted events will make the conceptual

solutions discussed so far concrete. The Table 2.3-1 contains comments about the PAs grouped by macro-theme, so that common aspects are highlighted.

Table 2.3-1 Comments grouped by PA macro-theme

Topic	Comments
ICT	Most of the PAs whose macro-theme is "ICT applications and service development" have a similar general schema: first, goals and scope are defined; then research activities are performed in order to define a conceptual solution, which are or will be implemented thanks to the help of external expertise, engaged through the definition of tenders. Data collection and meetings with the stakeholders often accompany this process, in particular for those PA falling in the sub-topic "Management of port operations and services" and "Monitoring of seaside and landside port areas". In some cases, the activities related to procurement processes for external expertise selection have already been carried on, whereas in other cases (when PPs received many offers when the PA started with delays) those activities are on the top of the to-do list. Even for those who already completed the procedure, some updates could be necessary. As the macro-theme name suggests, technological solutions such as apps, databases, and project platforms will be realized in the upcoming period. Since many PAs are tightly coupled with these kinds of technological solution, the external technical expertise is even more crucial with respect to the PAs dealing with other macro-themes. The most frequently encountered problems are the limitations related to COVID-19 when it comes to organize dissemination activities or in-presence meetings, and the delays concerning the calls for tender.
E&E	"Environmental and Energy aspects" PAs are quite different one to the other for what concerns the methodology and hence the advancement status, exception made for the first step of defining goals and scope of the PA. In some cases, activities carried out so far consist in events with the stakeholders, while in other it comes to perform desk or market research activities. The activities to be deployed in the upcoming period range from LCA analysis to operative actions. Problems encountered reflect the same differences: some PPs denounced that they faced problems related to the stakeholders' fragmentation, some others reported that the complexity of the PA is linked to the complexity of the necessary equipment. Some PAs have in common the fact that the coordination of the activities with other PAs and the analysis of the replicability is explicitly mentioned.
P&M	All the three PAs contain in their titles the word "Master-plan" since wide areas (counties or regions) are analysed from many different points of view. Data collection is crucial in all the three cases for performing a proper analysis of the study area. For this purpose, tenders were launched when necessary. First examples

	of results consist in SWOT/BOCR analyses. No specific problems were pointed out, except the difficulty in retrieving some kinds of data.
T&K	As the macro-theme name suggests, the direct contact with people and the desire of sharing the expertise knowledge characterize these PAs. For this reason, actors like touristic associations, schools, and local marinas figure in the stakeholders list. Lessons and training sessions for involving the students have been carried out both in case of young and adult students: scholars have been the primary subject of the PAs, and touristic associations have been involved as well. The same kind of activity will be carried on also in the next period. Even technological solutions such as the development of a platform are expected.
Business	The only PA whose macro-theme is "Business oriented aspects" shares some aspects with some of the E&E PAs: desk and filed research have been carried out so far for the purpose of making ports more sustainable. The approach used for the analysis and the fact that the PA is focused on the services offered by the ports remind also to P&M and ICT PAs.

3. Contributions from Project Partners

In the last sections, results are presented in a disaggregated form, as the reported contents are directly extracted from the document shared by each Project partner (PP).

3.1.ICT application and service development

Table 3.1-1 Pilot Actions of the macro theme: ICT application and service development

Macro-theme	Sub-topic	PP	PA
ICT	Harbour and navigation safety	PP3 - ASSET, PP13 - CMCC	3.3
	ICT services for local mobility transport	PP2 - ITL	2.3
	Management of port operations and services	LP - CORILA	LP.2
		PP3 - ASSET, PP13 - CMCC	3.2
		PP6 - AAST	6.1
		PP7 - LUUN	7.1
		PP8 - PGZ	8.1
	Monitoring of seaside and landside port areas	PP2 - ITL	2.2
		PP5 - ARAP	5.3
		PP10 - LUS	10.1
	Promotion of ports' resources and territory	PP1 - MMON	1.2
		PP5 - ARAP	5.2

3.1.1. Harbour and navigational safety

PA 3.3 – Development of a meteo-oceanographic forecasting system for sea shipping activities - PP3 ASSET, PP13 CMCC

The aim of the pilot action "3.3 - Harbour and navigational safety: development of a meteo-oceanographic forecasting system for sea shipping activities" is to improve safety conditions of harbours and to reduce the carbon footprint of navigation. It pertains to the macro theme "ICT applications and services development". The purpose is to develop a meteo-oceanographic

forecasting system based on atmospheric forecasts and hydrodynamic forecasts and a weather routing system for small vessels (both motor and sailboats).

Connections with the territory

- Improving safety conditions of Puglia small ports and harbours thanks to the use of high resolution meteo oceanographic forecasting systems
- Improving efficiency of navigation for all vessels (motor and sailboats) that enter the small ports in Puglia
- Creating synergies with other small ports, with public authorities and with research centers, that could lead to other services development

Activities carried out so far

Considering the two main activities of the pilot, achievement is as follows:

- For the hydrodynamic part, activities are concluded regarding the port of Otranto and are in progress for the other two ports (50%)
- Developments of the ship routing service are ongoing, and an external consultancy has been appointed for providing naval architecture information (progress so far: 20%)

Taking into account the three main ports included in the pilot, the modelling activities of the meteo-oceanographic forecasting for the Otranto port are finalized and the model is running operatively.

- The VISIR model has been generalized for dealing with various vessel types.
- External experts are now working to provide the vessel seakeeping and propulsion data of various vessel types (both motor- and sailboats).

Intermediate results

- Operational forecasting system at very high resolution for the port of Otranto.
- Enhanced modularization of VISIR model; selection and appointment of an external consultant.

Next activities

- Development of the high-resolution model for the ports of Vieste and Trani and operational forecasting system implementation.
- Embedding vessel data into VISIR; define departure/arrival locations; test runs on all vessel types and routes; pre-operational environment to be set; UI specifications to be prepared, UI to be implemented; integration of components; testing and operation

Problems encountered

There is the need to recover the impossibility to physically meet the stakeholders to show the intermediate results produced. The ship routing part is delayed. This is also due to the difficulty to

hire an external consultancy. However, a specific Gantt table has been prepared to recover it and deliver before project end.

3.1.2. ICT services for local mobility transport

PA 2.3 – Development of ICT application for real-time information on local mobility option - PP2 ITL

Due to internal reasons of the transport operator, the original concept has been tested before the beginning of FRAMESPORT project. ITL, together with the municipality of Rimini, is planning the new pilot action. The development will be done during Autumn and the next year.

3.1.3. Management of port operations and safety

LP 2 – Set of ICT tools (DSS) about the quality of service within the Programme Area to support competitiveness and sustainability of small ports - LP CORILA

STEADFAST is a Pilot Action (PA) aiming to develop a Decision Support System (DSS) based on a common project-level ICT platform fed by a Programme Area level common supply-based database, which will be populated thanks to the proactive involvement of, and collaboration with, small ports of the whole Adriatic region. Such DSS will incorporate a set of ICT tools supporting better choices by users, private investors (companies, operators) and policymakers, thus, improving the competitiveness and sustainability of small ports in the programme area. The overall DSS and ICT tools constitute an effective pilot action supporting, on one hand, a more integrated small ports' service offering at wide geographical area (the Adriatic) and, at the same time, a better match of supply with users' needs. As such, by promoting better efficiency and effectiveness of the whole system, it provides a significant contribution to improve overall competitiveness and sustainability of small ports.

Bullet points below depict the status of the planned pilot activities as reported in the previously prepared preparatory report for the PA.

- Goal and scope: 100%
- Design of baseline survey: 100%, within frame of WP3
- Baseline data collection and monitoring: 70% within frame of WP4. This is an estimate since a first data collection round is finishing at the end of March 2022
- Inventory analysis: 20%
- Design of the STEADFAST DSS tool: Not started
- Demo session with major industry players(s): Not started

- Final PA report: Not started

Connections with the territory

The Pilot Action LP 2 provides a multitude of benefits to small ports stakeholder community, particularly in overcoming a few structural challenges fragmented supply and offering, and segmented and poorly informed demand hindering their potential for contributing to local regeneration, increasing the attractiveness of coastal destinations and stimulating economic activity and employment, ultimately to regain competitiveness and sustainability gaps.

To sum up the principal opportunities derived from the initiative:

- Cooperation mechanisms through DSS based on a common project level ICT platform fed by a Programme Area level common supply-based database
- Supporting better choices by users, private investors (operators) and policymakers, thus, improving the competitiveness and sustainability of small ports in the Programme area
- A more integrated offering at wide geographical area (the Adriatic) and a better match of supply with users' needs

Activities carried out so far

- Goal and scope – as well as a workplan – of the PA were defined and reported in previous PA advancement reports
- Designed of baseline survey (to characterise the existing service offering at Adriatic small ports and the associated overall quality of service) - Performed as part of WP3
- Data collection (through common questionnaire to Programme Area's small ports) - Performed as part of WP4
- Inventory analysis: a purposely developed statistical tool and a preliminary analysis of data collected from small ports have been performed. Particularly, with reference to the service clusters mentioned in section 2.1, the tool provides insights into the existing level of services and facilities at small ports and within their surrounding areas.

Intermediate results

Statistical tool developed and preliminary analysis of existing service offering for a range of Adriatic small ports.

Next activities

As baseline data continues to be collected, a structured database is also being developed, following the current undertaking of usual data handling operations to ensure high data quality standards and ultimately deliver a cleaned up and ready to use database for the remaining WP5 activities. Following this, the inventory analysis will be finalised, and a selection of data items will also be map-matched to start developing the GIS tool constituting the backbone of the STEADFAST DSS.

Problems encountered

No problems encountered for the implementation of activities concerned with the PA up until now.

PA 3.2 – Regional ports networking and their connections: Promotion of the territory, ICT app for boat berth booking services, marine connectivity (sailboat) - PP3 ASSET

The aim of the pilot action "3.2 - Regional ports networking and their connections: Promotion of the territory, ICT app for boat berth booking services, marine connectivity (sailboat)" is to improve the network of regional ports from different points of view. It acts on the macro theme "ICT applications and services development".

Connections with the territory

The Pilot Action 3 2 provides several benefits to the Apulia Region ports. To sum up the main opportunities coming from the initiative

- To enhance cultural and touristic aspects of Apulia Region and to make them accessible by maritime tourists
- To improve connections among ports and the internal parts of the region
- To create an ICT application that collects booking services and technical information for all port network
- To improve maritime connectivity also regarding sailboat activities

Activities carried out so far

In this period, we analysed information collected during the meetings with the stakeholders. We focused on stakeholders needs in order to define the contents of the app. Data collection among stakeholders ensure a bottom-up approach through a participatory process.

Apulia Region just finalized the collection and analysis of the data gathered by the stakeholders. After that, the ToR for the external expertise procedure has been finalized, so that the level of achievement could be considered by 20%.

Stakeholders have been involved during public meetings. We have collected information and analysed stakeholders' needs. We are defining the Term of Reference (ToR) for the tender about the developing of the app.

Intermediate results

The implementation of the activities is going on and no intermediate results have been achieved.

Next activities

In the next period, we are going finalize the tender procedure for the developing of the app.

Problems encountered

The main problem encountered is the fragmentation of private stakeholder in each port; that situation affected this project pilot, and we define a new strategy to build the app (gate portal).

PA 6.1 – Development of a prototype of a software application for the identification, booking and payment of available spots at Adriatic small ports. Testing phase at Port of Termoli - PP6 AAST

The pilot will entail developing a prototype of a software application that will help captains of boats travelling in the Adriatic Sea identify available spots in nearby small ports/marinas and book their preferred spots in advance. This way we plan to decrease waiting times at the ports, generate additional revenue for small ports/marinas, decrease overcrowding in certain ports and maximize the use of all available space along the Adriatic coasts of Italy and Croatia. The App will collect real-time occupancy data from each spot at small ports/marinas and make it available to anyone who has access to online or mobile platforms. The app will also include an online payment system to allow captains book and pay for docking spots through the app.

Connections with the territory

The Pilot Action 6 provides a wide range of benefits to Molise region not limited to the 3 nautical ports that will be involved but spreading through its community and hinterland. To sum up the key benefits and added value generated from this specific pilot action

- Increasing ports' visibility to a wider range of potential nautical tourists
- Supporting the creation of a wider and integrated ports' offer by the inclusion of local stakeholders' offer in the app and favouring the composition of tourism product(s) and a better understanding of Molise tourism offer and attractiveness
- Overall efficiency improvement in tourism port operations decrease of waiting times at the ports, decrease in overcrowding in ports and maximization of the use of all available berths, possibility to make some operations online (payment, etc)
- Possibility to increase the adoption and use of ICTs of nautical tourism SME fostering sustainability
- Creation of synergies among regional tourist stakeholders, in order to create a wider regional offer, thus enhancing competitiveness for the whole destination

Activities carried out so far

There haven't been any substantial changes compared to the 1st Report Advancement Session. It could be assessed an advancement of 5% in the last months (related to the publication of the tender notice).

So far, some experts have been selected and engaged. They have developed the Pilot action preparatory initiatives, a regional report on best practices, a final common understanding on priority actions and KPI, Pilot Action Preparatory Initiatives, Pilot Review Sessions on Pilot Action Advancement Reports, and they will develop the document Pilot actions resume and scale-up.

On November 17th a stakeholders' meeting has been organized in the Tourist Port of Termoli. All different stakeholders, selected experts and the organizer AAST-Termoli took part to it. The aim of the meeting was to present the project pilot action to the different stakeholders and ports of Molise region and to start creating a network among them.

At the present time the tender notice for the development of the Booking Berth App has been published. Interested parties must submit an application within March 31st. Thereafter AAST Termoli will take the final decision as soon as possible and the realization and implementation of the App must be concluded within 180 days.

Intermediate results

Currently the main intermediate result has been the definition and publication of the tender notice.

Next activities

Among the next activity to be done AAST Termoli will take the final decision about the tender application finding the best App developers for the project at issue. Following activities will be the realization and implementation of the App.

Problems encountered

The main problem encountered in these months was the creation of the tender itself. It took more time than what was foreseen to define all aspects and publish it.

PA 7.1 – Improvement of the available technologies for port management - PP7 LUUN

The basic idea is to create a Port Management Program Platform that will provide supervision of vessels in ports managed by the Port Authority of Umag-Novigrad, i.e., management of IT and other services offered by the port authority. It would consist of several connected modules – applications, with the possibility of upgrading to new modules - functionalities together with their data exchange with other systems. In particular, the idea is to make it possible to monitor the ports and the berths through video surveillance cameras, for the facilitation of checking the berths availability, of the landing procedure and of the payment for the service.

The idea is to improve the available technologies for the port management and to improve the services necessary for a more efficient management of small ports. The new services that will be developed, will stand side by side with the existing applications (nIS and CIMIS) to further improve the port services. Once developed, the system will facilitate the work of the port authorities and make the service more accessible and comfortable for customers, since it will improve the communication with the port guard and will allow to check the availability of berths.

Activities carried out so far

Port Authority of Umag-Novigrad has so far hired an external expert for the purpose of preparing a document containing all of the fundamental needs for the project pilot. The experts helped to formulate the existing state and future needs through market research and development of the project solution. Following this step, thorough market research has been done in order to prepare for next steps and them being public procurement procedures for the needed equipment and further pilot advancement. Project documentation with cost estimates was prepared on the basis of which the projects were divided into three main areas which are the basis for the implementation of procurement procedures. These areas include procurement of: Video surveillance system; Application development, upgrade of current systems and adaption of information system presently

used by Port authority of Umag-Novigrad; and final area is berth monitoring system accompanied by service providing cabinets. For all three abovementioned points, the procurement procedure was initiated, where calls were made to three addresses for each point and a link was published on the official website of the port authority through which anyone could apply for the tender offer. For areas 2 and 3, the procedure has been completed. Last week decisions on the selection of contractors were made, and only thing left to do is signing of the contract. For the video surveillance part of the procurement procedure, contractors haven't yet been selected as the further clarifications regarding the offers have been requested.

Intermediate results

Two out of three procurement procedures for the current phase of project pilot have almost been completed and are awaiting the signing of the contract, while the third procedure will also be completed in couple of weeks as there are standing offers. The only thing holding back the third procedure is waiting for further clarifications as the variety of equipment coupled with different price ranges was offered.

Next activities

Next activities in line include completion and finalization of abovementioned contracts and consequently the implementation of acquired equipment.

After that, there is also a procurement procedure for acquisition of an electric powered vessel, but this is scheduled in a few months' time because of the hardships regarding the preparation of cost estimates due to lack of previous experiences in practices similar to this on a national level.

Problems encountered

No major problems have been encountered except from the fact that for the procurement procedure of video surveillance equipment, 6 tender offers have been received thus complicating the selection process a little bit. The process has been prolonged because of the need for further and more thorough evaluation.

PA 8.1 – Improvement of the small ports monitoring system (mooring management, billing system, analysis of customer habits) - PP8 PGZ

This pilot project will deliver an innovative and functional small port smart monitoring system with a comprehensive database and register which includes all necessary data for more efficient and

effective small port management, thus forming a cornerstone for further development and service improvement. Implementing innovative e-solutions for port services smart management with development of innovative ICT tools (macro-theme) aimed at facilitating e-government as well as the whole set of initiatives and bureaucracies to be processed thus ensuring the smart management of services and initiatives. As mentioned in the introductory part, our pilot project will deliver an innovative and functional small port smart monitoring system with a comprehensive and adaptable real time database and register which includes all necessary data for more efficient and effective small port management. The established system will provide managers and port authorities with an overview of the berth which will lead to easier visibility and managing of berth maintenance requirements thus enhancing the registration and simplifying the calculation process, making everything much faster. With just one click on the database, users will be provided with all necessary information regarding berths, users, vessels details, in real time.

Activities carried out so far

Following the conducted procurement procedure for the preparation of project-technical documentation for pilot actions, assigned external experts produced documentation which consists of analysis of current situation in defined small port, 5 proposed variants of conceptual solutions, SWOT analysis, risk analysis, conceptual project and D.5.2.1. Pilot action preparatory report.

The documentation has been delivered in two parts: 1st part of delivery was including analysis of current situation in defined small port, 5 proposed variants of conceptual solutions, SWOT analysis and risk analysis. Based on this documents, Primorje-Gorski Kotar County selected optimal conceptual solution for the implementation in the small port. Selected solution has been elaborated through produced conceptual project which will be baseline for the procurement of thematic equipment. The conceptual project and the D.5.2.1. Pilot action preparatory report make 2nd part of delivery.

Intermediate results

The intermediate results achieved so far are related to the production of pilot preparatory studies which consist of:

- Analysis of the current situation which includes analysis of defined location of small port and the analysis of current small port monitoring system proposed
- 5 variants of conceptual solutions
- SWOT analysis of proposed conceptual solutions

- Risk analysis of the implementation of conceptual solutions
- Conceptual project which represents a more detailed elaboration of one conceptual solution according to the choice of the Primorje-Gorski Kotar County
- D.5.2.1. Pilot action preparatory report

Next activities

Primorje-Gorski Kotar County has started with the preparation of documentation and annexes for the public procurement procedure for the pilot actions implementation which includes installation of thematic equipment and software. After the preparation of all necessary documents and realization of internal procedures, public procurement will be published. Implementation of the pilot action will start upon the signing of the contract with the economic entity which will deliver the most favourable offer.

Problems encountered

The contract with external experts who are engaged for the preparation of pilot preparatory studies had to be prolonged due to COVID-19 situation (accelerated spread of infection among the employees caused delays in the work) but this situation did not afflicted the achieving of planned results.

3.1.4. Monitoring of seaside and landside port areas

PA 2.2 – Development of monitoring system for port operations and public events in the canal port's area - PP2 ITL

The pilot activities consist in the design, implementation, and monitoring of an experimental action for the monitoring of the seaside and land-side areas of Rimini's Canal Port. The objective of the action is to test the use of surveillance technologies (e.g., cameras, sensors, drones, etc.) to monitor the safe performance of port operations on the water and on the land side. In particular, the following activities will be defined:

1. analysis of the reference context
2. Design of the pilot action
3. analysis of the technological solutions
4. definition of expected results
5. definition of a call for tender for the acquisition of thematic equipment
6. monitoring of the supply
7. go-live of the solution
8. monitoring of results achieved

At the time of preparing this document, the completed activities are 1, 2, 3 and 4, the definition of the call for tender is in progress. The activities carried out consist in 65% of total.

Connections with the territory

- Increase site security The Pilot action of FRAMESPORT stands as an element of support to the equipment of the subjects in charge of security bodies (Port Authority and Municipal Police)
- Limit degradation phenomena and poor hygiene of the site Monitoring, in particular at night, can facilitate the implementation of timely or preventive interventions to promote greater decorum of the area, with befits for the community
- Improve surveillance at public events, as the area is characterized by strong tourist and recreational attraction is the site of numerous events and demonstrations, which attract a large number of people
- Respect for the rules. The area has a mixed use (fishing, disembarking, etc and the surveillance system can help the analysis of the use of spaces at different times of the day and in the periods of the year, in order to define anomalies and easy dialogue between the interested parties

Activities carried out so far

At the time of preparing this document, the completed activities are 1, 2, 3 and 4, the definition of the call for tender is in progress. The activities carried out consist in 65% of total.

The previous period was dedicated to the data and information gathering from al the stakeholders.

A number of interviews carried out in May and June 2021 with the stakeholders working in the area of port of Rimini, highlighted some problems of social decline or perceived low security, which makes necessary to monitor the area with the general objective of counteracting the phenomena of improper use of the spaces of the Port of Rimini which are the cause of these criticalities.

In addition, an inspection was carried out in June with a representative of the municipality and three representatives of the port authority. This inspection revealed the need to improve the efficiency of the current monitoring system, in order to solve the problems of promiscuity along the quay. Currently the quay is used as a loading/unloading point for fishing vessels and as a transit point for pedestrians. The adoption of an appropriate monitoring system to verify the presence of improper behaviour would help in the definition of preventive measures.

The activities are realizing in the preparation of the tender for the acquisition of thematic equipment

During the reporting period, three meetings took place The purpose of the meetings was to share the objectives of the pilot action, to acquire information and feedbacks from the stakeholders for the design of the pilot action.

Intermediate results

The reached results are the definition of the technological option. After the preparation of the project, which presented various technical options, we proceeded with the evaluation of option with the stakeholders. Stakeholders have opted for a technologically simpler option that can be integrated with existing systems. The definition of technical specification was carried on with inputs of the technical office of the municipality for information on the existent systems and special requirement for installation, as preferred location, and technical compatibility. Other inputs came from manufacturers through brochures and meeting for information.

Next activities

Next step in the 6 months period will be:

1. definition of a call for tender for the acquisition of thematic equipment
2. monitoring of the supply
3. go-live of the solution
4. monitoring of results achieved

The next steps include the conclusion of definition of the call for tender for the acquisition of thematic equipment and the monitoring of the supply. The Municipality of Rimini will be strongly involved in those tasks.

Problems encountered

No particular problem has been encountered in the period June-December 2021.

PA 5.3 – Creation of Innovation Lab to promote development and planning of small ports along the Adriatic coasts: ICT Platform for monitoring and supervision of freights/passenger - PP5 ARAP

Arap will promote the constitution of an Innovation LAB, that will be the instrument to promote development and planning of small ports along the Adriatic coasts. The purpose is to engage and coordinate citizens, artists, students, governmental agencies, businesses and community organizations in Abruzzo to enhance public awareness, to intercept and to valorise different competences and experiences, to stimulate measures and actions aimed at recovering small port efficiency and attractiveness. Innovation Lab is articulated in four sessions: a) energy efficiency and pollution reduction; b) valorisation of “port space”; c) ICT solutions; d) training/informative paths.

Connections with the territory

The Pilot Action provides a multitude of benefits to the Local ports of Vasto and S. Salvo and their communities in particular Innovation Lab is articulated in four sessions: a) energy efficiency and pollution reduction; b) valorisation of “port space”; c) ICT solutions; d) training/informative paths. For what concerns the PA5.3, the main benefit on the territory is represented by planning, management, and monitoring of freights/passengers

Activities carried out so far

- First internal definition of main characteristics
- External procurment is under definition

Intermediate results

First internal definition of:

- Main characheristics
- Key factors
- Advantages
- Technical parameters

Next activities

- Arap will complete the phase of the public procedure and assignment.
- Arap will realize ICT platform for monitoring and supervision of freights/passengers

Problems encountered

Currently no problems have been detected in the implementation phase of the activities themselves.

PA 10.1 – Feasibility Studies on alternative moorings for ship and on the use of electric ro-ro passenger ships - PP10 LUS

The purpose of the pilot action is to study on alternative methods of mooring for ships (RO-RO and cruisers) and electricity supply for RO-RO ships: the study will define the possibilities of applying alternative methods of mooring for ships in order to increase the level of operability and safety in the port of Šibenik. Furthermore, the study will analyze and describe the possibilities of introducing RO-RO services to the islands of the Šibenik archipelago using electrically powered boats. It is necessary to analyze the possibilities and necessary steps for the implementation of the use of alternative fuels that have a lower impact on the environment in order to ensure sustainability. The technologies and lessons learned from the study, as well as the pronounced advantages of applying new technologies, are applicable in all ports in Croatia and Italy and there should be a possibility that they will become the standard in the Adriatic. The study is the first step and basis for future investments and application of these technologies.

Activities carried out so far

Šibenik port authority created the initial documents such as preparatory report and first pilot action report. The researching phase took a little bit more time than initially planned.

Intermediate results

Šibenik port authority focused most of its initial time in this project pilot phase on the thorough market researching activities while focusing on delivering the best possible product. As the theme of the pilot requires vast knowledge and expertise from various fields, researching activities require a little bit more time than initially planned but there shouldn’t be any kind of delays in regard to the original timeline.

Next activities

Following activities require announcement of a public tendering procedure for the external expertise for the creation of the study on alternative methods of moorings for ships while also incorporating electricity supply for RO-RO ships. The study will also analyse the possibility of introducing electrically powered boats for servicing the RO-RO lines in Šibenik archipelago. First thing the external expert has to do is create a draft version of the document which is followed by the review of project partner and relevant stakeholders. The step after that includes the appreciation of suggestions and creation of a revised version of the study.

Problems encountered

No problems were encountered during the last phases of the project's duration.

3.1.5. Promotion of ports' resources and territory

PA 1.2 – Promotion of the territory linked to Nautical clubs through development of extended reality application - PP1 MMON

The specific objectives of the pilot action are:

- Implement the attractiveness of the Sailing and Nautical Centres by making available to users the possibility to take advantage of the tourism/environmental opportunities offered by the territory;
- Facilitate the users of the sailing and nautical centers in the knowledge and therefore use of historical, environmental and tourist goods and services in the area through the activation of an AR Augmented Reality system.

Connections with the territory

The Pilot Action is aimed to facilitate the users of sailing and nautical centers in the knowledge and fruition of touristic, cultural and environmental services through the activation of an augmented reality system. The pilot action will implement a dual system:

- circuit of totems on site that indicate to the user of the marina where he is and what are the possible tourist activities in the area
- web platform (reachable through QR Code) where you can deepen the information content also thanks to an augmented reality system

The sailing centers identified will be the main anchor points from which this series of itineraries develops towards the territory. The added value of the initiative is the openness to all, users of the marina or the territory, and the possibility of constant updating and implementation.

Activities carried out so far

At present, the pilot action is still at the design stage and the thematic and indication contents have been defined for the conduct of the public procedure for awarding the activities (publication expected at the end of February 2022).

Intermediate results

The activities have not yet started, and no intermediate results have been achieved.

Next activities

Once the tender has been concluded, the following actions will be related to the realization of the activities: - Collection of informative and documentary contents (texts, images, video realization) - Construction of the experience portal and structuring of the internal thematic routes, with the inclusion of multimedia content created and/or implemented - Realization and positioning of the new physical totems that will constitute the path of the experiential itineraries on site.

Problems encountered

Currently no problems have been detected in the implementation phase of the activities themselves as they have just begun.

PA 5.2 – Creation of Innovation Lab to promote development and planning of small ports along the Adriatic coasts: Port attractiveness - PP5 ARAP

Arap will promote the constitution of an Innovation LAB, that will be the instrument to promote development and planning of small ports along the Adriatic coasts. The purpose is to engage and coordinate citizens, artists, students, governmental agencies, businesses, and community organizations in Abruzzo to enhance public awareness, to intercept and to valorise different competences and experiences, to stimulate measures and actions aimed at recovering small port efficiency and attractiveness. Innovation Lab is articulated in four sessions: a) energy efficiency and pollution reduction; b) valorisation of “port space”; c) ICT solutions; d) training/informative paths.

Connections with the territory

The Pilot Action provides a multitude of benefits to the Local ports of Vasto and S. Salvo and their communities in particular Innovation Lab is articulated in four sessions: a) energy efficiency and pollution reduction; b) valorization of "port space"; c) ICT solutions; d) training/informative paths. For what concerns the PA5.2, the main benefit on the territory is represented by valorizing natural and cultural unexploited capital of ports areas

Activities carried out so far

First Event in Vasto - 20 July 2022

Intermediate results

ARAP organized a valorisation event to present the territory's attractiveness, for this purpose it organized a guided tour on the boat along Trabocchi coast

Next activities

From May to September Arap will organize other animation and dissemination events

Problems encountered

Currently no problems have been detected in the implementation phase of the activities themselves.

3.1.6. Comments

Most of the PAs whose macro-theme is "ICT applications and service development" have a similar general schema: first, goals and scope are defined; then research activities are performed in order to define a conceptual solution, which are or will be implemented thanks to the help of external expertise, engaged through the definition of tenders. Data collection and meetings with the stakeholders often accompany this process, in particular for those PA falling in the sub-topic "Management of port operations and services" and "Monitoring of seaside and landside port areas". In some cases, the activities related to procurement processes for external expertise selection have already been carried on, whereas in other cases (when PPs received many offers when the PA started with delays) those activities are on the top of the to-do list. Even for those who already completed the procedure, some updates could be necessary. As the macro-theme name suggests,

technological solutions such as apps, databases, and project platforms will be realized in the upcoming period. Since many PAs are tightly coupled with these kinds of technological solution, the external technical expertise is even more crucial with respect to the PAs dealing with other macro-themes. The most frequently encountered problems are the limitations related to COVID-19 when it comes to organize dissemination activities or in-presence meetings, and the delays concerning the calls for tender.

3.2.Environment and energy aspects

Table 3.2-1 Pilot Actions of the macro theme: Environment and energy aspects

Macro-theme	PP	PA
E&E	LP - CORILA	LP.1
	PP3 - ASSET, PP13 - CMCC	3.1
	PP4 - SVIM	4.1
	PP4 - SVIM	4.2
	PP4 - SVIM	4.3
	PP5 - ARAP	5.1
	PP10 - LUS	10.2

LP 1 – Development of an Ecolabel criteria proposal for small ports to be submitted to the EU Ecolabelling Board (EUEB) - LP CORILA

The project will create an Ecolabel proposal. The requirements will be divided in “minimum” and “excellence”. The former is the set of criteria that will be developed to obtain the Ecolabel certification and thus represents the basic processes, activities and features that a small ports shall have to get the Ecolabel certification. The latter set of criteria will be defined to mark the small port as excellent from a sustainability perspective, therefore they are additional criteria that small ports can meet to achieve outstanding environmental performances. The requirements and guidelines for small ports are going to be developed adopting the Life Cycle Assessment (LCA) approach and desk research. LCA allows analysing the input and output of resources, energy and waste associated with each life cycle step of a certain organization and define the environmental hotspots, the main impacts on the environment and the opportunities for improvement. At least 3 small ports, representative of the Adriatic basin environment, are going to be analysed to gather data about their management and to delineate best practices, guidelines, and requirements to promote and certificate their sustainable development and efforts. The desk research will be performed to

delineate what are the environmental criteria required by other standards related to small port management.

The following activities are carried out to implement the LCA phase of the pilot project:

1. Literature review: analysis of academic publications, national and international regulations on port and touristic activities sustainable management.
2. Goal and scope: Definition of the objective, focus and system boundaries of the project.
3. Stakeholder involvements: Involvement of two Italian small ports that are representative of the Adriatic basin environment.
4. Inventory analysis: Gathering of the data needed for the LCA study. Visit the small ports to understand how they operate and to collect the required information to scientifically analyse their life cycle.
5. Impact assessment: Calculation of the environmental impacts of the life cycle according to the selected impact categories (e.g. global warming potential, ecotoxicity, resource depletion, water usage…).
6. LCA report: Report that presents the result of the LCA study, the way it was conducted, the environmental impacts and their sources, and opportunities of improvement.
7. Coordination with Project Partners (PP): collection of the outcomes and experiences from the various pilot projects of the FRAMESPORT initiative to gather valuable know-how, tools and methodologies that can be adopted to further improve the Ecolabel requirements. Assomarina will also be involved in this project in order to gather their suggestions on how to improve the Ecolabel proposal.
8. Draft on Ecolabel requirements: Creation of the draft on the Ecolabel requirement and guidelines.
9. Submission to JRC: Submission of the aforementioned draft to the JRC (Joint Research Center) to get their feedback and create the final version of the Ecolabel requirements, which then will be submitted to the EU Ecolabelling Board (EUEB).

Connections with the territory

- Study of the environmental impacts of small ports and delineation of opportunities for improvement
- Providing guidelines and standards on how to improve the environmental performances of small ports
- Allowing small ports with excellent environmental performances to get certified
- Support the transition towards sustainable development in the local context

Activities carried out so far

So far, the activities number 1, 2, 3 and 4 have been performed for 2 Italian small ports. 2 Coratian small ports will be involved soon. The following activities are carried out to implement the desk research phase of the pilot project:

1. Literature review: analysis of academic publications, national and international regulations on port and touristic activities sustainable management.
2. Standards & Certifications: The main standards related to small port management (e.g., Gold Anchor, Blue Flag, Ecolabel for touristic activities) are analysed to get an understanding of their requirements and get valuable references for the delineation of the Ecolabel for small ports' criteria.
3. Ecolabel Criteria: Deifinition of the main environmental criteria for excellent small port management.
4. Documentation: Prepare the documentation related to the criteria.

So far, the activities number 1, 2 and 3 have been performed.

Intermediate results

- Involvement of 2 Italian small ports;
- Data gathered from the 2 Italian small ports;
- LCA study and model set up;
- Involvement of Croatian small ports.
- Delineation of the Ecolabel criteria;
- Definition of the required documentation to create the Ecolabel proposal draft.

Next activities

The following activities are carried out to create the Ecolabel draft:

1. **Reporting**: creation of the first draft of the documentation related to the Ecolabel draft according to the EU requirements and expectations. This document will be presented to the project partners;
2. **Coordination with Project Partners (PP)**: collection of feedbacks about the documentation, and the outcomes and experiences from the various pilot projects of the FRAMESPORT initiative to gather valuable know-how, tools and methodologies that can be adopted to further improve the Ecolabel requirements. Assomarina will also be involved in this project in order to gather their suggestions on how to improve the Ecolabel proposal.

3. **Draft on Ecolabel requirements**: Creation of the draft on the Ecolabel requirement and guidelines.
4. **Submission to JRC**: Submission of the aforementioned draft to the JRC (Joint Research Center) to get their feedback and create the final version of the Ecolabel requirements, which then will be submitted to the EU Ecolabelling Board (EUEB).

Problems encountered

Difficulties in involving Croatian small ports. There is the need to involve at least 3 small ports to create a solid and reliable LCA study. In order to overcome this issue, the Project Partners and their network were involved to find at least one Coratian small port.

PA 3.1 – Implementation of Port sustainability best-practices - PP3 ASSET

The aim of the pilot action is to improve ports conditions by touristic point of view. The purpose is to realize best practices (plastic free) and information campaign in three Apulian ports (Vieste, Trani, Otranto) reducing emissions and waste from port operations and to collect all the existing services to be offered to the tourists. The pilot project will contemplate the supply of a plastic free kit.

Connections with the territory

The Pilot Action 3 1 provides several benefits to the Apulia Region ports. To sum up the principal opportunities coming from the initiative:

- To increase citizenship and tourist awareness about the territory by a sensitization campaign
- To reduce emissions and waste from port operations
- To collect existing services to be offered to tourists
- To inform tourists about cultural sites to be visited
- To collect the effective needs of the port community and the involved stakeholders within the co-design approach supported by the submission of a questionnaire
- To provide free plastic free kits to be distributed in the three pilot ports

Activities carried out so far

Stakeholders have been involved during public meetings. We have collected information and analysed stakeholders' needs. We are defining the plastic free set to be distributed in the three pilot ports.

Intermediate results

The implementation of the activities is going on and no intermediate results have been achieved.

Next activities

In the next period, we are going to define and realize the plastic free kit, after the stakeholder consultation.

Problems encountered

The main problem encountered is the fragmentation of private stakeholder in each port; that situation didn't affect so much the project for what regards this pilot.

PA 4.1 and 4.2 – Sustainable and local mobility interventions (ex. electric bus and bike services) - PP4 SVIM

The Pilot actions 4.1 for Vallugola port (Gabicce Mare) and 4.2 for Numana port have the same objective "Sustainable and local mobility interventions" and have been designed in parallel considering the following common aspects:

- the touristic vocation of the ports;
- the territorial context: both ports are located in natural protected areas;
- needs to develop transport connections with inland and/or other destinations.

Considering the specific context and needs of local territories, it has been selected to develop:

- an Electric Bus for Vallugola port
- an E-Bike for Numana port

Testing and monitoring the pilot actions will assess the feasibility to implement this solution in similar contexts of the Adriatic coast.

Connections with the territory

The Pilot Action provides testing and evaluation of an E bus amd E bikes as smart mobility solutions to improve the connections of the small Port of Vallugola and Numana with the inland destinations main opportunities:

- Improve the turist vocation of the little ports and mobility services,

- Reduce environmental impact especially inside the Natural Area of San Bartolo Park, testing a collective transport modality (and E bikes to reduce cars traffic, and contributing to reduce air polllution
- Testing and monitoring (also by questionnaires to beneficiaries) by pilot services in the territories of the beneficiary partners
- Feasibility of the solution in order to evaluate its implementation in the future with partner beneficiaries

Activities carried out so far

Pilot action 4.1 E-Bus Service of Vallugola port

The E-bus is a minibus with 15 seats, powered by a full electric motor engine. The E-bus performs 8 rides round trip every day, 4 in the morning and 4 in the afternoon, starting from Vallugola port to the centre of Gabicce Mare, with an additional stop at Gabicce Monte, one of the major tourist destinations in the municipality territory. Each roundtrip is 11 km. The Ebus has a station with an electric charging hub in the Vallugola port Area. The Service, free of charge, is available with priority for boat owners of Vallugola port. Number of places available has been limited to 8, according to the containment measures due to Covid-19. In each bus stop is placed a E-bus timetable with information in Italian and English. The service is composed of 8 E-bike, with specific characteristics able to perform long rides to the inland's destination, including the uphill roads of Conero Park. This means that the E-bikes are equipped with an electric motor with a battery of 625Wh, 10 – speed, autonomy of 120 km, hydraulic disc brakes. The E-bike station is inside the port area, equipped with a specific electric charging hub and locking system.

Pilot action 4.2 E-Bike Service of Numana port

The Service, free of charge, is available with priority for boat owners of Numana port. The 3 associations managing the rent of berths at Numana port have been involved in the activity. The regulation foresees that for boats occupants there is a free coupon for each week of berth rent, valid for a trip (morning or afternoon), booking the E-bike on a dedicated website. The operative process for the users is:

1. Collect the free coupon from the port associations
2. Book the e-bike on the online website
3. check the mail to receive the combination to unlock the e-bike
4. Get the e-bike from the e-bike station and unlock it with the combination
5. At the end of use, return the e-bike to the e-bike station and make sure to securely

lock it with the bike lock provided

6. Invite to answering the online questionnaire and give feedback

Intermediate results

Pilot action 4.1 E-Bus Service of Vallugola port

During the 45-day period of E-bus testing, 3738 users were registered; it means an average of 83 passengers per day, about 10 for each trip from Vallugola to Gabicce Mare. Compared to a theoretical capacity of 8 seats per trip, which corresponds to 5760 passengers (8 per trip, therefore 16 passengers roundtrip Vallugola - Gabicce and 128 per day), a 65% coefficient of passenger load can be estimated. The total number of passengers transported in the morning (1886) is comparable to the afternoon (1848). The questionnaire to evaluate the Ebus service has been compiled by 31 passengers. It emerged that most of the respondents are local tourists instead of boat owners, coming from local hospitality structures.

The E-bus service was highly appreciated: 40% of the respondents did not recognize the needs of any implementation, while 30% suggested adding trips in the evening. It highlighted the willingness of 60%of respondents to pay for a similar service in the future. About which kind of mobility service is more needed, 65% of respondents indicate the electric bus as a priority over other types of vehicles. In conclusion: the main users were tourists and not boaters, who appreciated the transport service both to reach the port of Vallugola and its recreational services (e.g. beach, restaurants), and to reach Gabicce Mare, coming from the accommodation facilities near to the port of Vallugola. Regardless the profile of users, the pilot action could be considered moderate successful and expected to be further increased as effective environmentally mobility solution for Vallugola Port, with regards to the optimization of persons transported by vehicles and reduction of pollution emissions, considering that the port is inside a Natural Park Area.

Pilot action 4.2 E-Bike Service of Numana port

The monitoring of the E-bike system covered both quantitative and qualitative aspects, through:

- data gathered from the online booking service and the kilometers traveled by the GPS of the vehicles.
- A sample questionnaire filled in by the users

In total, 49 E-EBIKES rents have been realized, with an average distance of 23 km, with peaks of 50 km. During the experimentation period, the service was also promoted at realities in the port area,

starting with the services of the municipal administration, in order to increase their use. Although the service worked regularly, the use of bicycles was far below expectations. Regarding the qualitative evaluation through questionnaires, it has been collected, of which about half refer to tourists with a boat at the port. The service result was appreciated, as well the choice of an electric bike as mobility service. Over 50% of respondents would be willing to pay for a service like this one.

About possible improvement interventions, about 30% of respondents suggested extending the service in the evening. About possible future mobility services for Numana Port, respondents confirm the choice of Electric bike and suggested also for electric kick scooter.

Next activities

About Pilot action 4.1 E-Bus Service of Vallugola port and Pilot action 4.2 E-Bike Service of Numana port, next activities will be dedicated:

- to complete the evaluation of the actions in terms of sustainability, with regard to energy efficiency and reduction of environmental impact
- to evaluate the replicability in other contexts with the final report assessment.

Problems encountered

The procurement processes for both external service selection (E-bike and E-bus) suffered some delays. It was caused partially by difficulties in organizing meetings among SVEM and associated partners to agree on the intervention to carry out and in drafting of the technical layouts (the modalities, the equipment required etc…), due to COVID restrictions during early months 2021, which negatively affected the promptly availability of each person involved. In the execution of the selection procedure, delays in obtaining certifications requested by law expanded the timing of service assignments to the Operators.

Even if the services started with a delay, anyway SVEM successfully realised the activities related to the E-bus service (Vallugola port - Gabicce Mare) and the EBIKE service (Numana port) during the 2021.

About the E-bus in Vallugola port, after the inauguration event on the 21st of July, the service was stopped on the 22nd, 26th and 27 th July due to some problems with the vehicle. To deal with the inconvenience, the E-bus has been replaced with a new one with the same characteristics. The three days have been recovered by extending the service until 7 September.

About the E-Bike in Numana port, the service was less successful than expected, even if it was appreciated by the users. Difficulties were highlighted during the involvement of the associations managing the berths' rent to correctly inform their client (summer 2021 was a busy period for the restart of port's activities). To solve it, Numana Municipality supported the dissemination of the initiative also through other communication channels.

PA 4.3 – Demonstrative action: intervention for cleaning water bodies from floating solid waste - PP4 SVIM

The action 4.3 is addressed to find out environmental solution to manage sea pollution, in particular from solid plastic waste. The pilot actions 4.3 has to be built-up yet. No information on thematic equipment shall be deliverable.

PA 5.1 – Creation of Innovation Lab to promote development and planning of small ports along the Adriatic coasts: environmental impact - PP5 ARAP

Arap will promote the constitution of an Innovation LAB, that will be the instrument to promote development and planning of small ports along the Adriatic coasts. The purpose is to engage and coordinate citizens, artists, students, governmental agencies, businesses and community organizations in Abruzzo to enhance public awareness, to intercept and to valorise different competences and experiences, to stimulate measures and actions aimed at recovering small port efficiency and attractiveness. Innovation Lab is articulated in four sessions: a) energy efficiency and pollution reduction; b) valorisation of “port space”; c) ICT solutions; d) training/informative paths.

Connections with the territory

The Pilot Action provides a multitude of benefits to the Local ports of Vasto and S. Salvo and their communities in particular Innovation Lab is articulated in four sessions: a) energy efficiency and pollution reduction; b) valorisation of “port space”; c) ICT solutions; d) training/informative paths. For what concerns the PA5.1, the main benefit on the territory is represented by implementing best solutions of sustainability in the ports’ spaces

Activities carried out so far

- First internal data recognition and on-site inspections
- The phase of procurement for the realization of sustainability plan is not yet concluded

Intermediate results

Only Vasto boasts an environmental monitoring system of wastewater, classified according to standard regulations. While all ports guarantee separate waste collection, waste oil collection and battery disposal, only Vasto are there water purifiers. Ports promote sustainable means of transport and environmental education activities for citizens and staff; charging columns are available within the port areas for boats and energy supply is based very little on renewable energy.

Next activities

- Arap will complete the phase of the public procedure and assignment.
- Arap will realize a feasibility study for possible eco-sustainability solutions to reduce the environmental impact of port

Problems encountered

Currently no problems have been detected in the implementation phase of the activities themselves.

PA 10.2 – Testing IT system for the forecast of possible geographical dispersion of the pollutants in case of accident - PP10 LUS

This pilot action is focused on the forecasts of possible geographical spread of pollution: buoys with sensors will be installed and an IT tool for predicting possible geographical spread of pollution will be tested. The Adriatic is a very sensitive area, and its protection is a priority for all regions. In case of pollution, the installed system will enable Šibenik Port Authority to predict the geographical spread of pollution and to react properly, which results in benefits for the entire Adriatic coast area.

Activities carried out so far

Activities carried out so far include market research for the appropriate equipment capable of positioning Šibenik port authority on the map of environmentally friendly area due to the fact that they want to secure a solution which cares about the environmental surroundings, longevity and sustainability of marine and coastal transport sectors.

Intermediate results

Similarly, to the first part of the Šibenik port authority's pilot, this part is also still in the phase of thorough market research due to the complexity and specifics of the sensorics equipment. The

market research phase takes a bit of more time due to logistic components of desired equipment and high modularity.

Next activities

Next activities include announcement of public tendering procedure for the adequate equipment, running the equipment through variations of simulation tests ensuring that the product will be in perfect working order and preparing it for the full and final deployment.

Problems encountered

No problems are expected to occur in the near future, nor it is expected that if anything happens it will impact the course of project implementation.

3.2.1. Comments

"Environmental and Energy aspects" PAs are quite different one to the other for what concerns the methodology and hence the advancement status, exception made for the first step of defining goals and scope of the PA. In some cases, activities carried out so far consist in events with the stakeholders, while in other it comes to perform desk or market research activities. The activities to be deployed in the upcoming period range from LCA analysis to operative actions. Problems encountered reflect the same differences: some PPs denounced that they faced problems related to the stakeholders' fragmentation, some others reported that the complexity of the PA is linked to the complexity of the necessary equipment. Some PAs have in common the fact that the coordination of the activities with other PAs and the analysis of the replicability is explicitly mentioned.

3.3.Spatial and planning management

Table 3.3-1 Pilot Actions of the macro theme: Spatial planning and management

Macro-theme	PP	PA
P&M	PP2 - ITL	2.1
	PP9 - ZLUZ	9.1
	PP14-LUSE	14.1

PA 2.1 – Development of Master Plan for the development of a regional-level port system in Emilia-Romagna region - Project proposal for the renewal of Rimini canal Port - PP2 ITL

This pilot action reports the analyses carried out for the preparation of a project proposal for the redevelopment, enhancement and enhancement of services and infrastructures of the Rimini canal. Taking into account the aspects of the port with a strong landscape, production and tourist value and the environmental, infrastructural and settlement conditions, analysed in Deliverable 5.2.1, in this phase we proceed to the development of analyses on the criticalities and potential of the Rimini Canal Port. The strategy proposed with this report aims to create an area that integrates perfectly with the urban context in which it is inserted and highlights the characteristics of historical value that are currently underestimated.

1. Restore hydraulic safety conditions;
2. Connect the areas already redeveloped in correspondence with the waterfront;
3. Qualify existing structures and services;
4. Implement connectivity between the dock and XXV Aprile Park, as well as between the two sides of the canal;
5. Enhance existing activities: tourism, boating, fishing and shipbuilding.

Connections with the territory

The Pilot Action 1 provides a multitude of benefits to the Canal Port of Rimini and its community. To sum up the principal opportunities derived from the initiative:

- Creating better quality urban spaces based on the effective needs of the port community and the involved stakeholders
- Fulfilment of the needs of the stakeholders within the co design approach supported by the submission of a questionnaire
- Raising docks and regularizing moorings aimed at increasing the attractiveness of the Canal Port
- Re connection of cycle pedestrian paths for the interconnection of socio-cultural poles
- Functional spaces for loading dock also safe and attractive for tourists and locals
- Regulatory feasibility guaranteed trough the involvement of local authorities such as “Autorità di Bacino del Po” and local municipalities and administrations
- Technical feasibility supported by the analysis of previous research on hydrological issues reported by Brath 2005 and Alpina Acque 2006

Activities carried out so far

The preliminary analysis was addressed in seven different activities, covering different scales and different themes, that are basically related to the seven topics identified in the previous deliverable D.5.3.1 (1° pilot action advancement session), as listed below:

1. Analysis of the existing institutional, regulatory, and environmental framework of the
2. functional pole;
3. Analysis of the urban, territorial, and landscape system;
4. Analysis of the relations between the port, the city, and the neighbouring territories;
5. Analysis of the existing heritage context;
6. Analysis of the existing functions and services with particular reference to ICT services;
7. Mapping of the socio-economic and cultural context;
8. Analysis of the historic and cultural values.

Each one was the subject of research activity, desk analysis, surveys, and stakeholders' consultation.

Most of the data were collected through the web sources, but the consultation with the stakeholders was essential to identify the most critical issues to consider in shaping the Pilot action activities aimed at the renovation of the area. In the months of May and June 2021, the first meetings with the main involved stakeholders were held. In particular, the stakeholders consulted so far are the following:

- Municipality of Rimini
- Sea Workers' Cooperative
- ARPAE

A first consultation event took place with the technicians of the Municipality of Rimini on 18th May 2021. During this meeting, the Municipality shared the recent urban regeneration works carried out in the Canal Port area and the ongoing project initiatives. Moreover, it expressed some criticalities and potentialities of the area, in order to identify possible strategies of intervention and enhancement of the same. Finally, the Municipality shared some documents and graphic design elaborations (for example, related to the project of the new "Parco del Mare").

At the end of this preliminary phase, an internal report was prepared for the FRAMESPORT consortium, presenting what emerged from the analysis of the 7 activities described above with a description of 8 macro-areas.

In Phase 2 the analysis for the identification of criticalities and potentials and the research of the indicators for the analysis and monitoring of urban quality took place. The most significant topics of this phase are the following:

1. SWOT Analysis (Strengths - Weaknesses - Opportunities - Threats) based on the results of the preliminary analysis delivered in the Phase 1;
2. Graphic tables summarizing the potential and criticality of the Porto Canale area;
3. In-depth analysis of the criticalities identified by the analyzes and surveys;
4. Data collection to identify a set of significant indicators for the assessment of the urban and infrastructural quality of the Porto Canale area;
5. Analysis of the data collected and identification of a proper set of indicators;
6. BOCR analysis (Benefits - Opportunities - Costs - Risks) based on the selected set of indicators;
7. Identification of the priority scale of the interventions to be carried out for the redevelopment of the Porto Canale area.
8. Elaboration of project concepts to be discussed with the Stakeholders involved.

In this phase, the contribution of the Municipality of Rimini was of fundamental importance, which actively supported the analysis phase by providing all the material necessary to conduct the analysis, in particular project files, shapefiles for the GIS and support for regulatory issues. Three meetings have been arranged for autumn 2022.

Intermediate results

A first intermediate result was reached from the analysis conducted in the first phase. It consists of the identification of the criticalities and potentialities located in the area of the Porto Canale through the SWOT analysis. The SWOT analysis is extremely useful for a first phase of processing and interpretation of the data collected from the analysis of the state of the art, but it does not provide information on the degree of priority of an intervention over the others. For this reason, it was deepening the meta-design analysis through the use of indicators that make it possible to identify a degree of priority of the actions to be taken for the redevelopment of the Porto Canale area through a BOCR analysis. Before identifying the degree of priority of the interventions to be

carried out within the Pilot Action 1, some graphic layouts were created to represent the critical elements on the urban plan and provide some first suggestions and concepts for improving them. As second intermediate result of the analysis conducted, a BOCR model was developed. It consists of a particular sub-category of the ANP method. Through this BOCR model it was possible to identify a priority ranking of the interventions found in the analysis of criticalities and potentialities issues. Already in the first ex-ante formulation phase of the project, urban transformation projects constitute systems of a complex nature, consisting of a large number of elements that interact with each other and influence each other. They are characterized by a multiplicity of solutions that can be influenced by infinite possible combinations between the elements of the problem. Therefore, the possibility of having different alternatives to choose the best solution becomes essential. The evaluation of alternative scenarios of urban transformation represents a complex decision-making problem that is frequently analysed by means of Multicriteria Analysis. In the ANP methodology (a class of Multicriteria Analysis), the decision-making problem is schematized as a network of elements organized in groups and correlated by various relationships of influence. The network structure allows to evaluate the interdependence relationships both within each group of elements and between the various groups of elements. In the literature, the application of the ANP method for the assessment of urban and territorial transformation scenarios is widely treated by authors such as Bottero.

The following are the basic steps for the development and application of an ANP model:

1. Structuring of the problem and construction of the decision-making model;
2. Compilation of the comparison matrices in pairs;
3. Training of Super-matrixes;
4. Aggregation of results;
5. Sensitivity analysis of the results.

The most common case of a complex network model with control hierarchies is the BOCR model (Benefits, Opportunities, Costs, Risks). In detail:

- Benefits: favourable aspects identified in the analysis of the area;
- Opportunities: potentially favourable aspects deriving from the planned project actions;
- Costs: negative aspects identified in the analysis of the area;
- Risks: potentially negative aspects that can be caused by project actions.

In this model the complexity of the problem is broken down into four separate subnets consisting of the clusters of environmental, economic, infrastructural, urban and social aspects. Each subnet produces a ranking of alternatives that will then be correlated to that of the other subnets to obtain a global result that provides a ranking of choice options. In the case of the Porto Canale of Rimini, it is intended to evaluate the priority of intervention among the redevelopment actions identified by the previous analyzes. The alternatives considered refer to the current situation (option 0), i.e. the non-intervention option, and to the possible intervention solutions identified by the previous analysis phases. In conclusion, the BOCR analysis shows that the degree of priority in the implementation of the redevelopment of the Rimini Porto Canale area is as follows:

1. Improvement of cycle-pedestrian paths;
2. Redevelopment and raising of the docks and regularization of the moorings;
3. Creation of urban spaces of better quality (redevelopment of P.le Boscovich);
4. Realization of the new Fish Market;
5. Construction of a new exchanger car park;
6. Construction of new tourist links (Croatia);
7. Implementation of the "Ferry Vittoria" service;
8. Redevelopment of the slipway;
9. Maintenance of the current configuration (absence of intervention).

Next activities

The next activities to be done are the following:

- Consultation of the Stakeholders to confirm the results obtained in the preliminary phase of analysis for the redevelopment of the Porto Canale areas;
- Identification of the technical and regulatory margins necessary to plan interventions;
- Final drafting of the regeneration project of the Porto Canale area

Problems encountered

Availability of data for the identification of the set of indicators

Despite the readiness of the Municipality of Rimini to provide us with all the data and information requested, sometimes the data necessary for the identification of some indicators potentially useful for the analysis was not available. Furthermore, sometimes despite having the data to calculate an indicator, there was no availability of targets with which to compare the data collected to verify its applicability.

Identification of the project regulatory limitations on the quays

Since the docks of the Porto Canale are both the responsibility of the River Authority Marecchia-Conca and the Port Authority, there have been some difficulties in understanding which rules to base the project interventions.

Need to raise the quays hindered by the impossibility of reducing the hydraulic section of the canal

Among the problems identified by the analysis, the raising of the docks was a priority, however this is problematic because from a comparison with the Civil Protection and the River Authority it emerged that it is forbidden to reduce the hydraulic section of the canal because it would constitute an increase in danger in case of flooding of the canal.

Accuracy of the connections established within the BOCR decision-making model

In order to obtain reliable results from the BOCR model it is necessary that all the connections between the nodes of the network are established as precisely as possible. Incorrect modelling of relationships can cause an alteration in the ranking of intervention priorities.

PA 9.1 – Development of Master Plan for the development of a county-level port system in Zadar County - PP9 ZLUZ

The aim of Pilot Action is to classify the county level port system and create necessary development steps for Zadar County ports, of which the end result will be a Master Plan. This document will classify for the first-time different levels of port sin a meaningful and systematic way. It will define the necessary steps and guidelines for the development of the port system in order to improve the infrastructure, commercialization of the port space, customer services, the available information for users and encourage cross- border cooperation/ service. The County Port Authority of Zadar has the largest number of ports (111) under its jurisdiction. While these ports are of great local and county significance, most are underdeveloped, and their commercial potential has not yet been adequately exploited. Development of these ports is of utmost importance for the touristic and economic system, depending on the cross - border exchange. Regarding the durability and transferability, the Master Plan will classify ports at county and local level, and this is absolutely applicable on the Croatian and Italian side. Furthermore, the development plan will cover the infrastructural, organizational, legal, and economic aspects which can be further adapted to any region on the Adriatic or in Europe.

Connections with the territory

- Classifying the county level port system and creating the necessary development steps for Zadar County ports will lead to increased security and protection in ports, reduce the impact of shipping on environment, increase modal split relations, improve inter modality Master plan will collect and systematise relevant key data on small ports that are to be shared as starting point of any further development
- Improve the accessibility of ports for travellers, tourists and excursionists
- Improve the integration of ports into the local passenger transport system
- Increase the reliability of maritime transport in difficult weather conditions
- Improve the integration of the maritime sector into socio economic developments in the country

Activities carried out so far

Of the activities carried out it is important to mention that the Zadar Port Authority conducted a tender procedure for the development of a master plan. Two offers from external experts have arrived and we expect to sign the contract with one of them soon.

Intermediate results

Intermediate results include data collection for the development of the Master Plan.

Next activities

Signing a contract with an external expert associate for the development of the Master Plan. After Master Plan's preparation, there will be carried out activities that include checking the validity and accuracy of the document, followed by potential proposals that will ultimately be useful for the development of the final version.

Problems encountered

An appeal was made during the announcement of the tender for the creation of the Master Plan. We believe that it will be resolved soon, and the contract will be signed.

PA 14.1 – Development of Master Plan for the development of a county-level port system in Ličko-Senjska County - PP14 LUSE

Introductory part of this preparatory report describes the pilot project activities undertaken by the Senj Port Authority. Aim of the activities envisaged for this project consist of extensive research activities encompassing a lot of smaller scale surveys and researches whose final purpose leads to

creation of the Master Plan for the development of a county-level port system in Ličko – Senjska County. Researches plan to develop an overview of the existing state in all of the smaller ports under the Ličko – Senjska County governance and according to the results, the Master Plan will be created encompassing all of the short-comings and all of the improvement potentials for all of the ports in County. Port of Senj as the biggest port containing the largest number of entities and stakeholders will benefit from the thorough research regarding all of the possibilities that could benefit the region. Stakeholders will be involved in several levels of the process to assure the most transparent scenario will be represented in the Master Plan.

Activities carried out so far

In this report it is worth mentioning that the Senj Port Authority conducted a tendering procedure where the external expert has been appointed for the creation of the Master Plan in regard to creation of a document that represents a development plan on a county-level port system in Lika-Senj County.

Intermediate results

Intermediate results encompass appointment of external experts and creation of a Master Plan draft document. Draft document is already in the development and will probably be done until March 2022.

Next activities

Following the creation of a draft document regarding the Master Plan for the Lika – Senj county, activities to be done incorporate checking the validity and accuracy of the document followed by potential suggestions that will ultimately benefit the creation of a final version. External experts will take the suggestions from the project partner and involved stakeholders into consideration before creating a final version.

Problems encountered

No problems were encountered during the researching activities nor during the creation of the Master Plan draft document.

3.3.1. Comments

All the three PAs contain in their titles the word “Master-plan” since wide areas (counties or regions) are analysed from many different points of view. Data collection is crucial in all the three cases for performing a proper analysis of the study area. For this purpose, tenders were launched when necessary. First examples of results consist in SWOT/BOCR analyses. No specific problems were pointed out, except the difficulty in retrieving some kinds of data.

3.4.Training and knowledge aspects

Table 3.4-1 Pilot Actions of the macro theme: Training and knowledge aspects

Macro-theme	PP	PA
T&K	PP1 - MMON	1.1
	PP5 - ARAP	5.4

PA 1.1 – Develop / refine professional skills for refitters and shipwrights for the classic and historical boat sector - PP1 MMON

The aim of the pilot action is to strengthen the operational capacities of sailing and nautical centers through the improvement of professional skills dedicated to ancient crafts and applied to new technologies. The challenge that the pilot action involves is the recovery of knowledge related to the profession of shipwrights that in recent years has had less and less development and that we want to bring back to a new interest in training and guidance to the new generations.

The implementation of the pilot action will be entrusted to an external company that won the tender procedure carried out in previous months. In January, the awarding of the contract was concluded with the signing of the contract and from February, the implementation of the activities began. A major problem encountered was the length of time taken to verify and conclude the public procedure. The specific objectives of the pilot action are:

- Implement technological knowledge for the strengthening of sailing and nautical centers
- Develop professional skills in the field of refitters and shipwrights
- Promote awareness and attractiveness of the professions related to the sector.
- Create a database of knowledge and skills in the field of classic and vintage sails.

Connections with the territory

- The Pilot Action is aimed to reinforce the operational capacities of sailing and nautical centres thanks to the improvement of professional skills and exchange of technologies, in

particular to promote the training of new generations for the profession of axe masters. The different values that are carried out are:

- Exchange and implement of technological knowledge of the north Adriatic sailing and nautical centres system
- Developing professional skills in the field of refitters and axe masters with the aim of creating a training school)
- Promoting awareness raising and attractiveness of professions related to the sector
- Create a database of connections, knowledge, and skills in the sector of classic and historical sailboats in the area of the north Adriatic Sea

Activities carried out so far

Now the activities that have been carried out are related to the phase of the public procedure, concluded in January 2022. The company entrusted with the PA has started at the beginning of February the phase of data census and data sheets for the construction of the database of classic and vintage boats (first project activity).

Intermediate results

At the moment the implementation of the activities has just begun, and no intermediate results have been achieved.

Next activities

In the next period, the activities that will be realized will be the realization of the technological platform that will see the insertion of the training modules in e learning and that will be container of the database of classic and historical boats. At the publication of the platform will be realized a promotional activity through the dissemination of the project dedicated to the School of axe on dedicated channels and an educational for the press. Lastly, a scholastic orientation activity will be carried out for the students of the third classes of the lower primary cycle of the Monfalcone schools.

Problems encountered

Currently no problems have been detected in the implementation phase of the activities themselves as they have just begun.

PA 5.4 – Creation of Innovation Lab to promote development and planning of small ports along the Adriatic coasts: training and learning events

Arap will promote the constitution of an Innovation LAB, that will be the instrument to promote development and planning of small ports along the Adriatic coasts. The purpose is to engage and coordinate citizens, artists, students, governmental agencies, businesses and community organizations in Abruzzo to enhance public awareness, to intercept and to valorise different competences and experiences, to stimulate measures and actions aimed at recovering small port efficiency and attractiveness. Innovation Lab is articulated in four sessions: a) energy efficiency and pollution reduction; b) valorisation of “port space”; c) ICT solutions; d) training/informative paths.

Connections with the territory

The Pilot Action provides a multitude of benefits to the Local ports of Vasto and S. Salvo and their communities in particular Innovation Lab is articulated in four sessions: a) energy efficiency and pollution reduction; b) valorization of “port space”; c) ICT solutions; d) training/informative paths. For what concerns the PA5.4, the main benefit on the territory is represented by enhancing awareness and competences among young generations on trades of the sea. All sessions foresee the involvment of local authorities, sectorial association and general citizens

Activities carried out so far

- Signed the contract with a local association for the rediscover and valorisation of ancient trades
- Training meetings with the students of the Mattioli D'Acquisto school in San Salvo.
- January: 1st Lesson Preparation lessons at school and Visit to the Tourist Port of Marinelle - San Salvo Marina;
- February: 2nd Lesson at school and Excursion to the Port of Vasto (commercial and tourist)

Intermediate results

Training meetings with the students of the Mattioli D'Acquisto school in San Salvo.

Theme: ANCIENT TRADES AND NEW PPORTUNITIES

Purpose: Discover the ancient crafts and places of traditional fishing and maritime trade for develop sustainable and historically based models for new use of marine resources

Next activities

Arap will complete the training activities

Problems encountered

Currently no problems have been detected in the implementation phase of the activities themselves.

3.4.1. Comments

As the macro-theme name suggests, the direct contact with people and the desire of sharing the expertise knowledge characterize these PAs. For this reason, actors like touristic associations, schools, and local marinas figure in the stakeholders list. Lessons and training sessions for involving the students have been carried out both in case of young and adult students: scholars have been the primary subject of the PAs, and touristic associations have been involved as well. The same kind of activity will be carried on also in the next period. Even technological solutions such as the development of a platform are expected.

3.5. Business oriented aspects

Table 3.5-1 Pilot Action of the macro theme: Business oriented aspects

Macro-theme	PP	PA
Business	PP12 - LOGO	12.1

PA 12.1 – Development of small port prototype. Identification of opportunities to be taken in order to develop a single port and convey outcomes to stakeholders for the future development and investment plans - PP12 LOGO

Aim of Logoteam's pilot action consists of research and systematization of opportunities that have the potential to be implemented and successfully deployed in small ports and harbours on both sides of the Adriatic coast. Research consists of discovering best practises all around the world while also keeping track of the current situation and opportunities that have potential in the existing state of the ports. Researching encompasses a whole spectrum of fields of potential improvement ranging from opportunities in use of renewable energy, efficient business practises, facilitation of existing processes, ecologically acceptable waste disposal practises, emergency reaction kits and whole lot of other spheres…

All of the potential improvement factors will be an agenda for the discussion with relevant stakeholders so the outcome can reflect everyone's vision for the future development of the ports and harbours.

Connections with the territory

- Logoteam's contribution is focused on research and systematization of opportunities that have the potential to be implemented and successfully deployed in small ports and harbours on both sides of the Adriatic coast
- Research consists of discovering best practises all around the world while also keeping track of the current situation and opportunities that have potential in the existing state of the ports
- Researching fields renewable energy, efficient business practises, facilitation of existing processes, ecologically acceptable waste disposal practises, emergency reaction kits
- All of the potential improvement factors will be an agenda for the discussion with relevant stakeholders so the outcome can reflect everyone's vision for the future development of the ports and harbours

Activities carried out so far

Project Partner Logoteam's members focused on thorough desk and occasional field research regarding the existing state of Adriatic ports, coupled with forming of a draft document containing non-exhaustive examples and best practises from all over the world. As the task complexity exceeds its nominal expectations, most of the work falls under the category of deep desk researching activities.

Intermediate results

Intermediate results encompass creation of a document containing the best practises from ports and similar infrastructural areas keeping in mind that the ultimate goal is sustainability, thus most of the examples in the document focus on efficient business practises and processes, renewable energy, waste management solutions… The document draft consists of several chapters or paragraphs, each containing one of the aspects that could potentially be transferred to the Adriatic coast. The aforementioned documents consist of following sub-paragraphs: Informatization, ecology, services, safety, tourist offering, infrastructure and superstructure.

Next activities

Following activities encompass continuation of research work that needs to be done which is then followed by compiling of a final draft version of a document, i.e., pinnacle of this pilot action. The step after involves project pilot's dissemination activities.

Problems encountered

No problems were encountered until this point.

3.5.1. Comments

The only PA whose macro-theme is "Business oriented aspects" shares some aspects with some of the E&E PAs: desk and filed research have been carried out so far for the purpose of making ports more sustainable. The approach used for the analysis and the fact that the PA is focused on the services offered by the ports remind also to P&M and ICT PAs.