Report on pilot actions replicability

Template version

D.5.4.1

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1 Introduction

The transfer of project results and main outputs requires appropriate guidelines delivering the methodologies used and a description of the context where projects have been implemented. This report represents the output through which project partners and stakeholders may be able to better understand the methodological frame used for the pilot actions implementation and to replicate and scale-up them in other territorial contexts. As final deliverable of pilot actions, the contents of this document may provide valuable insights, through the FRAMESPORT Toolbox (D.5.4.2), for the strategy consultation and for the structure of the FRAMESPORT strategy paper.

2 Pilot action in a nutshell

2.1 Contextualization

The Port Authority of Umag-Novigrad's pilot action was strategically implemented in the Istria County region of Croatia, which is known for its stunning, extended coastline with an extensive number of small ports and marinas. This region has a remarkable history of seafaring and maritime activities, making the development of small ports a critical factor in its economic and touristic potential. Due to its essential position as a leading port authority in the north-western part of Istria, the Port Authority of Umag-Novigrad manages various small ports in the area and acknowledged the need for improving their management and services. The implementation of this pilot action was initiated by the desire to boost the available technologies for port management, enhance services necessary for more effective management of small ports, and improve communication with customers and the port guards from the port authority. The potential for economic and touristic development in the region made it an ideal context for testing and validating the effectiveness of the pilot action, which aimed to serve as a model for other similar regions facing similar challenges in port management and services. By implementing solutions in their port, the Port Authority of Umag-Novigrad aimed to showcase the potential of their pilot action in contributing to the wider strategic objectives of the FRAMESPORT project, as well as to provide a valuable source of inspiration for other port authorities across the European Union.

2.2   Overall vision of the pilot

The pilot action of the Port Authority of Umag-Novigrad aimed to create a Port Management Program Platform that would provide supervision of vessels in ports managed by the authority, as well as management of IT and other services offered by the port authority. The implementation of this project involved several connected modules and applications, including video surveillance systems, an information system upgrade, a berth monitoring system, and the acquisition of an electric-powered vessel. The overall goal of the project was to improve the available technologies for port management and services, enhance communication with customers and the port guard, and increase the efficiency of management for small ports.

The pilot action was carried out in several phases, including hiring an external expert to prepare a document outlining the fundamental needs for the project pilot, market research for procurement procedures, and the implementation of the procurement procedures themselves. The project documentation with cost estimates was prepared, and the projects were divided into three main areas for implementation.

The reached results of the pilot action include the successful implementation of all four parts of the procurement process and the creation of a more efficient and effective port management system, the fourth part being the acquisition of the electric-powered vessel. The system has allowed for the monitoring of ports and berths through video surveillance cameras, as well as the ability to check berth availability, the landing procedure, and payment for services. The electric-powered vessel has facilitated movement in the port areas, and the use of mobile phones has allowed for the acceptance, billing, and printing of invoices, as well as the sending of invoices to customers in a digital format. Overall, the pilot action has improved the services necessary for efficient management of small ports and increased the communication with customers and the port guards.

3   State-of-the-art and literature review

As part of the implementation of their pilot action, the Port Authority of Umag-Novigrad did not require an extensive literature review therefore this part is not applicable. The Port Authority of Umag-Novigrad followed their existing procedures in order to ensure that the procurement process was transparent, fair, and efficient. The Port Authority of Umag-Novigrad placed particular emphasis on following the appropriate regulations and laws governing procurement procedures.

This allowed for a smooth and streamlined procurement process with help from extensive research and consultations with external sources. However, some general guidelines were followed such as:

- A focus on continuous improvement and innovation, such as through the use of new technologies or the development of new services to meet changing customer needs and expectations.

- Strong collaboration and communication with stakeholders, including port users, local communities, and government bodies, to ensure that port operations are aligned with regional and national goals and priorities.

- Effective management of environmental and social impacts, including through the implementation of sustainability practices and compliance with relevant regulations and standards.

- A focus on safety and security, including through the implementation of robust risk management systems and emergency response plans.

- Regular monitoring and evaluation of port performance, including through the use of key performance indicators, to identify areas for improvement and measure progress over time.

4 Pilot action development and main obstacles

4.1 Step-by-step procedure

At the beginning of the pilot action, the Port Authority of Umag-Novigrad hired an external expert to prepare a document containing all the fundamental needs for the project pilot. This expert helped in formulating the existing state and future needs through market research and development of the project solution. Following this step, thorough market research was done to prepare for the next steps, which were public procurement procedures for the required equipment and further pilot advancement.

The project documentation with cost estimates was prepared on the basis of which the projects were divided into three main areas, namely the procurement of a Video surveillance system, Application development, upgrade of current systems, and adaption of the information system presently used by the Port Authority of Umag-Novigrad, and the berth monitoring system accompanied by service providing cabinets. All four parts of the procurement have been finalized, and the pilot action is fully implemented and up-and-running.

The Video surveillance system helps in the automation and modernization of business processes using new innovative technologies and software solutions, such as smart video surveillance. The Berth monitoring system accompanied by service-providing cabinets has resulted in the integration of the information system with the existing financial system of the Port Authority of Umag-Novigrad, increasing general and port security, and overall integration with the platform developed as part of the FRAMESPORT project. The Application development, upgrade of current systems, and adaption of the information system presently used by the Port Authority of Umag-Novigrad have led to automation and modernization of business processes, collection of invoices via mobile phones, automatic issuance of nautical contracts, keeping a register of nautical contracts, transfer of necessary data to the graphic display of the port, etc. The electric vessel acquisition has facilitated movement in the port areas.

4.2   Target groups and stakeholders

The target group of the Port Authority of Umag-Novigrad's pilot action was primarily the users of the small ports managed by the Port Authority, including boat owners, sailors, and visitors to the ports. The stakeholders involved in the pilot action included the Port Authority of Umag-Novigrad, local government authorities, and suppliers of the thematic equipment used in the project.

To involve the target group and stakeholders, the Port Authority of Umag-Novigrad relied on several methodologies and tools. Firstly, the external expert hired by the Port Authority helped to formulate the existing state and future needs of the ports through market research and development of the project solution. Additionally, the Port Authority conducted thorough market research to prepare for the implementation of procurement procedures for the needed equipment.

Once the procurement procedures were completed, the Port Authority implemented the new equipment and services, such as the video surveillance system and berth monitoring system, to improve the management and services of the ports. The electric-powered vessel also contributed to the improvement of the port activities, benefiting both the port guard and users of the ports.

The involvement of the target group and stakeholders in the pilot action through these methodologies and tools contributed to the achievement of the results, including the enhancement of available technologies for port management, improvement of communication with customers and the port guard, and more efficient management of small ports. The pilot action served as a model for other similar regions facing similar challenges in port management and services.

4.3   Main obstacles

There were several obstacles faced during the development of the pilot action by the Port Authority of Umag-Novigrad. One of the main obstacles was the economic crisis caused by the COVID-19 pandemic and the war in Ukraine, which greatly impacted the market and prices. This led to companies working under the extension of the contract for additional months. Additionally, the procurement procedure for the video surveillance system had to be repeated, and the cost estimate for the electric-powered vessel was prolonged since it was the first case in Croatia and no previous experience existed. To avoid such obstacles or reduce their impact, alternative methodologies could have been implemented such as conducting more thorough market research to anticipate potential economic and political fluctuations and ensuring that procurement procedures are done meticulously to avoid any unnecessary repetitions. Additionally, seeking advice and guidance from experts with previous experience in similar projects could have helped to avoid or mitigate any obstacles that may arise.

4.4 Identified KPIs and related achievements

Indicator	Unit of measure	Target value	Achieved value	The time horizon for monitoring (June '21/ Dec. '21/ June '22)
Public procurement for the external experts	*1x external experts*	*2*	*2*	*Apr 2021 – Jan 2023*
Drafting of the project solution document	*1x document draft*	*1*	*1*	*Jun 2021*
Public procurement for the thematic equipment	*1x procurement procedure*	*4*	*4*	*March 2023.*
Implementation activities	*1x Implementation*	*4*	*4*	*Jan 2022. – Jan 2023*
Dissemination activities	*1x presentation*	*2*	*1*	*Sep 2021 – Apr 2023*

These KPIs were chosen as they are directly related to the objectives of the pilot action and allow for the monitoring of the progress of the project. The first three KPIs measure the efficiency of the procurement process, which is a critical aspect of the project's success. The fourth KPI focuses on the timely execution of the implementation activities to ensure that the project remains on schedule. Finally, the fifth KPI measures the success of the dissemination activities in reaching the target audience and promoting the project.

During the monitoring phase, these KPIs were tracked to evaluate the progress of the pilot action. The results showed that the procurement process for the external experts was completed in a timely manner, the drafting of the project solution document also but the procurement process for the thematic equipment took longer than expected but was fortunately completed within the expected timeframe, i.e., ending of the project. Implementation activities were carried out according to the schedule, and the dissemination activities were successful in reaching the target audience.

In hindsight, including additional KPIs such as cost-effectiveness and customer satisfaction could have provided a more comprehensive picture of the success of the pilot action. Nonetheless, the selected KPIs allowed for the monitoring of critical aspects of the project and provided valuable insights into its progress and success.

5   Final consideration, tips&tricks

In summary, the pilot action carried out by the Port Authority of Umag-Novigrad aimed to improve the available technologies for port management and services necessary for more efficient management of small ports, and improve communication with customers and the port guard. The pilot was implemented in the Istria County region of Croatia, known for its long and indented coastline with many small ports and marinas, which presented an ideal context for testing and validating the effectiveness of the pilot action.

The pilot action involved several steps, including hiring an external expert to prepare a document containing all fundamental needs for the project, conducting market research, and dividing the projects into several main areas for procurement procedures. The thematic equipment was then acquired and integrated into the existing information system and port operations, which included a video surveillance system, an application for port management, and a berth monitoring system. Electric vessel for the facilitation of movement in the port area was also procured.

The stakeholders involved in the pilot action included the Port Authority of Umag-Novigrad, the customers of the small ports and harbours, and the port guards (employees of the port authority). The stakeholders were involved through consultation and communication throughout the pilot action development, and a locally organized targeted event, and their feedback was taken into account during the implementation and monitoring phases.

The monitoring phase involved the use of several KPIs to facilitate the process of tracking progress. The results of the monitoring phase showed that the pilot action had achieved its intended goals, with an improvement in the management and services of the small ports and harbours under management, and an increase in communication between the Port Authority and its stakeholders.

To replicate the pilot action in another territory, it is recommended to follow a similar approach to the Port Authority of Umag-Novigrad, including the hiring of an external expert to prepare a document containing all fundamental needs for the project, conducting a thorough market research, and dividing the projects into several main areas for procurement procedures. It is also recommended to involve stakeholders throughout the pilot action development and use KPIs to monitor the progress and effectiveness of the pilot action.

Annex: Pilot action synthesis

Please fill the following table with the information related to your pilot action. Please, use concise bullet points where indicated.

Project partner	PP7 - LUUN	Pilot action number	7.1.	Macro-theme*	ICT
Pilot action name		*Improvement of the available technologies for port management (berths booking system, service payment, information on user's service)*			
Group of stakeholders involved (bullet points)		- Other port authorities - Ministries - County - Port users			
Main steps (bullet points)		- External expert hired to prepare project needs document - Thorough market research conducted for procurement procedures - Procurement divided into video surveillance system, application development, berth monitoring system, and procurement of the electric vessel - Implementation and testing phase			
KPIs (bullet points)		- Public procurement for the external experts - Drafting of the project solution document - Public procurement for the thematic equipment - Implementation activities - Dissemination activities			
Main obstacles (bullet points)		- Economic crises caused by coronavirus and war in Ukraine impacting the market and prices - Procurement procedure for the video surveillance system had to be repeated			

	• Cost estimate for the electric-powered vessel was prolonged since it was the first case in Croatia and no previous experience existed.
Advice and suggestions	• Conduct a thorough market research to ensure successful procurement and implementation of equipment and technology. • Involve and communicate with all stakeholders, including the target group, throughout the pilot action. • Consider and plan for potential external factors that may impact the pilot action, such as economic crises or political instability. • Monitor and evaluate the progress and results of the pilot action using appropriate KPIs and adjust strategies accordingly. • Document and disseminate the outcomes and best practices of the pilot action to facilitate replication in other territories. • Ensure that the pilot action aligns with the overall strategy and objectives of the larger project.
Other comments	N/A

* Use the following acronyms:

- **ICT**: ICT application and service development
- **P&M**: Spatial planning and management
- **BSN**: Business oriented aspects
- **T&K**: Training and knowledge
- **E&E**: Environment and energy aspects