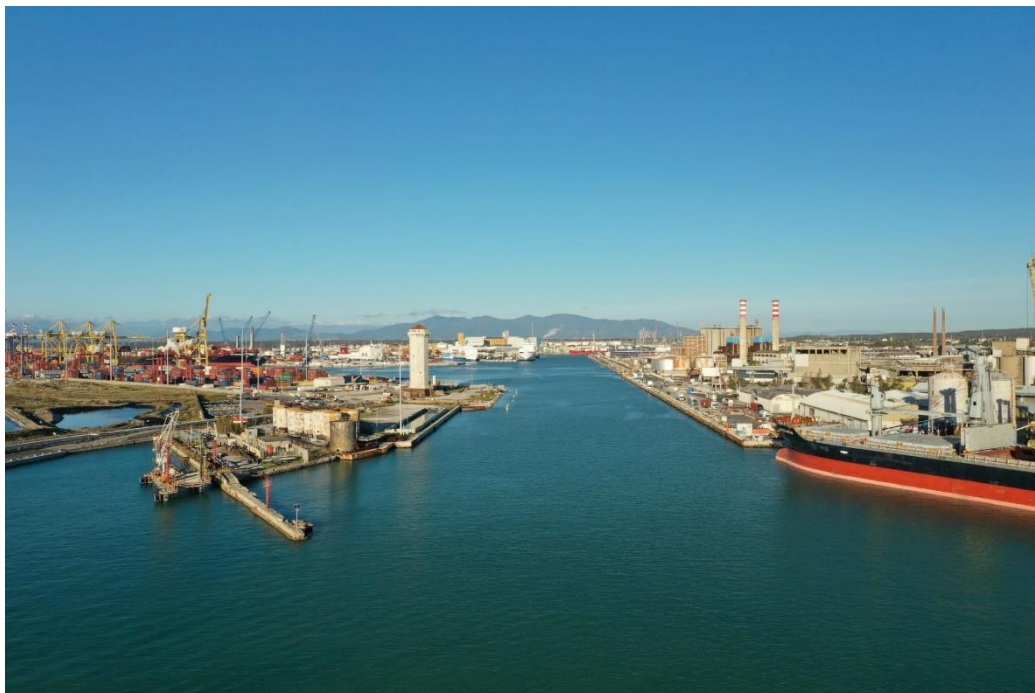




Action Plan

CREATION OF A NEW SPATIAL PLANNING TOOL FOR CROSS BORDER EFFICIENT LOGISTIC FLOWS AND OPERATIONS



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¹ Aerial photo of the access channel of the port of Livorno, courtesy of Raffaele Cappelli- RAI Radio Televisione Italiana



European Union
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ABBREVIATIONS

IRE	Interreg Europe
TEN-T	Trans-European Transport Network
ICT	Information Telecommunication Technology
5G	5 th technology of mobile communications.
RRP	Recovery and Resilience Plan for Italy



1 PART I – GENERAL INFORMATION

Project	SMOOTH PORTS
Partner Organisation	ADSP MTS
Other Partner Organisations involved:	
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NUTS2 Region	Tuscany
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Smooth Ports is an Interreg Europe project, coordinated by the Hanseatic Free City of Hamburg, Germany, which pools ports and regions across Europe with the goal of supporting the CO₂ emissions reductions. This goal can be achieved through decarbonisation of port and logistic operations, more efficient processes and deployment of ICT as a means to curb pollutant emissions through smoother operations. The port of Livorno has decided to draft an Action Plan focussed on ICT measures, due to the fact that immediate benefits are better achieved through smoother and smarter operations, as well as because the target Programme, the Italy France Maritime, does not foresee substantial infrastructural investments.

In addition to the project's partners, notably the Coordinator, the port of Hamburg Marketing, the port of Nantes -Saint Nazaire, the Regional Administration of Varna, and in Italy the port authority of the Norther Tyrrhenian sea and the Municipality of Monfalcone, Smooth Ports has also involved local stakeholder to engage a discussion on smart and efficient port and logistic management. In the Livorno case, these stakeholders have been notably control authorities, the customs agency and the terminal operators.

In the project, from the Livorno side, the following bodies, authorities and organisations have been involved:

- Agecontrol, Italian body responsible for food quality control;
- Customs agency (Livorno branch);
- Plant Health service (regional office, Livorno branch);
- Health office;
- Terminal operator Lorenzini;
- Terminal Operator TDT;



-Italian Guardia di Finanza, Police with responsibility on customs and fraud prevention.

These stakeholders are the same institutions and organizations involved in the Port Community Services coordination board, and are all concerned by improvements in the efficiency and competitiveness of port related logistic chains.

Several meetings in the framework of Smooth ports project have been held, both physical, when it was possible, and virtual.

These meetings have been held:

- 16/12/2019, meeting of Port Community services users, first presentation of project's expected outcomes and results;
- 17/01/2020 Specific meeting with control authorities;
- 5/2/2020, workshop with involved stakeholders and project's partners in Livorno;
- 18/11/2020, local stakeholders' meeting, virtual, as update on project's progress;
- 21/02/2021, local stakeholders' meeting, virtual, as update on projects' progress.

In so doing, the identified stakeholders have been continuously updated and informed and have been given the chance to provide contributions on potential improvements for the efficiency of the logistic chain. These inputs have been used mainly to understand and focus on the needs for IT planning of logistic facilities, digital tools to improve freight circulations (such as new services, re-design of already existing services) and to identify more critical procedures to be addressed with a new IT planning. For instance, the truck appointment or Vehicle booking system have been discussed and analysed, as well as paperless management of control and inspections controls on freight.

The project's budget totals for SMOOTH PORTS 1,139,601.00 euros, in the time frame 1/08/2019-31/01/2022 for the first implementing phase and the additional twelve months for the second implementing stage (till 31/1/2023).

2 PART II – Policy Context

The Action Plan aims to impact:



- Investment for Growth and Jobs programme
- European Territorial Cooperation programme
- Other regional development policy instrument

Name of Policy Instrument addressed:

Italy France Maritime Programme



3 PART III – DETAILS OF THE ACTIONS ENVISAGED

3.1 ACTION 1-

CREATION OF A NEW SPATIAL PLANNING TOOL FOR CROSS BORDER EFFICIENT LOGISTIC FLOWS AND OPERATIONS

3.1.1 BACKGROUND

In modern ports and logistic chains, ICT and spatial planning are strictly intertwined. Each development and upgrade of transport infrastructure has to go hand in hand with improvement of ICT services and infrastructures, so that operations are smoothly managed and port facilities can interoperate even with more distant transport nodes in the hinterland. In many ports, there is an increasing call for digital twin, that is a digital replication of the port that mirrors every operation and allows to steer activities automatically and with innovative technologies, including Artificial Intelligence.

Lessons learnt in the framework of Smooth project show therefore that ICT design and planning of port operations has to be coordinated at transnational level by port partners, in order to avoid any disruption of the supply chain. These lessons have been pointed out notably in the following:

- Deliverable 2 - Physical Circuit of Controls in the Port of Livorno, delivered by ADSP MTS; this deliverable is relevant as the design of a sound flow and circulation of goods within and outside port area can save unnecessary movements and reduce thus CO2 emission by road transport;
- Deliverable 3- Analysis of Challenges in the Current Flow of Controls and In the ICT System-Co2 Emissions Analysis, delivered by ADSP MTS; this deliverable has been relevant to assess potential improvements of ICT infrastructures at node level, determining new digital services that can support an efficient management of logistic flows;
- Virtual visit of the port of Antwerp, where a Single Border Inspection Point has been set up, made on December the 3rd 2020; this visit has been proven useful to see how physical and organisational issues can be fixed to better manage freight flows;



- Paperless Port with DAKOSY, virtual meeting held on February the 25th 2021; this meeting has shown the novel cutting-edge solutions of a digitalized port and has provided a benchmark for represent in a digital environment port operations.

Table 1, list of best practices referred to in the making of the Action Plan

Best practice	How	Why	Donor region
Tuscan Port Community System-TPCS and paperless port DAKOSY	Lessons learnt in the management of the Local community for delivering on new ICT processes and services	Many ports, even in the IT-FR Maritime Cooperation are, still do not have a PCS or have in general Port Community IT tools	TPCS funded by ADSP MTS budget, Tuscany; DAKOSY funded with Hamburg region financing
Carbon Footprint Measurement Methodology	Lessons learnt to have reliable data from port monitoring tools and estimation on time and effort to perform checks and visits on cargo flows	This information and capability are still missing in many ports of the IT-FR Maritime cooperation area, or it is not updated regularly.	Carbon footprint funded by ADSP MTS, Tuscany
Single Border Inspection Point-Antwerp	Lessons learnt from Antwerp for designing and implementing a Border Inspection Point for the port	Livorno is still building its Border Inspection point and many other ports in the region do not have this facility	Single Border inspection point funded by Antwerp Port Authority

The lessons learnt from Smooth project's activities show that, although each port or logistic node has to develop its own tools and responses to deal with the growing needs of sustainability and digitalisation, specific requirements for logistic management and environmental impact of transport operations have to be better solved at transnational or cross border level. This is the case of carbon footprint measurements, that should be done in a harmonised manner, following international standards, and digital services shall be implemented in a way they are interoperable and follow a similar development logic.

As mentioned in the above, Smooth Ports is an Interreg Europe project, coordinated by the Hanseatic Free City of Hamburg, Germany, which pools ports and regions across Europe with the goal of supporting the CO2 emissions reductions. This goal can be achieved through decarbonisation of port and logistic operations, more efficient processes and deployment of ICT as a means to curb pollutant emissions through smoother operations. The port of Livorno has decided to draft an Action Plan focussed on ICT measures, due to the fact that immediate benefits are better achieved through smoother and smarter operations, as well as because the



target Programme, the Italy France Maritime, does not foresee substantial infrastructural investments. This kind of action, therefore, matches better with the traditional scope and size of IT-FR projects.

In addition to the project's partners, notably the Coordinator, the port of Hamburg Marketing, the port of Nantes -Saint Nazaire, the Regional Administration of Varna, and in Italy the port authority of the Norther Tyrrhenian sea and the Municipality of Monfalcone, Smooth Ports has also involved local stakeholder, as previously said, to engage a discussion on smart and efficient port and logistic management. In the Livorno case, these stakeholders have been notably control authorities, the customs agency and the terminal operators. The concern for timeliness and efficiency of operations is common to both public and private stakeholders, and it calls for joint projects to improve logistic management and planning.

3.1.2 ACTION

The Action has the objective of paving the way to a cross border IT tool for efficient and competitive management of freight flows, in the framework of the cooperation area targeted by the IT-FR Maritime programme.

The IT tool shall display and provide the relevant information for smooth, sustainable and efficient management of freight flows in the cooperation area covered by the IT-FR Maritime programme, that encompasses the following regions:

- Coastal part of Tuscany;
- Liguria;
- Sardinia;

In Italy.

As for France, the departments of Var, Nice-Cote-d'Azur and the Corse region are included in the cooperation area.

The IT tool is structured as a cross-border GIS platform, that reports the infrastructural conditions, notably the existing facilities, the rail, road and inland waterways connections, along with the private properties that have a logistic use, such as warehouses and yards for goods storing and handling.

The importance of this IT tool lies in the cross-border management of logistic capabilities, having a comprehensive overview of the existing structures and planned improvements in an



IT-FR dimension. The IT tool integrates therefore both port, rail, road, air and waterways facilities and enables the user to check the availability of structures for logistics and handling purposes. The IT tool has also a potential also a real estate management, since it displays the main quantitative data on current facilities and the average current property values, retrieved from market values.

The table below highlights the main features of the envisaged IT tool:

Feature	Goal	How
Overview and control of availability of facilities for logistics use	Optimal use of land planning, optimisation of costs and circulation of freight	Interactive GIS mapping, displaying current occupation rates and use of existing structures
Monitoring of pollution levels and carbon footprint measurement	Delivery of environmental data on logistic impact on the environment	Direct and indirect measurement of pollution levels from selected nodes
Real estate management and investors' attractions	Optimisation of current market values for new investments in the logistic sector	Interactive GIS mapping displaying average values for rent and purchase of properties

As it is shown in the above, the IT tool is a rather global support to:

- Optimal logistic services, reducing freight unneeded movements, and exploiting the existing infrastructures without adding new facilities where not necessary;
- Investments' attractions and boost, as it allows to real time visualisation of the logistic market in a cross border dimension;
- Comprehensive monitoring of pollutant emissions, especially air pollution, and overall assessment of logistic impact on the region;

This action targets the design of the new IT-FR Maritime programme, with reference in particular to structural change in the new programming period 2021-2027. The action is related more in detail to the supporting and financing of the new spatial planning tool for cross border efficient logistic flows and operations. As policy impact action the activities are therefore meant to exert the interest of the Managing Authority towards this financing opportunity.

For raising the interest of the Managing Authority, it will be pointed out:

-the consistency with Programme priorities of reducing the impact of transport activities on the environment, through the exact knowledge of emissions sources, existing facilities and hence optimisation of routes and investment for cargo shipments in the area;



-the cross-border potential of a tool that integrates data from different sources and of different typologies (notably economic and financial, environmental, operational);

-The benefit of having an integrated dataset for logistic and transport infrastructures, that allows a cross border visualisation of infrastructures and the main information relevant for transport planning.

-the interest for public and private operators, in light of investing further in existing capacities or in new facilities, including investing in environmental protection;

-assessment of freight circulation routes and CO2 related emissions among existing facilities.

The action plan is intended to provide the Operational workplan of the IT-FR programme with a dedicated financing priority or financing reference to allocate specific funds for the improved spatial planning, leading to a cross border integrated management of logistic flows. The action does not implement therefore directly the tool: there will be the need for specific funding in the framework of IT-FR maritime programme, with a future Call for proposal.

This action is needed since the cooperation area IT-FR Maritime still lacks a comprehensive tool that allows for fast and remote overview of logistic facilities. Information on logistic facilities available has been provided in several projects, but it is scattered among different sources, with no intercommunication yet possible. Port Community Systems and Carbon footprint measurement tools have been developed as well in a differentiated manner. Many seaports, or logistic infrastructures, do not have real time information on handled flows or environmental impact of operations, lagging behind a fully digital management of their activities. Players, especially decision makers, do not know the pollutant emissions at a disaggregated level and cannot identified then the main sources of greenhouse gases and other climate change gases. This lack of knowledge can affect also both public and private investments when it comes to attract green funding from EU and international sources, since the potential environmental gain cannot be determined with detailed data. Moreover, it is worth mentioning that here we are not referring to the ADSP MTS ports only (Livorno, Piombino, Portoferraio, Cavo, Rio Marina and Capraia), but in general to all seaports, including smaller ones, in the IT-FR Maritime area. Measurements on environmental impact can be done also in relation to other inland logistic facilities, such as freight villages or distribution platforms. Comparable data will in fact exert a greater potential if all ports and nodes in the region can share their information in an integrated manner.

The proposed action can instead to contribute to solve this knowledge gap and to bridge at a cross border level the needed information on logistic facilities. Climate change information,



along with information on specific sources' contribution to CO2 emissions, is instrumental therefore to have a clear and comprehensive overview of better planning of logistic flows. This measure will be also relevant to reduce the digital divide affecting areas and infrastructures in the IT-FR cooperation region, equipping them with novel Carbon footprint monitoring assets found in many other regions in the EU.

The proposed cross border dimension proves to be the right scope for such action: in fact, a pure local or only regional tool for spatial planning would be insufficient to meet the needs of logistics chains. A more transnational or international tool, encompassing more regions in several countries, would be instead difficult to implement and would lose a required comprehensive approach, that can be offered by dedicated Interreg funding with a ETC programme.

3.1.3 PLAYERS INVOLVED

For the action's implementation, the involvement of the already mentioned IT-FR Maritime Managing Authority is of course needed. The Managing Authority is drafting the new operational programme at the moment of writing this action plan (January 2022), and is by all evidence the first stakeholder to be committed to endorse the new spatial planning tool. It is worth mentioning that the Managing Authority is the Tuscany region.

Exchanges are in due course with official of the IT-FR Maritime programme Managing Authority, notably the Director, for this adoption.

Other players to be involved, in a later stage and with reference to the adoption of the new programme for the timeframe 2021-2027, are the other regions than Tuscany (NUTS level) that take part in the IT-FR Maritime cooperation area. These are:

- Liguria;
- Sardinia, in Italy
- Region Sud
- Corse, in France.

Albeit not directly involved in the drafting of this action, these regions shall be involved when the final version of the new operational programme is formally approved.



The role of the promoter ADSP MTS is in this respect to support the adoption by the new operational programme of the provisions to finance the envisaged activities. In a later stage, after 2023, ADSP MTS wants to raise the interest of potential users and partners to actually implement the spatial planning tool.

3.1.4 TIMEFRAME

In the 2022-203, the Action plan expects to reach the formal adoption of the envisaged action within the new Operational programme of the IT-FR Maritime.

By formal adoption we mean the acceptance of the relevance of the envisaged action for the new operational programme and the willingness to support it financially in the next period, 2021-2027, through a specific reference if not a dedicated priority.

Here below we can see the timeframe, including activities that have been already carried out to involve and to share information with the Managing Authority of the IT-FR Maritime programme.

Table 2, foreseen Milestones for implementing the Action Plan, both already achieved and projected

Milestone	Description	Timeframe
Smooth ports' project presentation	Presentation of project's activities and scope to IT-FR Maritime Regional Representative	5/02/2020, during the Livorno local workshop
Smooth ports workshop 8th Virtual Meeting participation by IT-FR Maritime official	Extension to IT-FR Maritime regional representative of the invitation to the project's meeting held on 22/04/2021	22/04/2021
First anticipation of contents of the Action plan to the IT-FR Maritime programme	Dispatch of first supporting documents	28/10/2021
Dispatch of the revised contribution -Action Plan - to the Italy-France Managing Authority	Formal dispatch of the document	January 2022
Meeting with Italy-France Managing Authority	Meeting with officials of the programme- possibly the Director	February-March 2022
Acknowledgement of the contribution by form exchange	Formal communication from the IT-FR Managing Authority	April-May 2022
Adoption of the Operational programme with policy change	Operational programme of the IT-FR Maritime adopted and published	June 2022



This is an indicative timetable, that is still subject to revision and modifications as the Operational programme's drafting goes further.

It is meant that the actual spatial planning tool will require further two years for its completion. The provided timeframe is therefore referred strictly to the policy-making phase.

3.1.5 COSTS

For the 2022-2023 timeframe, in the second stage, projected costs to have an impact on the policy making of the new IT-FR maritime programme are quite limited.

The projected human resources' costs are worth 10,000 euros, counted as 2 PMs work in the given timeframe. Besides these costs, additional 200 euros for travel costs are required.

No specific subcontracting for design or preliminary assessment is deemed necessary at this stage.

It is meant that these sources are only meant for the policy-making phase, and the spatial planning tool costs are much higher and shall be detailed in the following implementation phase.

3.1.6 FUNDING SOURCES

ADSP MTS is funding this stage of policy-making impact with own resources. The Smooth ports funds, including the final lump-sum, will be also used as appropriate.

The action is expected to lever additional 2 million euros ERDF funding for a so-called simple project, that is a project with 6 partners, for implementing the new spatial planning tool for the IT-FR Maritime cooperation area.

The identified priority in the new Operational Programme is the no.3, named " a cross-border area connected physically and digitally". Since the IT-FR programme acknowledges that it can promote only small scale investments, with larger development planes left to national or other European supporting actions, the targeted funding scheme has the right size to develop a joint cross border tool with the foreseen financing in the next programming period.