STRATEGY FOR FOSTERING COORDINATED MULTIMODAL FREIGHT TRANSPORT THROUGHT ICT SYSTEMS - TRIESTE

DELIVERABLE D.T1.3.2   **Version 1**

OUTPUT O.T1.2   **02 2020**

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1. Introduction

Within the COMODALCE project, outputs of the WPT1 include a "Strategy for fostering coordinated multimodal freight transport through ICT systems" (D.T1.3.2-10)", described as "strategy for fostering multimodal transport through ICT systems setting a vision, objectives and priorities in a mid- to long-term perspective, including a detailed wish list of measures to be tested in the pilot action".

This document includes the strategy elaborated for the Port of Trieste.

2. Methodology

2.1. Setting vision, mission, key values

The definition of vision statement, mission statement and key values provides a strategic framework for the planned measures.

VISION
(Vision statement focuses on tomorrow and set the target aims to be achieved)
To reach full-fledged development of multimodal freight transport in the Port of Trieste. To steer the development of the port community by promoting technological innovation and boosting digital growth for a fully integrated supply chain. To continually improve the port to make it safer, more efficient and more sustainable.
MISSION
(Mission statement focuses on today, what challenges shall we face towards the vision today)
To reach a strong coordination and information exchange in the port-hinterland interface, overcoming all problems in coordination, connectivity, interoperability. These objectives will allow a better coordination between all stakeholders and public authorities in order to reach a further increased modal shift.
KEY VALUES
(The principles and values that are the basis of the vision of the strategy)
Neutrality. Open-Source. Interoperability. Use of standards.

2.2. Setting strategic goals

Medium term (5 years):

1. Goal #1 – Trieste & Monfalcone: full integration of the ICT systems of the port of Trieste and of the systems of the port of Monfalcone (part of Port Network Authority of Eastern Adriatic Sea since January 2020).

2. Goal #2 – Local dry ports: data exchange interoperability with the ICT systems of the dry ports of Fernetti and Cervignano (the hinterland of the ports of Trieste and Monfalcone).

3. Goal #3 – Blockchain: application of blockchain technology to all relevant data exchanges in the framework of an improved cybersecurity for all critical ICT systems.

4. Goal #4 – Other dry ports: data exchange interoperability with the ICT systems of all dry-ports connected with the ports of Trieste and Monfalcone by direct rail transport.

Long term (10 years):

1. Goal #5 – All systems: "plug and play" interoperability with the ICT systems of future external ICT systems wishing to connect with the ports of Trieste and Monfalcone.

2. Goal #6 – More Cybersecurity: Introduce all relevant new ICT technologies which might emerge that can improve the cybersecurity of all ICT systems in Port, particularly the critical ones.

Perspectives	Goal #1 – Trieste & Monfalcone	Measurement
1. Environmental and safety perspective	An integration of the processes will lead to increased efficiency also from the environmental point of view.	All port systems by law must prepare yearly a comprehensive document (Environmental Energy Planning Documents of the Port Systems DEASP) measuring in detail the carbon footprint of all port activities.
2. Internal processes perspectives	The processes and procedures in the two ports will be harmonized to become a common set of rules	Reduction of number of rules and procedures managed in different ways in the two ports.
3. Innovation and growth perspective	Increased efficiency should lead to a better growth for the two ports.	Statistics for the two ports.
4. Customer / Partner perspective	Transparency portals on website communicate promptly any change in procedures to stakeholders.	Yearly satisfaction survey is distributed to stakeholders.
5. Financial perspective	Funds from European Projects can help Port System Authority in financing activities toward this goal.	Number of EU projects focused on this goal.

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Perspectives	Goal #2 – Local dry ports	Measurement
1. Environmental and safety perspective	A better interoperability between ICT systems will lead to increased efficiency, also from the environmental point of view.	All port systems by law must prepare yearly a comprehensive document (Environmental Energy Planning Documents of the Port Systems DEASP) measuring in detail the carbon footprint of all port activities.
2. Internal processes perspectives	All existing or new ICT systems or modules communications must be based on use of standards in order to ease systems interoperability.	Analysis and statistics of communication problems between systems.
3. Innovation and growth perspective	Increased efficiency should lead to a better growth for the ports and dry-ports.	Yearly statistics for the ports and dry ports.
4. Customer / Partner perspective	Improvements in interoperability between ICT systems are usually largely transparent to stakeholders, who will only notice and increased efficiency of the systems (more data, more reliable).	Yearly satisfaction survey is distributed to stakeholders.
5. Financial perspective	Funds from European Projects can help Port System Authority in financing activities toward this goal.	Number of EU projects focused on this goal.

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Perspectives	Goal #3 – Blockchain	Measurement
1. Environmental and safety perspective	An improved cybersecurity of the systems can prevent critical situations to ICT systems which would have consequences to port operability and possibly avoid environmental catastrophes consequent to cyber-attacks.	All port systems by law must prepare yearly a comprehensive document (Environmental Energy Planning Documents of the Port Systems DEASP) measuring in detail the carbon footprint of all port activities.
2. Internal processes perspectives	All relevant critical systems where more cybersecurity is deemed necessary must be adapted for use of technologies allowing an increased security.	Periodic evaluation of cyber risks for ports ICT systems (cybersecurity assessment) is mandatary by law in Italy.
3. Innovation and growth perspective	Increased security should prevent possible critical ICT security breaches which could hamper growth for the two ports.	Statistics for the two ports.
4. Customer / Partner perspective	Stakeholders involved will be widely informed about new procedures and technologies they would need to adopt.	Yearly satisfaction survey is distributed to stakeholders.
5. Financial perspective	Funds from European Projects can help Port System Authority in financing activities toward this goal.	Number of EU projects focused on this goal.

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Perspectives	Goal #4 – Other dry ports	Measurement
1. Environmental and safety perspective	A better interoperability between ICT systems will lead to increased efficiency, also from the environmental point of view.	All port systems by law must prepare yearly a comprehensive document (Environmental Energy Planning Documents of the Port Systems DEASP) measuring in detail the carbon footprint of all port activities.
2. Internal processes perspectives	All existing or new ICT systems or modules communications must be based on use of standards in order to ease systems interoperability.	Analysis and statistics of communication problems between systems.
3. Innovation and growth perspective	Increased efficiency should lead to a better growth for the ports and dry-ports.	Yearly statistics for the ports and dry ports.
4. Customer / Partner perspective	Improvements in interoperability between ICT systems are usually largely transparent to stakeholders, who will only notice and increased efficiency of the systems (more data, more reliable).	Yearly satisfaction survey is distributed to stakeholders.
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Perspectives	Goal #5 – All systems	Measurement
1. Environmental and safety perspective	A better interoperability between ICT systems will lead to increased efficiency, also from the environmental point of view.	All port systems by law must prepare yearly a comprehensive document (Environmental Energy Planning Documents of the Port Systems DEASP) measuring in detail the carbon footprint of all port activities.
2. Internal processes perspectives	All existing or new ICT systems or modules communications must be based on use of standards in order to ease systems interoperability.	Analysis and statistics of communication problems between systems.
3. Innovation and growth perspective	Increased efficiency should lead to a better growth for the ports and dry-ports.	Yearly statistics for the ports and dry ports.
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Perspectives	Goal #6 – More Cybersecurity	Measurement
1. Environmental and safety perspective	An improved cybersecurity of the systems can prevent critical situations to ICT systems which would have consequences to port operability and possibly avoid environmental catastrophes consequent to cyber-attacks.	All port systems by law must prepare yearly a comprehensive document (Environmental Energy Planning Documents of the Port Systems DEASP) measuring in detail the carbon footprint of all port activities.
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2.3. Wish list of ICT measures

According to the AF, local strategies include a "detailed wish list of ICT measures to be tested in the pilot actions (WPT2)".

Accordingly, please include the items of the wish list in the table here below.

Please remember to ensure consistency between the wish list of ICT measure, the strategic goal here above (4.2) and the pilot action you will implement:

Wish list of ICT measures			
Title	**Short description**	**Link to the strategic goal**	**Link to the pilot action**
1.	Upgrade of interoperability of the Port Community System towards external systems.	Goal #2 – Local dry ports Goal #4 – Other dry ports	Measure implemented in pilot action. Correct data exchange between systems will be checked.
2.	Interoperability with OCR systems installed at the rail gates to port	Goal #1 – Trieste & Monfalcone	Measure implemented in pilot action. Correct data exchange between systems will be checked.
3.	Evolution of CH30 model and generation of waybill.	Goal #4 – Other dry ports	Measure implemented in pilot action. Correct data exchange between systems will be checked.