

STRATEGY FOR FOSTERING COORDINATED MULTIMODAL FREIGHT TRANSPORT THROUGH ICT SYSTEMS -GDYNIA

DELIVERABLE D.T1.3.8

Version 1

OUTPUT O.T1.2

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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 node of Gdynia, including the contributions of PP07-Port of Gdynia Authority and PP08-Baltic Container Terminal, which were kept as separate documents (Part A and Part B) despite being synergic and complementary to each other.



2. Baltic Container Terminal

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)

Our vision is to create Port Community System on national level integrating operational systems of all major ports, inland terminals and hubs, main logistics operators and transport companies and other players taking part in logistic chain. Once shipment information is generated freely circulates from system to system automatically and being proceed accordingly. Basic data are public and visible and easy to proceed by the ones who needs them. All sensitive and commercial data are protected by any unauthorized leakage or misuse. Data circulation is safe and fast.

MISSION

(Mission statement focuses on today, what challenges shall we face towards the vision today)

Our Mission is to create the electronic data interchange platform for rail wagon deliveries and transshipment at container terminal integrated with Terminal Operational System and systems of the other players taking part in this process. This is still missing but very important and necessary element of Gdynia Port Community System which is under construction now.

The main challenge is transfer of all very complex and complicated processes into easy to understand and easy to manage electronic form with a lot of information exchanges between many partners.

The other challenge is quite great diversification of players who take part in this process from are big companies with well defined procedures & standards using wide IT systems to small operators without any operational systems and well defined procedures.

There is also a need to adjust legal rail regulations based on old fashion organization, still requiring paper documents, obstructing and even preventing data sharing.

KEY VALUES

(The principles and values that are the basis of the vision of the strategy)

On national macroeconomic level, common data sharing speeds up and facilitates the whole transport process making it easier to contract and manage which **makes it cheaper and more controllable**. It increases the capacity of national transport system capacity. It promotes, facilitates and increases international exchange (import & export) bringing **benefits to whole national economy**.

International trade reaching some certain volume simply requires digitalization of whole logistics chain otherwise is impossible to grow and proceed all the data in traditional way. Digitalization of the whole logistic chain is just a must for regional economies to grow and develop.

For the participants like terminals, operators, ports, distribution hubs, transport companies, and traders, interconnectivity and synchronomodality in the long run brings **decrease of operational, communication and employment costs** and helps to compete on the logistics market and **increase the sales**.

It is important to point attention to the national or European Regulator to promote and even require from transport organizations system compatibility, data standardization and opening for data exchange. Interconnected transport systems on national and European level can provide reliable information in real time about the present traffic and trade. It helps to control the process better, manage it and create a good conditions and regulations for future development.



2.2. Setting strategic goals

Medium term (5 years):

1. Goal no. 1: system integration with all major partners (sea, inland and administration).
2. Goal no. 2: Connection to Gdynia Port Community System

Long term (10 years):

1. Goal no. 3: Creation Dynamic Truck Appointment System
2. Goal no. 4: Connections to Polish National Transport System (national PCS)



Goal no. 1 - System integration with all major partners

Perspectives	Goal	Measurement
1. Environmental and safety perspective	Some of paper documents (railway bill, discharging lists and loading confirmations) will be not printed any more but sent and stored electronically instead. We expect reduction of the paper used.	Expect reduction of paper usage/printing of approximately by 40% measuring by costs of printing paper bought per month or year.
2. Internal processes perspectives	We need to define all processes at terminal or re-define the ones existing in order to be covered them by Terminal Operating System. Some of processes are still not under the system and proceed with such paper documents (warehouse, break bulk and project cargo operations). We need also to introduce the tools assigning time of the execution of each process element to be registered by TOS.	Increase the number of electronic communicates sent and received by TOS to/from partners on average daily session per month.
3. Innovation and growth perspective	There is necessary to increase the capacity of TOS for exchange external communication and data storage by investing in IT hardware, TOS modification and/or pushing part of this to cloud.	Due to application of new technologies in data interchange with major partners we should observe by decrease of sessions in our Web User interface: "Main Sail On Line" which is now the basic tool in communication with partners. The measurement would be the number of sessions per month.
4. Customer / Partner perspective	We need to look for synergies with partners, Organizing common workshops, look for the possibilities and common benefits in application system integration. Investigating present possibilities and IT capacity for integration.	We can measure the number of new system integration achieved during the year.
5. Financial perspective	System integration required some IT investments (works and hardware) which in long run brings much operational savings. Each of the partners will cover the initial costs of necessary IT investments on his own sides counting on operational savings in future which can cover the initial cost.	System integration will result in reduction of employment, communication and claim costs. We can closely observe reduction of these cost categories year by year.

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players taking part in logistic chain. Once shipment information is generated freely circulates from system to system automatically and being proceed accordingly. Basic data are public and visible and easy to proceed by the ones who needs them. All sensitive and commercial data are protected by any unauthorized leakage or misuse. Data circulation is safe and fast.



Goal no. 2 - Connection to Gdynia Port Community System

Perspectives	Goal	Measurement
1. Environmental and safety perspective	Definition of data interchange data safety standards, sign relevant agreements with PCS operator and apply them.	We can measure communication errors and incidents.
2. Internal processes perspectives	We need to digitalize all order placing and operations executed at terminal.	We can measure TOS internal errors and communication errors with PCS per week/month.
3. Innovation and growth perspective	There is necessary to increase the capacity of TOS to exchange and storage of external communication by investing in IT (upgrades of software & hardware).	We should measure the increase of number of communicates exchanges between TOS and PCS.
4. Customer / Partner perspective	We should encourage our partners to connect to PCS showing the common benefits and helping with our know how and experience in this field.	We should register increase the communicates exchanged with PCS on weekly/monthly basis.
5. Financial perspective	PCS Operator should set up some business model of financing its operations and connection rules. By the moment it is governmental initiative financed by Port Authorities.	PCS operator should register and disclose the number new partners and services available by PCS on yearly basis.

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Goal no. 3 - Creation Dynamic Truck Appointment System

Perspectives	Goal	Measurement
1. Environmental and safety perspective	We need to create the system and port policy for truck movement monitoring to avoid port area congestion, long waiting time, managing trucks for even distribution within the day and week.	We should measure in real time terminal operations indicating to truckers the most convenient time of arrival (shortest waiting time). The shortest gate in/gate our time the better system is working.
2. Internal processes perspectives	We need to gather all information about all planned operations at the terminal to be able predict in one 1-2 day in advance the peaks and lows during the day/week time in order to manage trucks' flow.	We should measure % of equipment utilization by shift and establish the desired level to be kept.
3. Innovation and growth perspective	We should look for system integration with all tracking systems, motorway and read monitoring systems to identify trucks' movement.	We should measure the estimated waiting time indicated to the trucker when appointed the visit with the actual gate in/gate our time.
4. Customer / Partner perspective	We should to promote this solution among trucking companies, freight forwarders and operators and develop application available on mobile phones to be easy and user friendly to manage.	We should measure the satisfaction level of the users.
5. Financial perspective	DTAS will be developed by BCT means and initial costs of creation and implementation will be covered by future operational savings (elimination of congestion and idle time costs)	Due to better terminal work distribution operational costs should start to decrease.

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Goal no. 4: Connection to Polish National Transport System (national PCS)

Perspectives	Goal	Measurement
1. Environmental and safety perspective	There is a need of digitalization of all the partners in the whole logistics chain including administration, customs and inspections. Establish standards of communications on national or European level, common policy and strategy for development.	We should measure growth of transaction number come via National Transport System.
2. Internal processes perspectives	We need to develop new capacity for exchanging and processing data. Take advantage of the fact of having access to more data and develop new procedures and IT tools lifting quality of our services on higher level.	The operational costs should continue to decrease year by year
3. Innovation and growth perspective	Capacity of the terminal should to grow without any investments into infrastructure due to shorter storage and faster operations due shorter and smoother turnover of containers.	Amount of the containers shipped on national level should to grow. All the participants of the transport chain should to register bigger sales.
4. Customer / Partner perspective	National/European Regulator needs to promote, encourage and facilitate the connection of the new partners.	We should to measure the number of new partners connected and new services available for the partners.
5. Financial perspective	National/European Regulator needs to finance IT infrastructure. The cost of connection and internal adjustment of local company system need to be covered by special financing program. Regulator need to develop preference financing tool (low interest loans or co-financing programmes) for the small and medium companies.	Utilization the financing fund for development and functioning of national transport system.

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2.3. Wish list of ICT measures

Wish list of ICT measures			
Title	Short description	Link to the strategic goal	Link to the pilot action
1. integration module for rail operations	Present BCT TOS is missing rail module that is why we cannot provide digital information to rail partners.	Goal no. 1 - System integration with all major partners	Platform will collect the data from the stakeholders and environment, proceed it, aggregates and pass to TOS in the form it can accept and work on.
2. Common data exchange standards	All stakeholders develop systems using different standards which are often not compatible. There is a need of standardization and set up the standards when they are missing.	Goal no. 2 - Connection to Gdynia Port Community System	Platform will organize, and clearly define the processes, actions and data proposing the standards
3. Central Operational Planning System	Effective allocation of resources is the basic issue for good functioning of the terminal. Resources are always limited and defined and orders fluctuate a lot. Resource management is crucial for keeping operational costs low.	Goal no. 3 - Creation Dynamic Truck Appointment System	Platform will manage the rail operations giving real-time precise input to planning system. Having this information prediction of waiting time for trucks will be more precise.
4. IT infrastructure and know-how for wider integrations	Adopting of platform integration module for many different communication forms and standards. Providing new services and new opportunities for cooperation	Goal no. 4: Connection to Polish National Transport System (national PCS)	BCT Pilot will be first complex integration in Polish Ports in rail deliveries areas. It will bring the base, knowledge and know-how for any further and wider system integrations in transport.



3. Port of Gdynia Authority

3.1. Setting vision, mission, key values

VISION (Vision statement focuses on tomorrow and set the target aims to be achieved)
<p>Port of Gdynia stands as competitive multimodal node in TEN-T utilising ICT systems integrated within global value supply chains, creating its comparative advantage.</p>
MISSION (Mission statement focuses on today, what challenges shall we face towards the vision today)
<p>Port of Gdynia together with its key stakeholders aims at utilising current and upcoming ITS systems by integrating both port's and railway's IT management systems. The essential scope of adaptation of port's IT system to the system implemented by the PKP PLK at Local Control Center of Gdynia Port Station.</p>
KEY VALUES (The principles and values that are the basis of the vision of the strategy)
<p>Port of Gdynia focuses on utilising multimodal technology, connecting with port's hinterland and foreland, especially rail and maritime links, integrating stakeholders and logistic processes, fostering green deal principles and enacting the European area transport policy.</p>



3.2. Setting strategic goals

Medium term (5 years):

3. Goal no. 1: Launching port's ICT railway system within PKP PLK Local Control Center of Gdynia Port Station
4. Goal no. 2: Technical documentation for the integration of both port's and port's terminals' railway IT systems.

Long term (10 years):

3. Goal no. 3: Integration of both port's and port's terminals' railway IT systems.
4. Goal no. 4: Integrating both port's and railway ICT systems within RFC5.
5. Goal no. 5: Road ITS in the node: intelligent truck traffic management system in the Port of Gdynia.

The following table refer to all goals:

Perspectives	Goal	Measurement
1. Environmental and safety perspective	<Enacting Green Deal policy objectives in line with ESPO requirements and position in this matter.>	% of ships using green renewable energy in the port by 2025
2. Internal processes perspectives	< ICT systems integrating in terms of processes, decision taking, multimodality, volume handled>	number of new systems effecting the railway cargo volume handling
3. Innovation and growth perspective	< smart port vision enacting by 2030>	number of new innovative technology used
4. Customer / Partner perspective	< creating a common users' /stakeholder information and processing platform >	number of new customer/partner communication strategy involved
5. Financial perspective	<own funds, national financial sources and new EU 2021-2017 perspective>	% of external financial sources utilised per ICT project
<p>VISION:</p> <p>< Port of Gdynia stands as competitive multimodal node in TEN-T utilising ICT systems integrated within global value supply chains, creating its comparative advantage.></p>		



3.3. 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.	Local Control Center of Gdynia Port Station in action.	Goal no. 1	This will allow for the remote management and supervision of the railway traffic by means of IT systems in the pilot case.
2.	Common port's and terminals' IT system handling railway cargo.	Goal no. 2 and 3	Showing the added value of data exchange and institutional trust in the pilot case.
3.	Full functional and infrastructural standards within RFC 5	Goal no. 4	Enhancing the competitiveness of the rail freight transport in order to improve the share of rail over road in port's interconnections by 2030.
4.	Intelligent truck traffic management system in the Port of Gdynia	Goal no. 5	Integrated e-booking and traffic management of trucks in the Port of Gdynia findings in the pilot case.