EVENT FOLLOW UP REPORT

WP2 – Communication activities

Activity 2.5 - Events

Event summary

Type of event	Online/physical
Location	Port of Ploče Authority Entrance terminal HQ
Date of the event	25/05/2022
Time/Duration	1 day
Purpose of the event (What was the objective?)	Digitalization goes Schools event in coordination with High school from Ploče within ERASMUS+ project. Port of Ploče Authority has delivered presentation to participant regarding the deliverable from the PROMARES project.
Short description of the event (what happened during the event?)	Port of Ploče Authority has presented to participants activities and deliverable from the PROMARES project. The theme of the project is digitalization and industry 4.0. PPA had brief presentations on IS/IT solutions realized by the Port of Ploče Authority of Ploče, especially the PCS system. Also, PPA has presented IT solutions in the port (port terminals) at the meeting. PPA has organized also visit to Port of Ploče Terminals.
Results/Outcomes of the event (What are the takeways from the event?)	Port of Ploče Authority has presented to participants activities and deliverable from the PROMARES and INTESA project. The theme of the project is digitalization and industry 4.0. PPA had brief presentations on IS/IT solutions realized by the Port of Ploče Authority of Ploče, especially the PCS system. Through this event PPA has combined good practice and activities from two main projects and shown that cooperation with other partners within projects can bring positive results and can have impact on local and domestic public. Combination with ERASMUS+ project these activities have been provided to school

	target groups and PPA hope that trend regarding the digitalization and new technologies will be more represented in schools. Port activities have been also positive represented to school representatives.
Number of attendees	*48*
Type of stakeholders/target groups that were represented	*Port operators, freight forwarders, agencies, Port authorities, public and domestic local target groups (Highschool)*

Photos

2022/5/25 10:38

2022/5/25 10:34
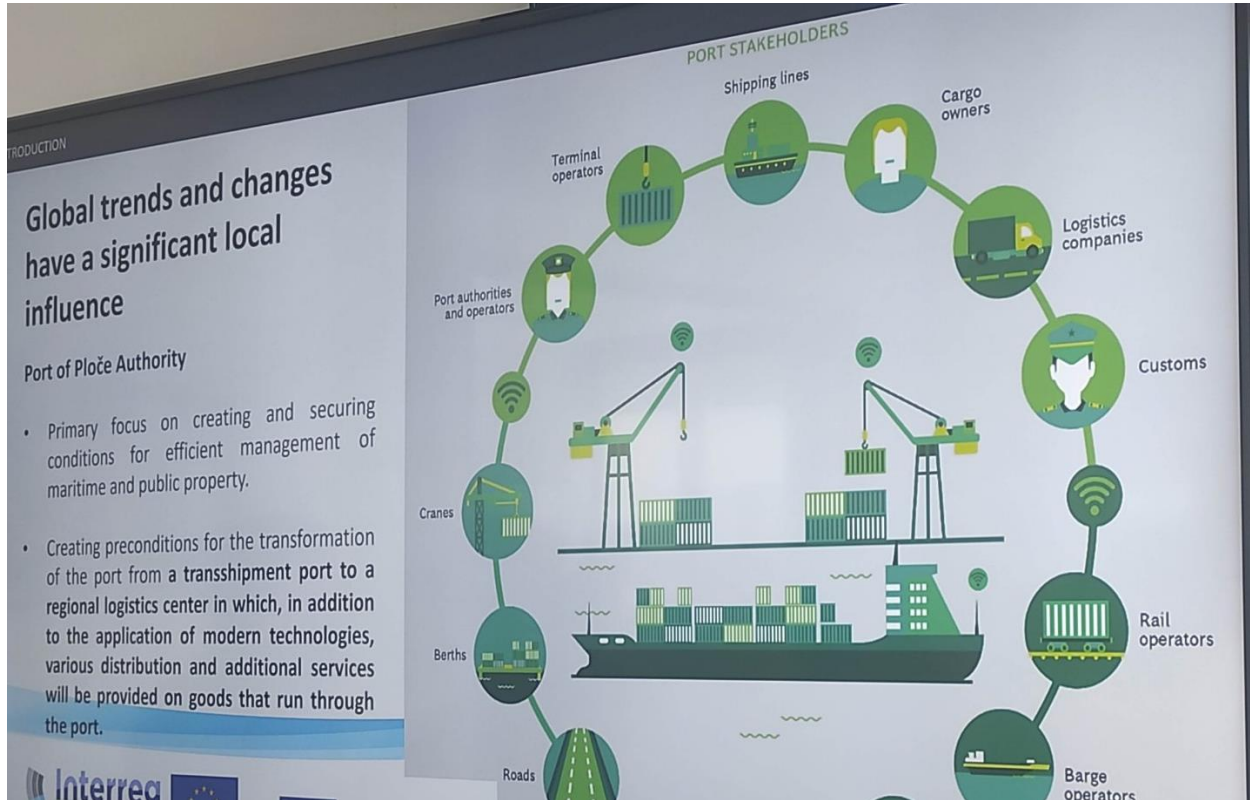
Presentation: attached

LOCAL EVENT

Digitalization goes Schools
Design and development of IT systems
in the port of Ploče community

PROMARES | INTESA | ERASMUS+
PORT OF PLOČE AUTHORITY

Ploče, 25/05/2022.

1. INTRODUCTION

2. PILOT ACTIVITES

3. CURRENT SITUATION

4. GUIDELINES FOR THE FUTURE

5. FUTURE IMPROVEMENTS

6. CONCLUSION

INTRODUCTION

Global trends and changes have a significant local influence

Port of Ploče Authority

- Primary focus on creating and securing conditions for efficient management of maritime and public property.

- Creating preconditions for the transformation of the port from **a transshipment port to a regional logistics center in which, in addition to the application of modern technologies, various distribution and additional services will be provided on goods that run through the port.**

PORT STAKEHOLDERS
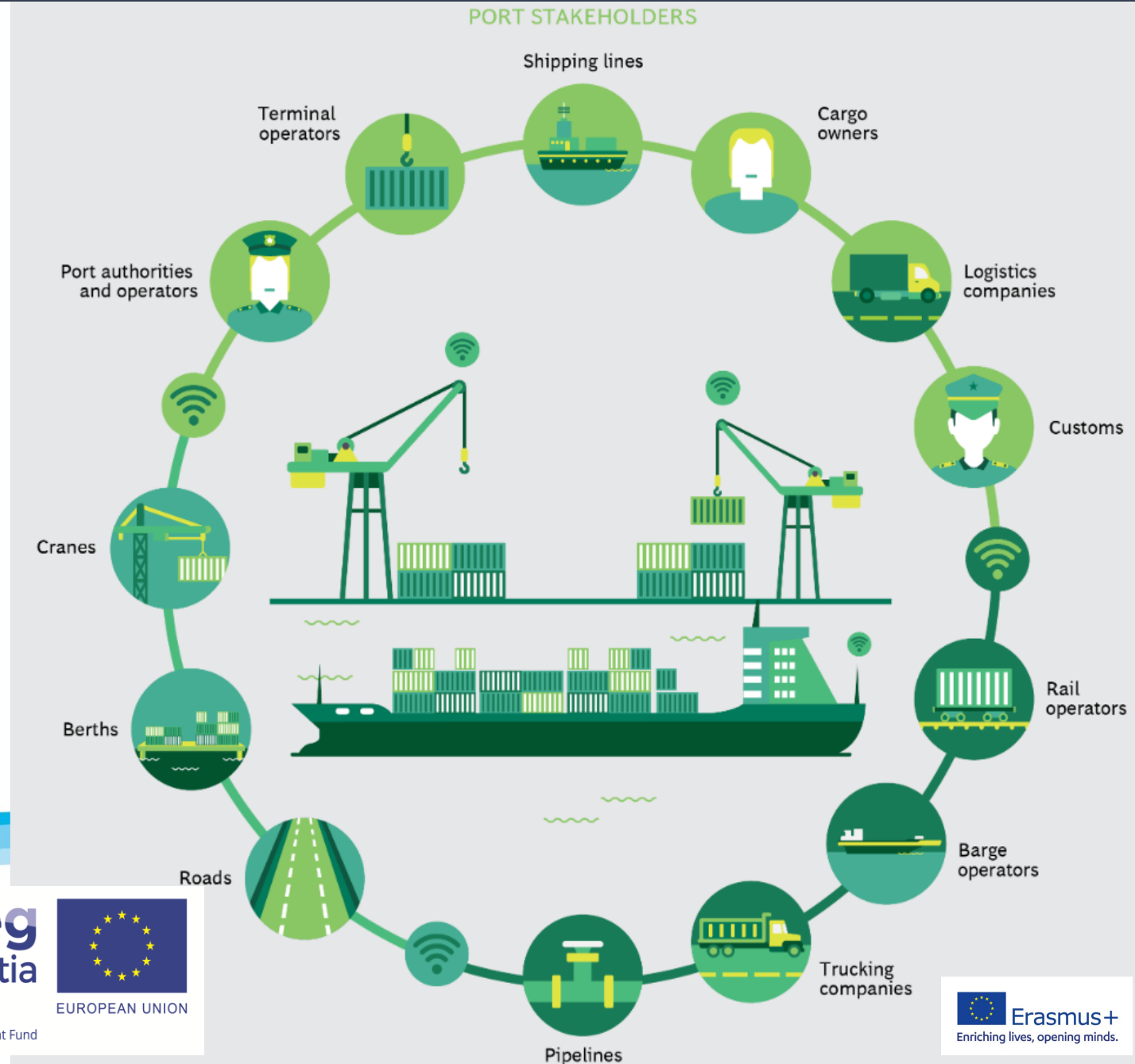
Global trends and changes have a significant local influence
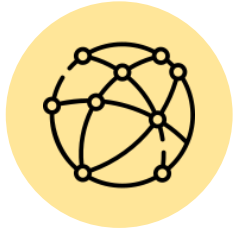
Global Context
- Port systems have undergone significant and profound changes in the last decade
- Volatility in energy prices; structure of cargo; supply chain disruptions
- Maritime and transshipment technology had a significant impact
- Increased investments, but long term decreased costs

Transformational impact of IT
- Wider and deeper application of IT made business activities in ports more transparent, faster and more efficient
- Significant financial resources continue to be invested due to positive experiences in the past, at global and local levels
- Locally, PPA is availing PCS system to accelerate and optimize the exchange of documents and data in the port community

IT in the port of Ploče area
- PPA continues to undertake initiatives to facilitate the execution of port processes to make the port more competitive and attractive to current and future users
- Port IT ecosystem becomes more complex and diverse. PCS is still in the main focus, but complete state of IT of all port community members needs to be considered to define the strategic plan and guidelines
- Given the diversity of port community members, it is not simple to define IT strategy in a way that one single model meets the needs of all participants

Interreg Italy - Croatia INTESA
EUROPEAN UNION
European Regional Development Fund

Interreg Italy - Croatia PROMARES
EUROPEAN UNION
European Regional Development Fund

Erasmus+
Enriching lives, opening minds.

One of the deliverable was feasibility study. The aim of feasibility study is to **analyze the situation, identify opportunities for improvement in a structured and understandable way, and define initiatives** that would lead to an increase in the **information systems maturity levels** in the port of Ploče area.

1 Which existing IT systems are critically important for the port community?

2 How to ensure that IT systems meet different business needs of port stakeholders?

3 How to ensure that the use of IT systems brings measurable benefits to port stakeholders?

4 What criteria to use to clearly set the limit of responsibility in financing and developing IT systems in the port community?

5 Which functionalities, activities and initiatives to run in the short and medium term to increase the number of users of port IT systems?

PILOT ACTIVITES

The existing IT environment in the port community of the Ploče port is complex and consists of commercially, functionally, organizationally and technologically diverse systems.

All plans and strategies for development of local port IT ecosystems must be compliant with national and transnational plans and strategies on all perspectives (including technology, processes, and financing)

INTESA Project activities:

- Equipment HW - servers and networking as prerequisite for pilot system
- Feasibility Study - Design and development of IT systems in the port of Ploče community
- Pilot system implementation service - upgrade and implementation of a pilot system with the aim of exchanging data in the port area and solving bottlenecks in the transport flows of goods - CIMIS, VTS, Maritime safety
- ICT Action plan development services with the aim of digital port transformation (includes the preparation of a series of documents in accordance with the activities within the project)

The existing IT environment in the port community of the Ploče port is complex and consists of commercially, functionally, organizationally and technologically diverse systems.

All plans and strategies for development of local port IT ecosystems must be compliant with national and transnational plans and strategies on all perspectives (including technology, processes, and financing)

The PROMARES project provided wider scope of possibilities to Port of Ploče Authority regarding the needed digitalization of the port operations and security in r the Port of Ploče area. It has enabled to implement targeted interventions capable of improving and strengthening IT security, in relation to:

- Perimeter security and cyber security: strengthening the technological safeguards for the protection of networks and their perimeters with the aim of increasing the ability to optimize and balance the network traffic with the aim for optimizing data exchange in the port area and resolving bottlenecks of transport flows of goods while using PCS systems

- Backup and Disaster Recovery: Port of Ploče Authority has upgraded the virtualization platform with the aim of ensuring better management of transport flows in port areas which can guarantee the continuity and operational availability of the PCS Ploče, and its rapid recovery following serious damage caused by cyber-attacks, accidental events, sabotage, natural disasters, or other problems.

Through PROMARES project Port of Ploče Authority implemented PCS pilot related system upgrade and development services and development of the integration API-s, in relation to better exchange of data in the port area and resolving bottlenecks of transport flows of goods:

- Integration of PCS system and module for truck announcements with other control access subsystems and systems from other terminal operators. PCS system was for example integrated with truck cargo scale management system from terminal operator and data regarding cargo and truck weight have been exchanged to PCS truck announcement module. Based on PCS Truck announcements truck and cargo data have been exchanged to terminal operating system for the truck and cargo scale management.

- Integration of PCS module general cargoes, Customs with the system of TOS main concessionaires

- The Port Authority of Ploče is a user of the ERP system, which needed to be integrated with PCS system to exchange the necessary data and automate procedures. The integration of the system affects the port entrance procedures. Based on incidental situations in the maritime part, and the monitoring of the maritime aspect through the PCS system, based on the announcement of ships, truck and operational procedures, financial documents have been issued through ERP system and PCS system. With a aim of automating procedures and improving and optimising them, it is necessary to develop data exchange services and interfaces in the data receipt/transmission system in order to avoid unnecessary data overtaking.

CURRENT SITUATION

The existing IT environment in the port community of the Ploče port is complex and consists of commercially, functionally, organizationally and technologically diverse systems.

Ownership

- Government
- Commercial
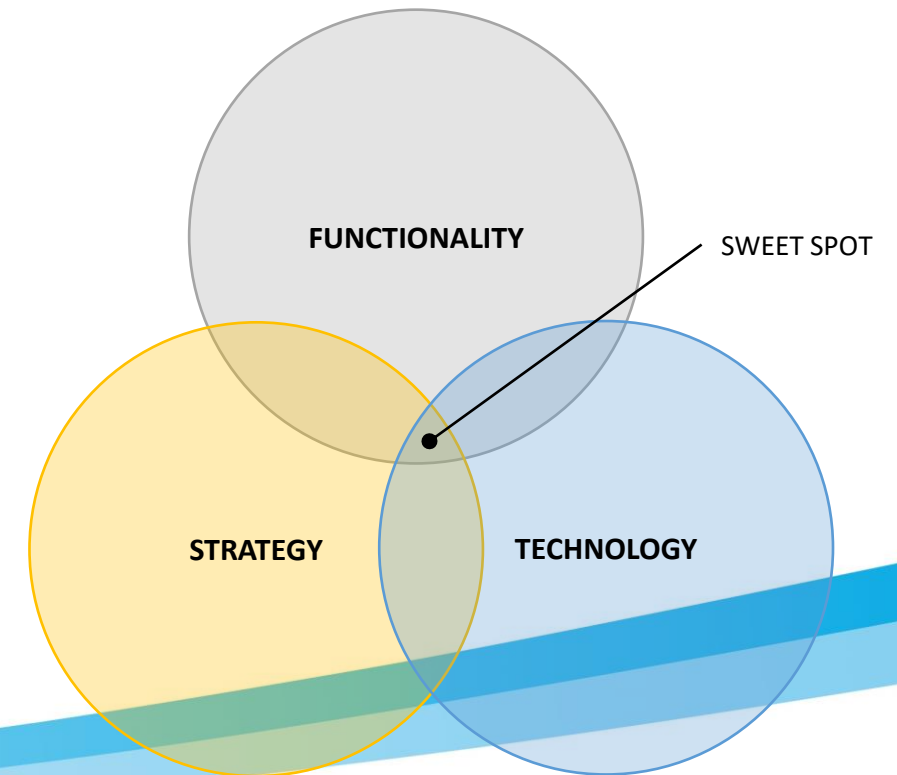- Internal

Functional overlaps and differences

- Vessel calls

Different technologies

- Legacy client/server architecture
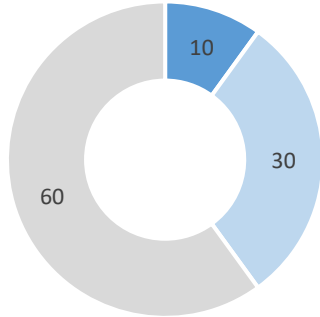- New generation technology

Ongoing initiatives

- PCS, CIMIS, Atlas, ...

The perception of PCS as a key information system of the port community varies considerably from user to user.

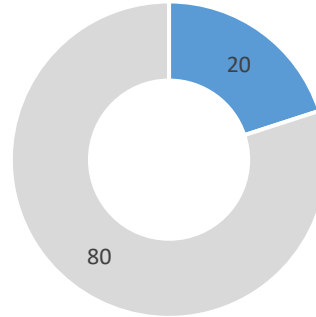### Does PCS facilitate doing your business activities?

10
30
60

■ Yes ■ Partially ■ No

ALL USERS

"Central functionality of PCS, i.e. exchange of electronic documents between participants in port processes, is successfully implemented and is functioning as intended."
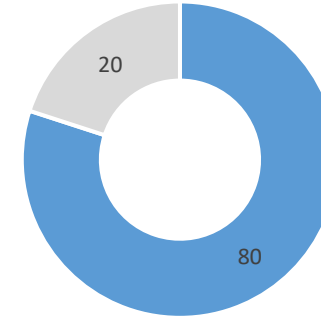
Do you consider PCS critical for doing your business activities?

20
80

■ Yes ■ No

"The value of PCS for us is not proportional to the value received by other participants due to our participation."

Should PCS meet specific, operational business needs?

20
80

■ Yes ■ No

LOW IT MATURITY USERS

"We expect PCS to meet our operational functions, i.e. functions specific to our particular business activities, cargo types or internal organizational procedures."

TIGH IT MATURITY USERS

)NALITY!

Different understanding of the role and functionality of PCS is one of the essential reasons why the perception of the PCS's value is at a lower level than expected.

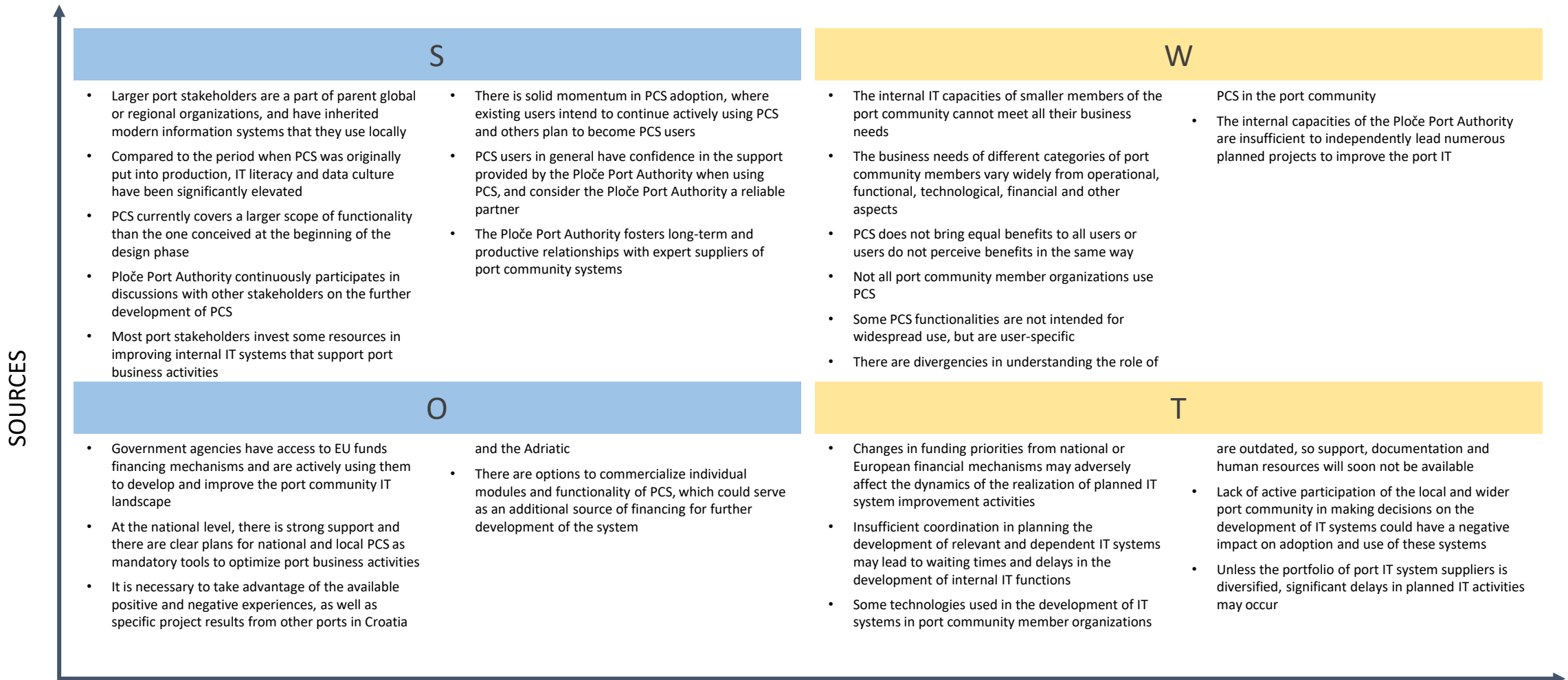TOP RECOGNIZED BENEFITS

1 — Saving time when sending and receiving port documents

2 — Timely information about the position and status of land transportation means (trucks, trains, etc.)

TOP COMPLAINTS

1 — Lack of discipline in entering and updating data within PCS

2 — Orphan processes, i.e. processes that have been recorded as started but never recorded as completed

TOP UNRECOGNIZED BENEFITS

1 — Reducing the frequency of occurrence of errors in data entry

2 — Elimination of redundancy in data entry

3 — Established confidence in the correctness and authenticity of data exchanged through PCS

4 — Traceability of business documentation in electronic form

SWOT

SOURCES (vertical axis label)

INFLUENCES (horizontal axis label)

S

- Larger port stakeholders are a part of parent global or regional organizations, and have inherited modern information systems that they use locally
- Compared to the period when PCS was originally put into production, IT literacy and data culture have been significantly elevated
- PCS currently covers a larger scope of functionality than the one conceived at the beginning of the design phase
- Ploče Port Authority continuously participates in discussions with other stakeholders on the further development of PCS
- Most port stakeholders invest some resources in improving internal IT systems that support port business activities

- There is solid momentum in PCS adoption, where existing users intend to continue actively using PCS and others plan to become PCS users
- PCS users in general have confidence in the support provided by the Ploče Port Authority when using PCS, and consider the Ploče Port Authority a reliable partner
- The Ploče Port Authority fosters long-term and productive relationships with expert suppliers of port community systems

W

- The internal IT capacities of smaller members of the port community cannot meet all their business needs
- The business needs of different categories of port community members vary widely from operational, functional, technological, financial and other aspects
- PCS does not bring equal benefits to all users or users do not perceive benefits in the same way
- Not all port community member organizations use PCS
- Some PCS functionalities are not intended for widespread use, but are user-specific
- There are divergencies in understanding the role of

- PCS in the port community
- The internal capacities of the Ploče Port Authority are insufficient to independently lead numerous planned projects to improve the port IT

O

- Government agencies have access to EU funds financing mechanisms and are actively using them to develop and improve the port community IT landscape
- At the national level, there is strong support and there are clear plans for national and local PCS as mandatory tools to optimize port business activities
- It is necessary to take advantage of the available positive and negative experiences, as well as specific project results from other ports in Croatia

- and the Adriatic
- There are options to commercialize individual modules and functionality of PCS, which could serve as an additional source of financing for further development of the system

T

- Changes in funding priorities from national or European financial mechanisms may adversely affect the dynamics of the realization of planned IT system improvement activities
- Insufficient coordination in planning the development of relevant and dependent IT systems may lead to waiting times and delays in the development of internal IT functions
- Some technologies used in the development of IT systems in port community member organizations

- are outdated, so support, documentation and human resources will soon not be available
- Lack of active participation of the local and wider port community in making decisions on the development of IT systems could have a negative impact on adoption and use of these systems
- Unless the portfolio of port IT system suppliers is diversified, significant delays in planned IT activities may occur

GUIDELINES FOR THE FUTURE

All plans and strategies for development of local port IT ecosystems must be compliant with national and transnational plans and strategies on all perspectives (including technology, processes, and financing)

National Single Window

- MMPI has launched a national project to develop a single maritime interface
- Digitization of maritime formalities
- Integration of national administration IT systems with local systems.

Integration of NSW and other systems

- Key project in the context of improving and developing IT systems in the Ploče port community
- One of the main NSW features is a data bus to integrate CIMIS, E-Carina and other similar systems
- Most importantly, NSW data bus will be used to connect to local port community systems (Local Single Window)

INTESA and PROMARES projects

- **PPA participation in the INTESA and PROMARES project brings certain opportunities, but also commitments**
- **Aim is to harmonize and optimize the complete maritime transport process in order to make port and maritime transport systems more efficient and secure**
- **Important part of INTESA and PROMARES projects is upgrading and developing port IT ecosystems**
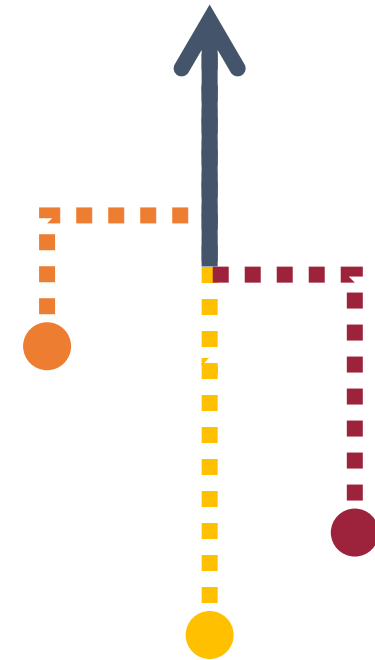
The fundamental step in defining the IT systems development strategy is to frame all current and future goals, initiatives and activities in a single mission statement.

"The Ploče Port Authority, in cooperation with other port stakeholders, is developing PCS as a central system for the most efficient exchange of electronic documents and other data between all port stakeholders and their IT systems, thereby facilitating their operations and generating additional business value."

C1 - PARTICIPATION

All members of the port community should exchange electronic documents through the PCS system.

C2 - COOPERATION

All members of the port community should contribute to the development of PCS, whether through ideas, opinions, work or funding.

C3 - EFFECTIVENESS

PCS should be the fastest, safest and most reliable way to exchange electronic documents between all port participants.

C4 - BENEFITS

PCS should facilitate executing the port stakeholders' business processes, thus bringing them added value.

C5 - INTEGRATION

All members of the port community should exchange electronic documents through the PCS system.

The principles of developing and improving PCS serve to clearly separate responsibility, prioritization, technological approaches and other aspects of the IT systems development.

1 RESPONSIBILITIES

- PPA owns, develops and maintains PCS. Other stakeholders own, develop and maintain their systems.
- PPA provides integration points to PCS. Other stakeholders adapt their systems for PCS integration points.
- PPA and other stakeholders are responsible for collaborating and communicating on topics related to PCS improvement and development

3 IMPROVEMENT CRITERIA

- Functionality facilitates the performance of user business activities within the port community
- Functionality improves, accelerates, clarifies exchange of business documents between members of the port community
- Functionality uses, generates or exchanges the data required by at least two port community members (except PPA)
- Functionality uses, generates or exchanges data that each member of the port community interprets and understands in the same way

5 AVAILABILITY

- PCS and all its modules must always be available for use by members of the port community
- Each individual module must be implemented in an architecture that allows HA (High Availability)
- Each individual module must be compatible to, and accessible from personal computers and laptops, smartphones, tablets and other similar devices

2 MODULE TYPES

Core modules - Distribution of digital documents and other data exchanged through messages. Used by all members.

Operational modules - Operational business processes of port community members. Used by some members.

Administration modules - Support the Ploče Port Authority services. Used by PPA only.

Integration modules – Integration of PCS and other IT systems in the port community. Used by some members.

4 USER EXPERIENCE

- PCS user interfaces must be designed to allow the user to interact easily and quickly with PCS
- Avoid showing information that is not relevant to the user at that time, that is, in that step of the business process
- Divide the interfaces with a multitude of information into logical units that would be displayed on different screens
- Assign meaning to colors, so that users can know at first sight what they need to pay attention to

6 INTEGRATION OPTIONS

ESB intergration - Used to enable the exchange of individual digital documents, i.e. generating documents outside of PCS and sending them to PCS for distribution to other users

API integration - Used to enable the functionality of generating documents within the PCS, but through calls from external systems. Also, API integration can help achieve the functionality of exporting and importing larger amounts of data, structured in various ways

FUTURE IMPROVEMENTS

On the value matrix below, all suggested improvements and activities are displayed. The value matrices for each of the three categories are shown in the corresponding sections.
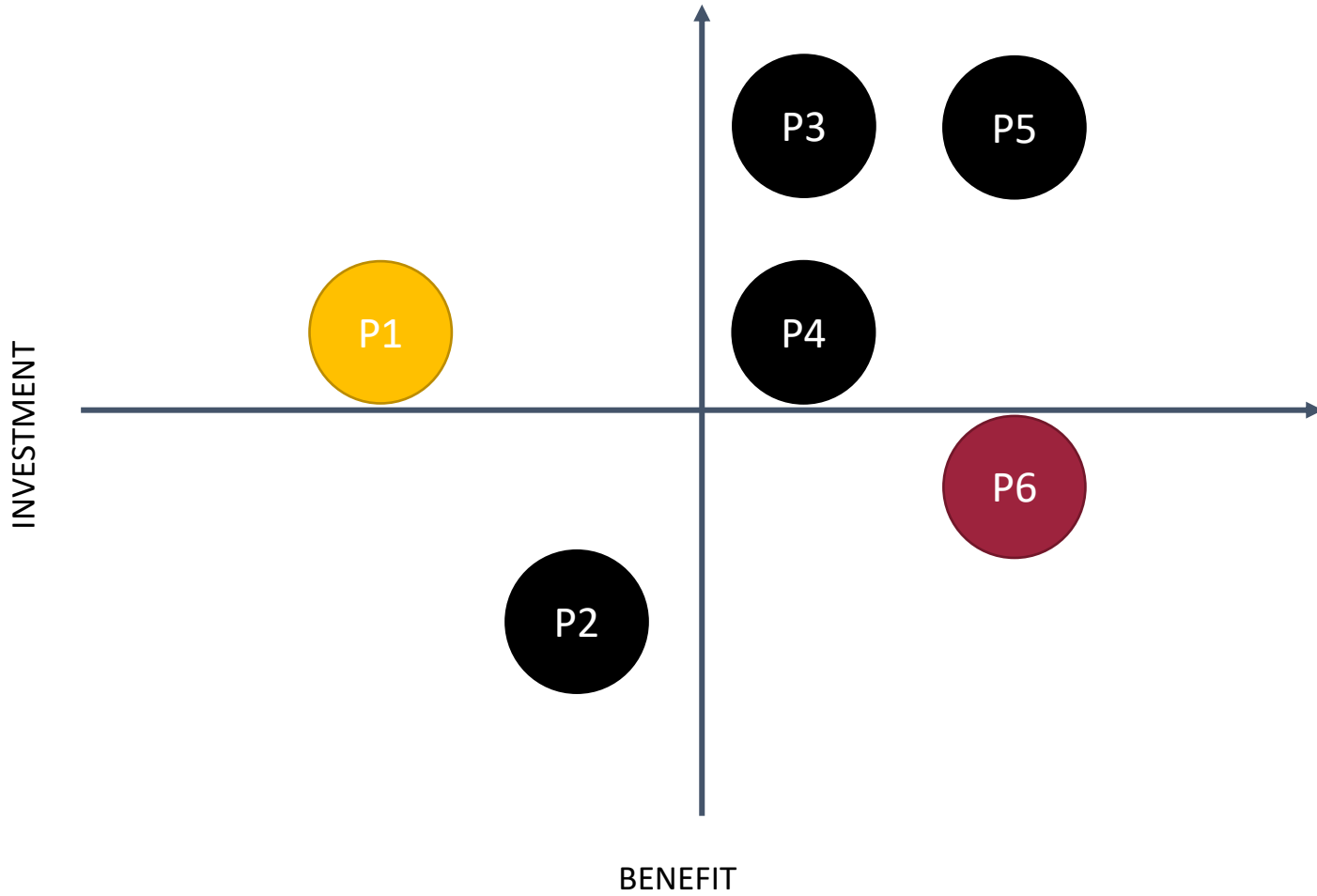

INVESTMENT

BENEFIT

T1
L4
T2
L5
P3
6
P5
T7
L2
L3
P4
T5
P1
L1
T4
P6
L6
P2
T3

Technology

INVESTMENT

BENEFIT
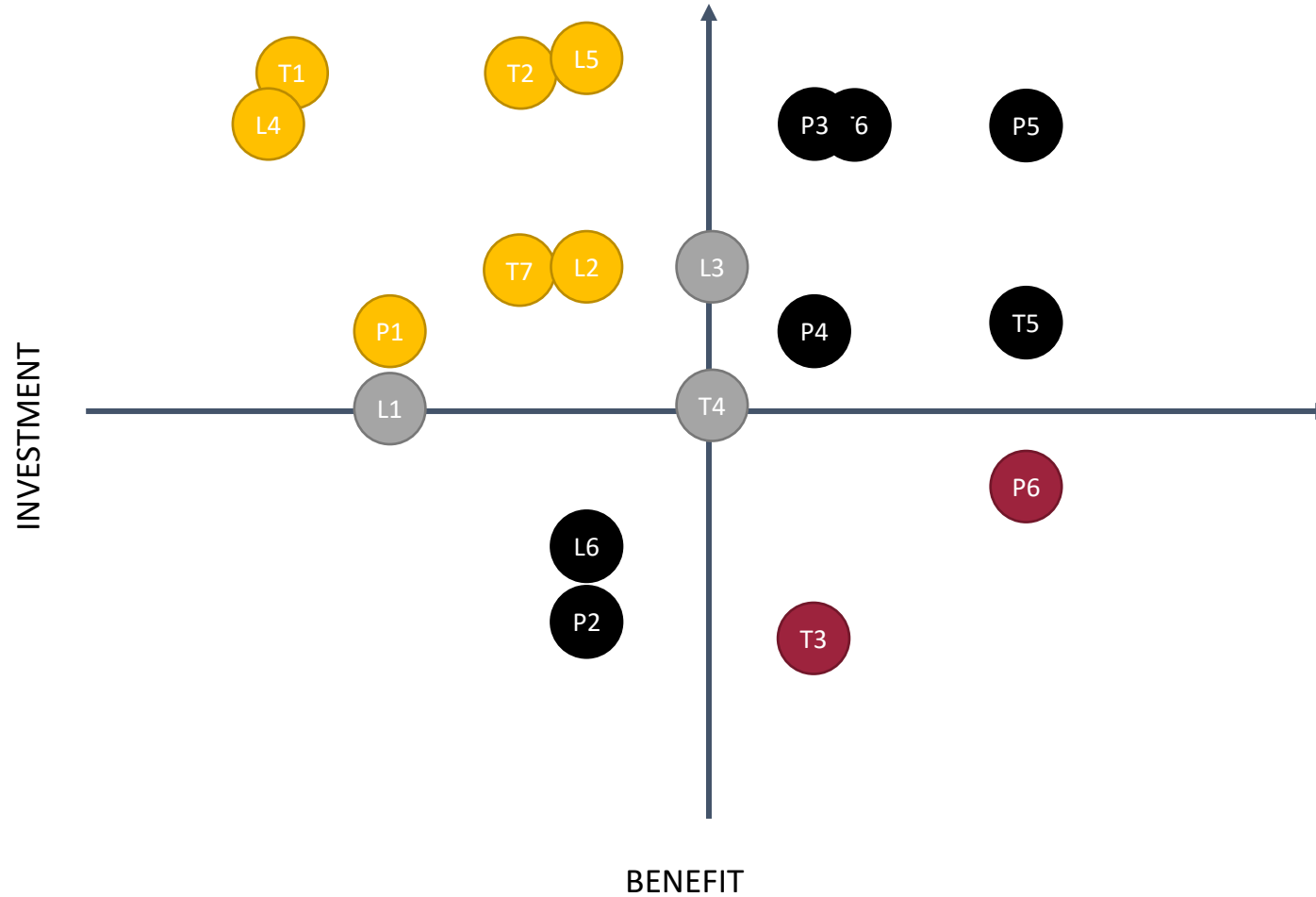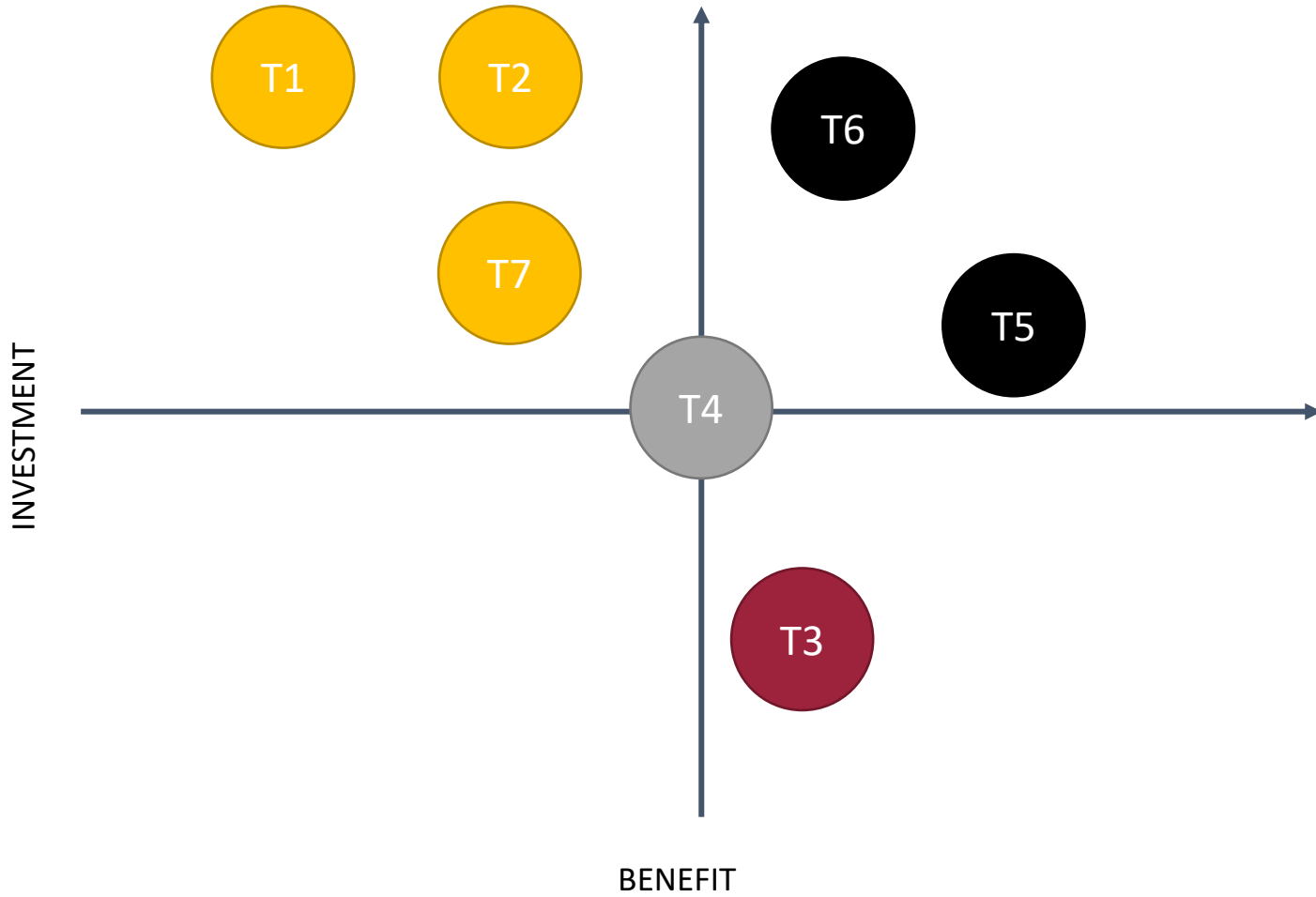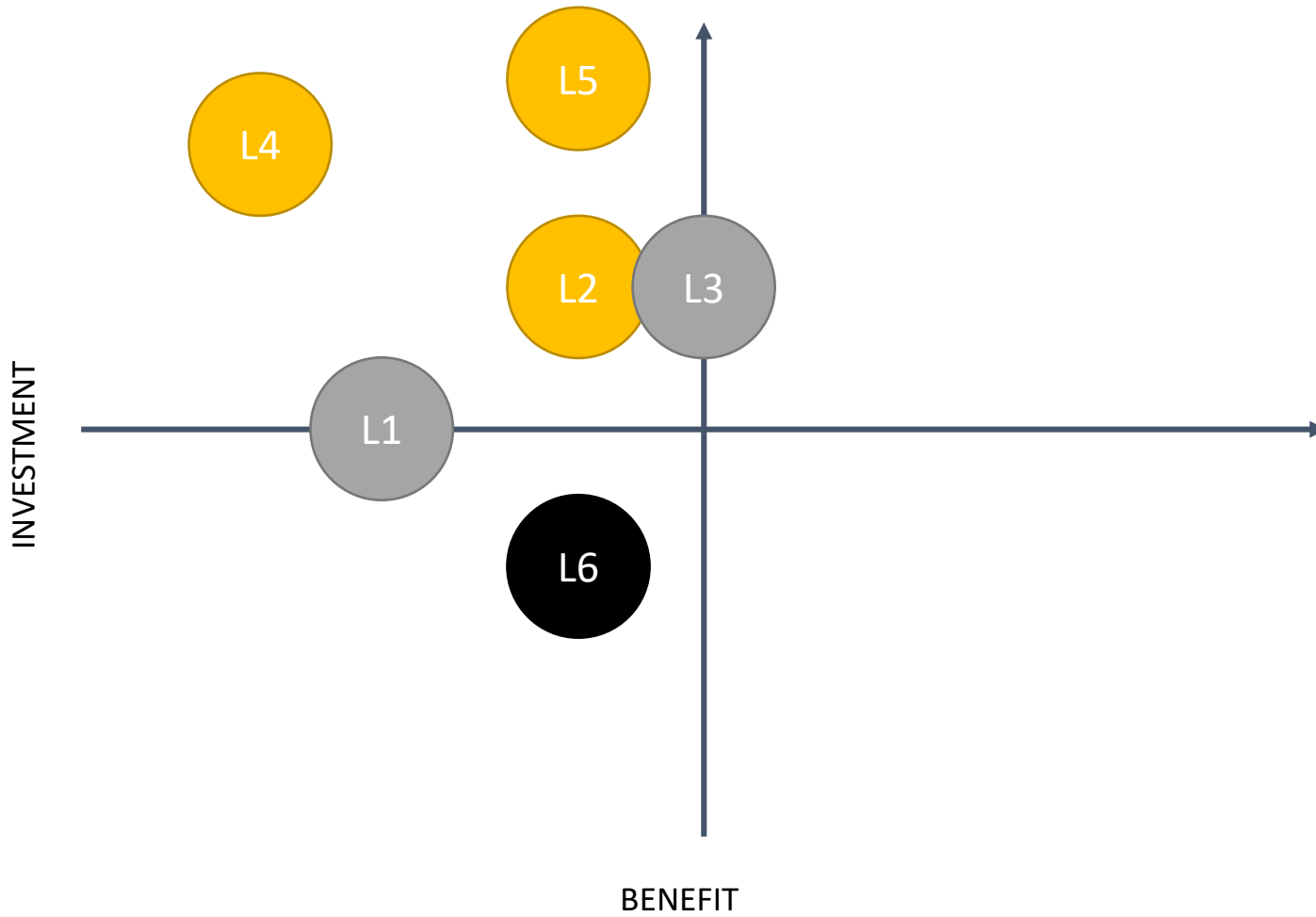
T1 — Integration module - CIMIS

T2 — Integration module – e-Carina

T3 — UI Optimization

T4 — Ticketing application

T5 — Open integration platform

T6 — Business data warehouse and analytics system

T7 — Strategy management system

Processes

People

Roadmap
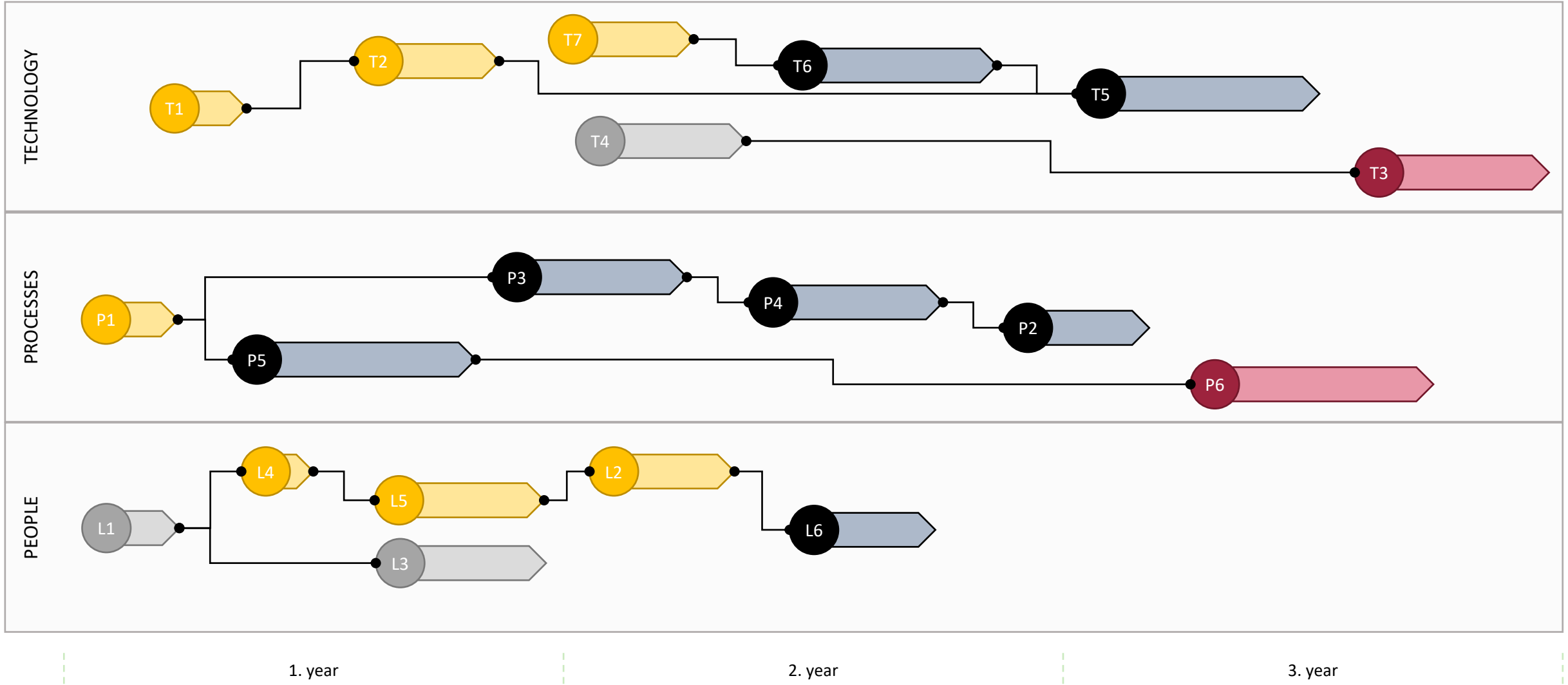
CONCLUSION

In conclusion, the foundation of this strategy is the existing Port Community System Here is why:

! National and cross-border initiatives are shaping the future of PCS by providing positive examples

! PCS is scaling out in reach and capabilities, thus becoming a key port resource

! Internal IT initiatives are welcome and encouraged, but delays in adopting PCS will cause issues

! Port community must be actively involved in PCS development to eliminate risk and skepticism

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