

# LASTING PROJECT

*The Strategic Plan for the Transnational Passenger Transit System*

*Towards a closer coordination among the main ports in the Lower Adriatic region*

SMART INTEGRATION PROCESS

D.T2.3.1 – Technical Study for the harmonization of in/out passenger flow

INTERREG IPA CBC ITALY–ALBANIA–MONTENEGRO PROGRAMME

# Agenda

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- LASTING Project – Smart Integration Process il Lower Adriatic: aims, objective, output
- State of the art of the IT systems
- Pilot activity developed in Durazzo, Bar, Bari
- Smart Corridor: adoption of best practice
- Results and evaluation

## CHALLENGE

To speed up and improve the passenger transport system in the Lower Adriatic region

## OVERALL OBJECTIVE

Regional coordination and streamlining of passenger flows within the Lower Adriatic area and into the Trans-European Transport Network(TEN-T), calling for the relaunch of the Pan-European Corridor VIII.

## OUTPUTS

WP1) Lower Adriatic-Passenger Integrated Mobility System(LA-PIMS) Strategic Plan  
WP2) Smart Integration Process of the Lower Adriatic International Ports [Pilot Action]

# WP2 - Smart Integration Process in Lower Adriatic

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A **process** built around the **cooperation** among the 5 Project Partners

aiming to harmonize the **equipment** and the related **software** needed

to **ease** and **speed up** the **embarkation** and **disembarkation** process in the Lower Adriatic International Ports

looking forward to eliminating **bottlenecks** and reducing **transit time**.

# WP2 - Smart Integration Process

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WP2 supports the design and implementation of state-of-the-art "smart corridors", coming with customized **equipment** and **software**, for:

- a) easing and speeding up the **embarkation-disembarkation** process,
- b) widening bottlenecks and **reducing transit time**,
- c) enhancing the **security** level and the speeding up of passengers' controls by renewing and upgrading the video control systems.

**Accordingly, WP-2 builds on 3 Activities:**

- Port Of Bar (**PoB**) Alignment with the ISPS ("International Ship and Port Facility Security") Code;
- Port of Durres (**PoD**) Electronic Check-in System for passengers and vehicles;
- South Adriatic Port Authority (**SAPA**) - Coordination of the Pilot Activities, Technical study of Software architecture designed around the Fast Corridor specifications (embarkation / disembarkation process)



# PoB pilot: Alignment with the ISPS code

Port of Bar, has implemented a pilot system, to support the implementation of a smart corridor system, adapting its operational processes to the requirements of maritime security dictated by the **ISPS Code** (International Ship Port Security):

- a) installation of RFID equipment and barriers at the Port Security gate and
- b) development of a software module of the Port Community system (PCS) for the control of incoming and outgoing flows , to and from the port, using electronic cards read by radio identification systems (RFID).





# PoB Pilot: results

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- Through the use of this pilot system, Luka Bar has improved the **efficiency** and **safety** of its transport services;
- In addition to the adoption of innovative equipment, the technical coordination and the **integration** of the new software with pre-existing IT systems, the port of Bar has managed to achieve an important requirement to allow **adaptation to the standard ISPS code** for international security of ships and port infrastructure.
- The main result of the pilot action is that **today all port visitors** (be they passengers, workers, truck drivers, guests, etc.) entering or leaving the port, **are automatically registered at the port PCS system gate using an RFID card.**





# PoD - IT system: as-is

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The PCS system currently has the following modules:

- 1- **PCS Core application module** application that must store all information passed through the Message Broker/Controller and entered through the PCIS Web tier into the system's database (RDBMS)
- 2- Application module for **ships** and **cargo** in PCS (**Vessel and Cargo Module**).

The prospect involves further developing the PCS "Basic" project by completing it with further modules and making it compliant with **EU directives (2010/65)**, adding new modules, for example, for managing the **truck announcement**.



# PoD Pilot: Electronic Check-in System

PoD made improvement of the **Electronic Check-in system** for passengers through the development of software for controlling incoming/outgoing passenger flows using electronic cards read by radio identification systems (RFID):

- (1) The exchange of information with maritime agencies dealing with passengers for the maritime lines between Durres, Ancona and Bari.
- (2) The process for issuing daily and long-term permits has been improved
- (4) The connection of the access control system with the permit and ticketing system.
- (5) The project also includes the creation of structures for verify permits (vehicles, pedestrians and passengers) via Mobile Devices.
- (6) The announcement report at the Port of Bari for the movement of passengers and vehicles was created.
- (7) The connection of the Permit System with the Port's Global Reporting System



# (PoD) pilot: results

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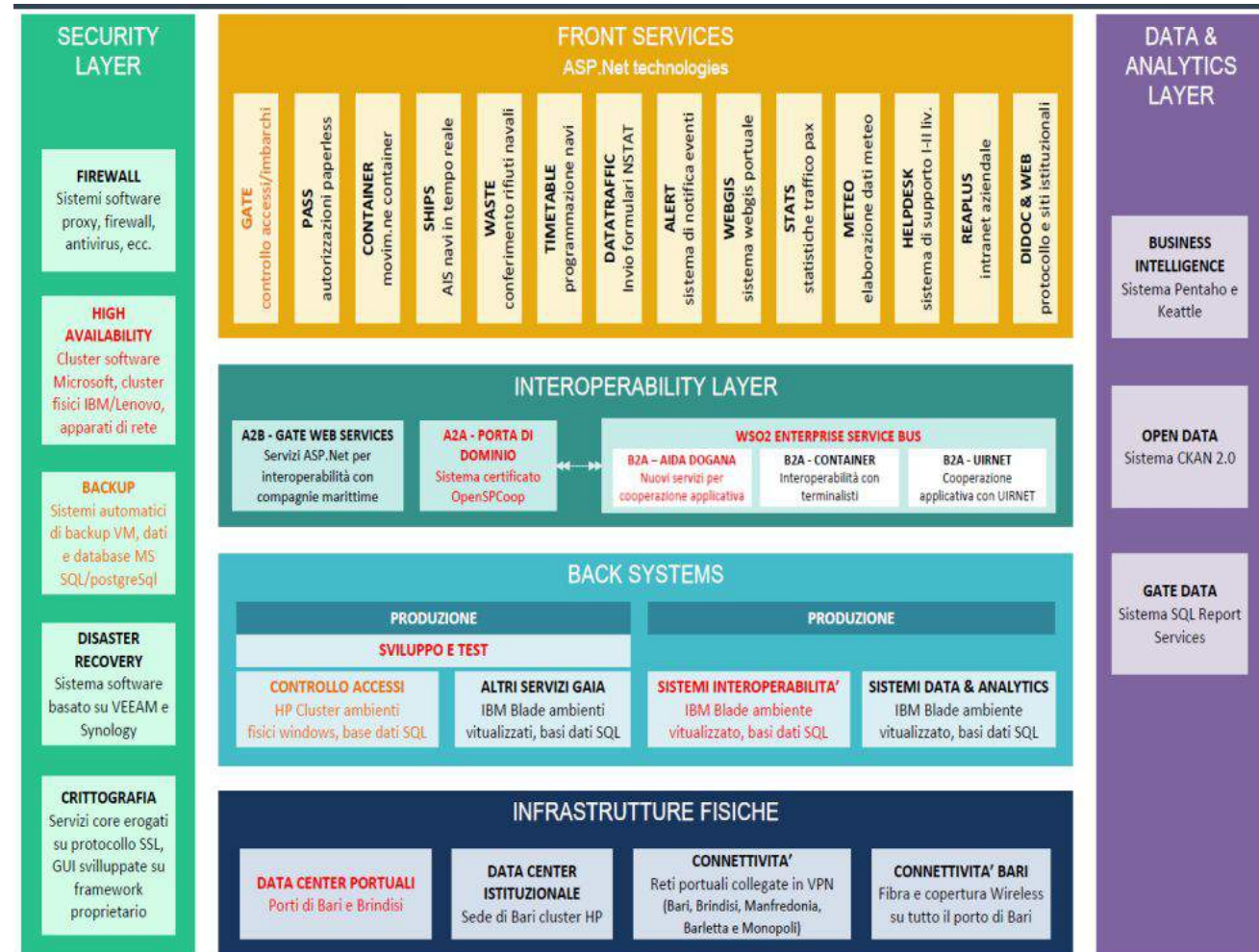
From the LASTING project, the Port Authority of Durres (PoD) benefited from an enhancement of the already existing electronic control system for the access of passengers and vehicles to the ferry terminal.

- 1) Improvement of the current permit management system for the issuing, activation and renewal of permits as well as online reporting at the port of Bari.
- 2) Integrations with other applications and systems such as:
  - Passenger/vehicle booking system,
  - Tax system,
  - Reporting system,
  - Pedestrian management system,
  - Vehicle management system.
- 3) Development of functionality for the online request for port access permits.
- 4) Purchase of identification scanners and handheld devices for port entry control.
- 5) Training and support

# (SAPA) - IT System: as is

**GAIA** is the **Port Community System** multi-port made as support tool for the ports of Bari, Brindisi, Manfredonia, Barletta and Monopoli, used since 2011 in implementation of the Maritime Security Measures (ISPS) Code, SOLAS XI.2, EC Regulation n.725/2004. Services:

- GATE (access control/embarkment)
- PASS (digital authorization)
- CONTAINER (container movements)
- SHIPS (ships situation – AIS)
- WASTE (ship waste management)
- TIMETABLE (ships schedule)
- WEB GIS (port web GIS)
- STATS (passenger statistical data)
- METEO (meteo data information)
- HELPDESK (users support)
- DIDOC & WEB (Official Website / backoffice)





# (SAPA) IT System: state of the art

**GAIA – GATE module** is used in the management of the ticketing and boarding phases on ferries departing from the port of Bari through the issuing of **Security Cards**, and the monitoring and control of the flow of passengers and vehicles passing through the Port Security and Port Facilities gates, both for travel to the Schengen and non-Schengen areas.

In moments of intense traffic, PCS GAIA managed up to 30,000 security cards between passengers and vehicles and over 10,000 authorizations daily, monitoring over 100,000 daily accesses to security and facility gates, all without causing delays for the agencies' operations or for security checks



**AUTORIZZAZIONE DI ACCESSO PORTO DI BARI**

CAVADITE CODE  
220180614155006707

nr. autorizzazione **180015**

dogname e nome **Nome e Cognome**

ente **Azienda Srl**

valida dal **01/01/2018** | fino al **31/01/2018**

varco portuale  
- **Varco A di I livello**

varchi di port facility  
- **Varco B di II livello**  
- **Varco C di II livello**

**COME ARRIVARE**

**DA NORD**

- Entrare in Autostrada A14 direzione Taranto
- Prendere l'uscita Bari NORD
- Entrare in Tangenziale
- Prendere l'uscita 4 per entrare su Via Napoli
- Proseguire dritto per circa 3 km: all'incrocio con via Maratona svoltare a sinistra
- Al primo incrocio svoltare a destra
- Proseguire dritto fino a raggiungere il Varco della Vittoria per l'accesso al Porto di Bari

**DA SUD**

- Entrare in Autostrada A14 direzione Bari
- Prendere l'uscita Bari NORD
- Entrare in Tangenziale
- Prendere l'uscita 4 per entrare su Via Napoli
- Proseguire dritto per circa 3 km: all'incrocio con via Maratona svoltare a sinistra
- Al primo incrocio svoltare a destra
- Proseguire dritto fino a raggiungere il Varco della Vittoria per l'accesso al Porto di Bari

**AUTORIZZAZIONE DI ACCESSO PORTO DI BARI**

**LEGENDA**

**VARCHI PORTUALI**

- 1 Marisabilla
- 2 Dogana

**VARCHI DI PORT FACILITY**

- 3 Commerciale
- 4 Darsena Ponente - 10
- 5 Darsena Ponente - 11
- 6 Molo di Ridozzo
- 7 Molo di Ridozzo - Stazione
- 8 San Vito - Portone
- 9 San Vito - Servizio
- 10 San Vito - Stazione marittima
- 11 Terminal Crociera - Servizio
- 12 Terminal Crociera - Stazione

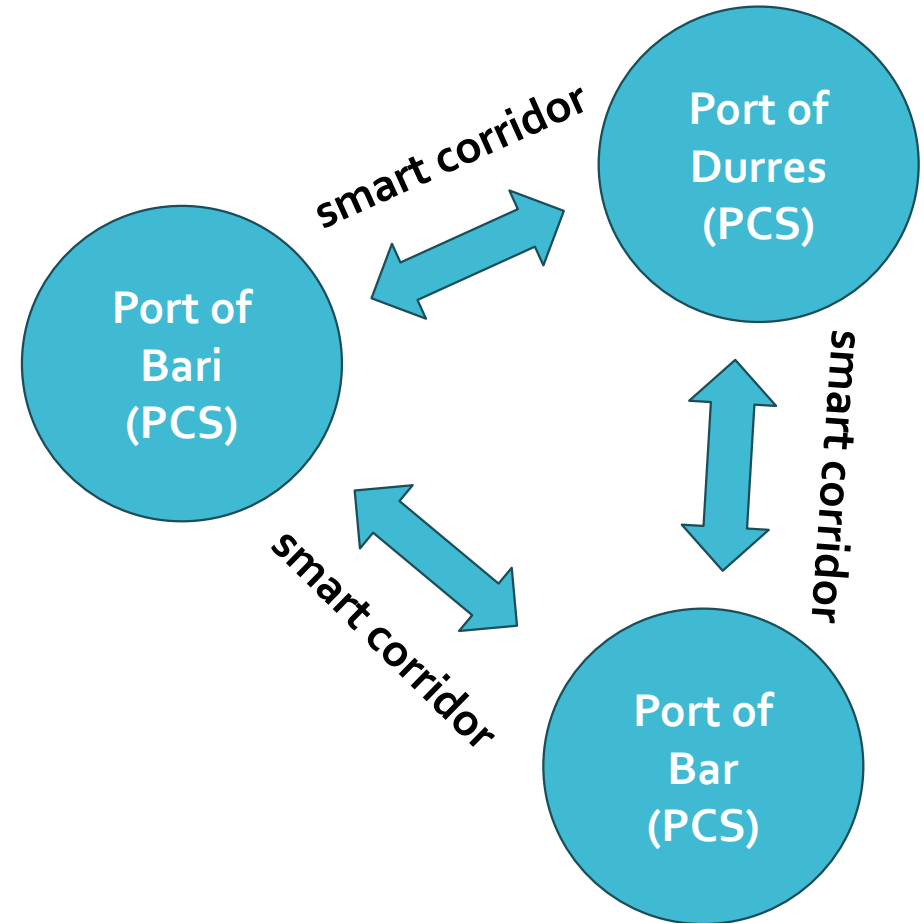
gaia | GAIA - Port Community System  
Dipartimento Sviluppo e IT

Servizio PASS  
gaia.pass@dispmam.it | +39 080.578.85.11

# Smart Corridor

The “smart corridor” is defined as a multimodal transport corridor connecting infrastructure and logistics facilities, between two or more countries, used to transport intra-regional and international goods and passengers enabled by the latest technological and financial trade facilitation tools and policies favorable;

“Smart corridor” can be achieved by putting the port “PCS - Port Community System” systems in communication with each other, each of which constitutes a unique computerized port environment that is concerned with managing the events that occur through the joint action of the various private and institutional actors who operate there, transforming them into data and as such valorising them and making them available to all those who can benefit from them for their own use.



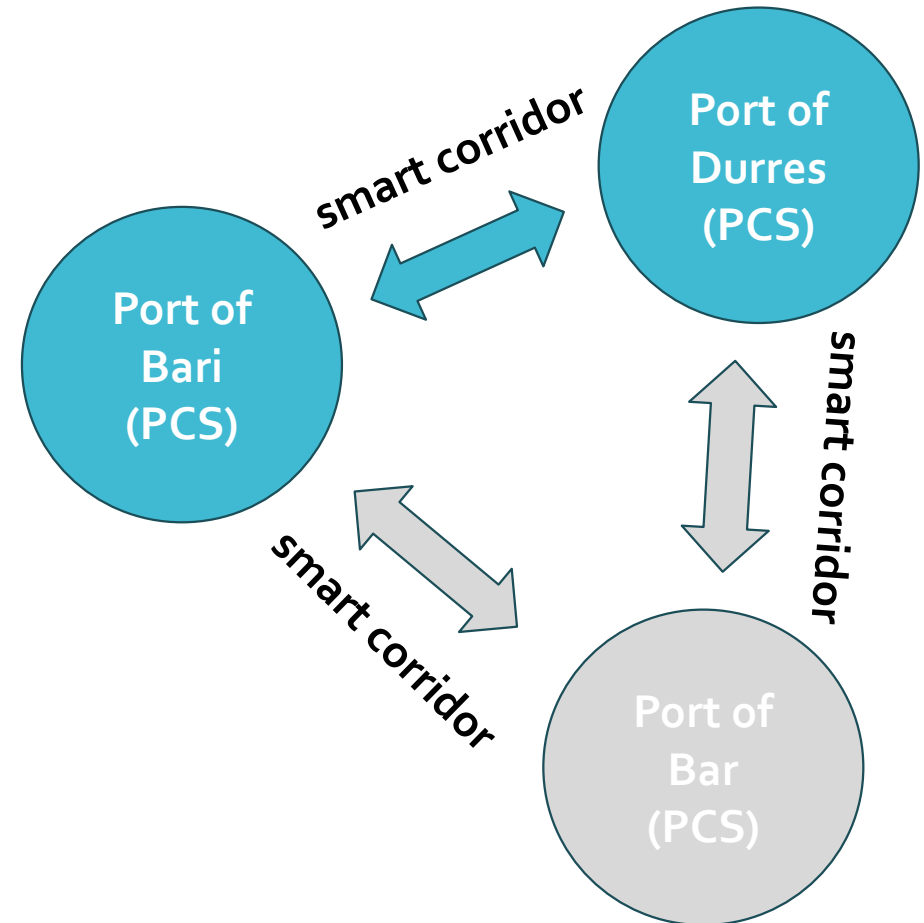
Example of Federated Network



# Smart Corridor – implementation Bari-PoD

In 2011 the Italian Ministry of the Interior financed the **CRIO project** (**ExChange of InfoRmation in Adrlatic POrts**), within which the Bari Port Authority developed a system in which even today the Port Authority of Durres can consult to obtain summary information on ferries arriving in its port, and in particular:

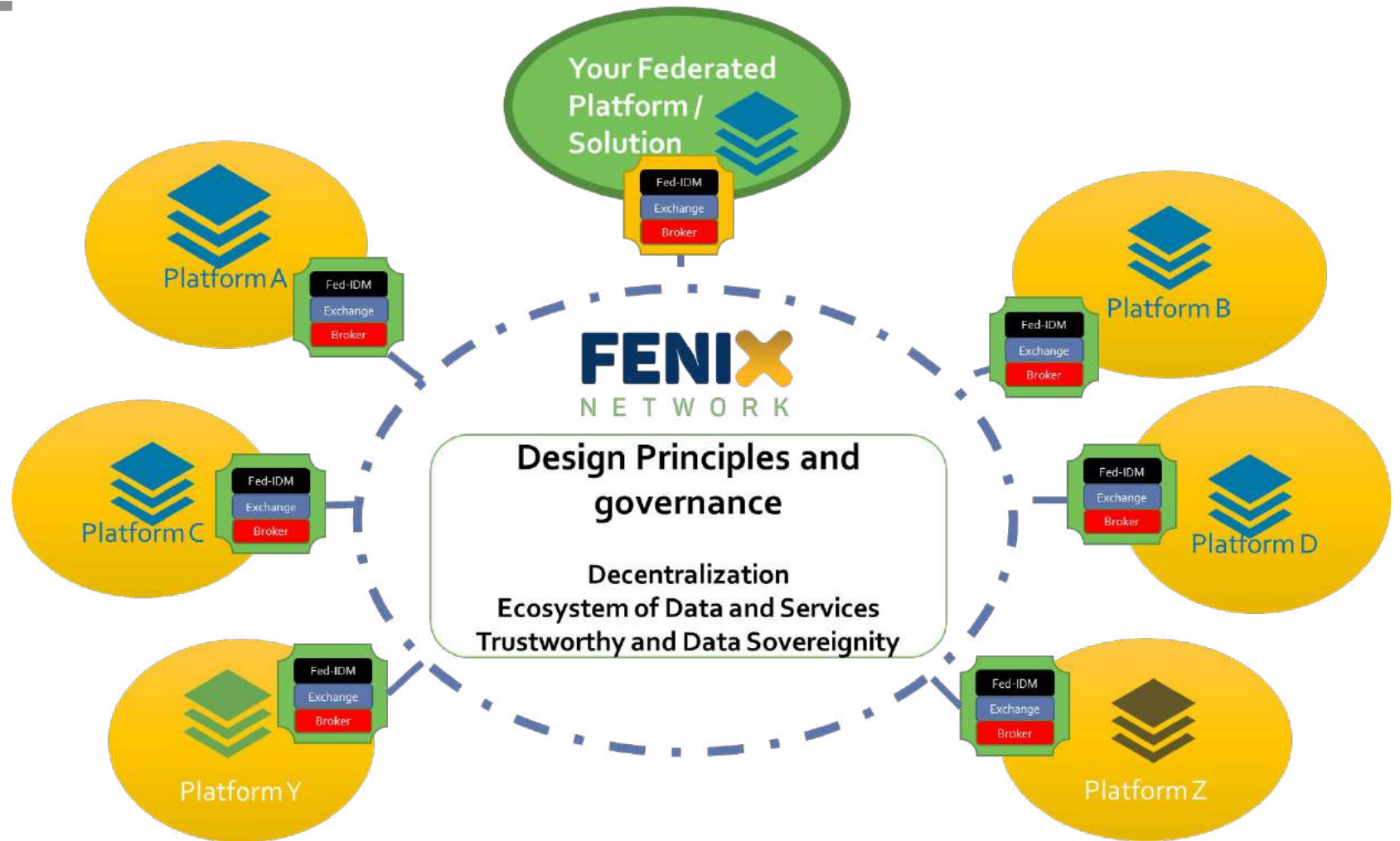
- ❑ data of the ship departing from Bari to Durres (Ship Name, IMO, ATD, etc.);
- ❑ Number of passengers on board (without personal details such as Name, Surname, document ID, etc.);
- ❑ Number of vehicles on board (cars, trucks).



# Federated Network of platforms

The PCS systems used in the ports of the LASTING project is developed with technologies designed to be interoperable with each other.

The use of a federated systems architecture, such as that proposed by the **FENIX project**, represents an architectural solution for exchanging data between them.



*FENIX - A European Federated Network of Information exchange in Future Logistics-federation of platform*

# FENIX project – adoption of project results

Coordinator: ERTICO ITS Europe

Number of overall partners: **44 private/public entites** from **Austria, Belgium, France, Germany, Greece, Italy, Netherlands, Slovakia, Spain)**

Italy:

- MIT Ministry of infrastructures and transport - Road safety directorate - Division 5: CCISS
- TTS Italia will support MIT and all national Implementing bodies for the project management, with particular involvement in all administrative issues, including relationships with ERTICO (as international Coordinator), EC DG MOVE and EC INEA.
- Italian Partners for Trieste Pilot: INFO.ERA, PLUSERVICE, MATRAS LOGISTICA, ADRIA INTERMODALE, CODOGNOTTO, INTERPORTO DI TRIESTE, AUTOVIE VENETE, SEA, POLITECNICO DI BARI, TTS ITALIA, ADSP MAO (TRIESTE PORT AUTHORITY), SWARCO MIZAR, DBA PRO., INFO.ERA, SITI.

CEF project

Start: 01.04.2019

End: 31.03.2023

Total costs:

60,613,464 €

EC contribution:

30,306,732 €



# FENIX project - adoption of project results

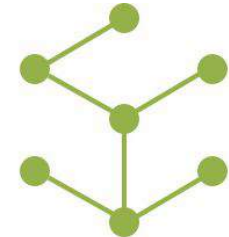
Based on the work and recommendation of the **Digital Transport and Logistic Forum (DTLF)** sub-group 2 (**corridor information systems**) to *create a viable and valid federative network of platforms* as enabler for Business to Administration (B2A) and Business to Business (B2B) data exchange and sharing by transport and logistics operators.

**FENIX Federation network is** a secure data sharing framework in the form of a federation, where there is not a centralized entity owning the ecosystem, and where **all the participants of the federation have the same rights and obligations** and follows the federation governance.

Federation



Decentralized approach



Ecosystem of Data and Services





# AT GLANCE+many NON-EU countries

Test site Austria: Customs corridor -Fürnitz (South Austria) on the Baltic-Adriatic corridor

Test Site Belgium: PS BE<sub>1</sub>- AirCargo (Be)

PS BE<sub>2</sub>- Multimodal inland Hub-Procter & Gamble-Mechelen-Willebroek (Be)

Test site France: French Mediterranean – North Sea

Test Site Germany: Multiple test sites across on Rhine-Alpine in Holland, Germany, Switzerland, Italy

Test site Greece: Greece Balkan-TEN-T network, Adriatic-Ionian corridor-Cyprus multimodal

Test Site Holland (South Holland): Smart multimodal

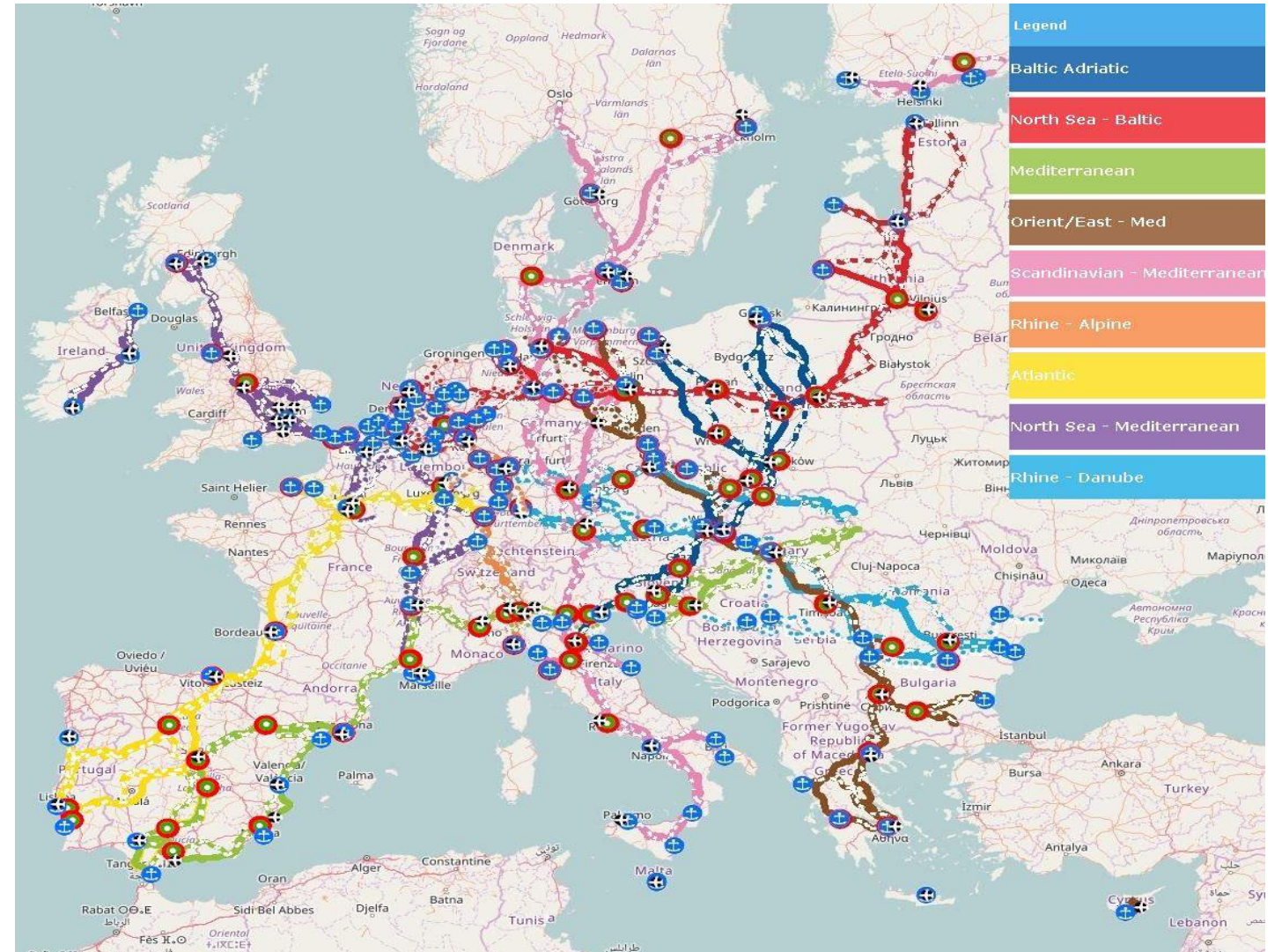
Test Site Italy: PS IT<sub>1</sub>- Mediterranean and Baltic-Adriatic and the Motorway of the Sea of South-east - Trieste

PS IT<sub>2</sub>: The Italian Rhine Alpine – Dynamic Synchromodal Logistic

Test Site Slovakia: All TEN-T corridors and multimodal

Test site Spain: The Spanish-Atlantic Corridor

- **Multi/synchromodal Transport**
- **Intelligent hubs**
- **Network Optimisation**



# Technology integration

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Platform Federation



Security (Encryption + Auth)



T&L corridor services



Software integration



Test cases



Quality



# Entry Exit System

With "REGULATION (EU) 2017/2226 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 30 November 2017 establishing an **entry/exit system** for the registration of entry and exit data and data relating to the refusal of third-country nationals who cross the external borders of the Member States.

With EES system a passenger, once he has obtained the Ticket and checked in at the port and received the boarding passes, will proceed towards the gate of the port facility next to the embarkation where will be a kiosk to register personal data, scan passport, carry out facial recognition, both for departure and arrival from non-Schengen areas.

The **EES system is part of the public security network**, managed by the Police, and interfaces with the European node (Interpol), **it has nothing to do with maritime security** and therefore will not interface with the PCS GAIA-GATE system.



*...implementation has also been much delayed but expected to be in place at the end of 2024...*

# Smart Integration process: evaluation

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- a) Despite the availability of the technology necessary for the future creation of a single architecture for the exchange of data among the ports of Bar, Durrës and Bari, important issues regard the **regulatory imposed by the GDPR that currently limit the possibility of exchanging personal data between these ports.**

We need to regulate the transfer of such data to member states' law enforcement authorities and their processing for the prevention, detection, investigation and prosecution of terrorist offences and serious crime (e.g. EU directive on passenger name record (PNR) data).

- a) With the introduction of the **EES (Entry Exit System)** at the entry/exit points of the European community, such as the port of Bari, in addition to the security procedures currently managed through the PCS GAIA-GATE system, **will be added new activities for passengers which will inevitably make the process of disembarking and embarking towards the ports of Bar and Durrës more complicated as they are ports in non-Schengen areas.**

LASTING

# Thank you!

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