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ADM

L'AGENZIA DELLE ACCISE, DOGANE E MONOPOLI

**Direzione Organizzazione e Digital
Transformation**

European workshop on disruptive technologies

April 29, 2021

SUMMARY

- Introduction
 - AIDA
 - Port Interoperability
 - Internet of things
 - Digitalization Program - Clusters of projects
 - Application examples
 - I-Rail
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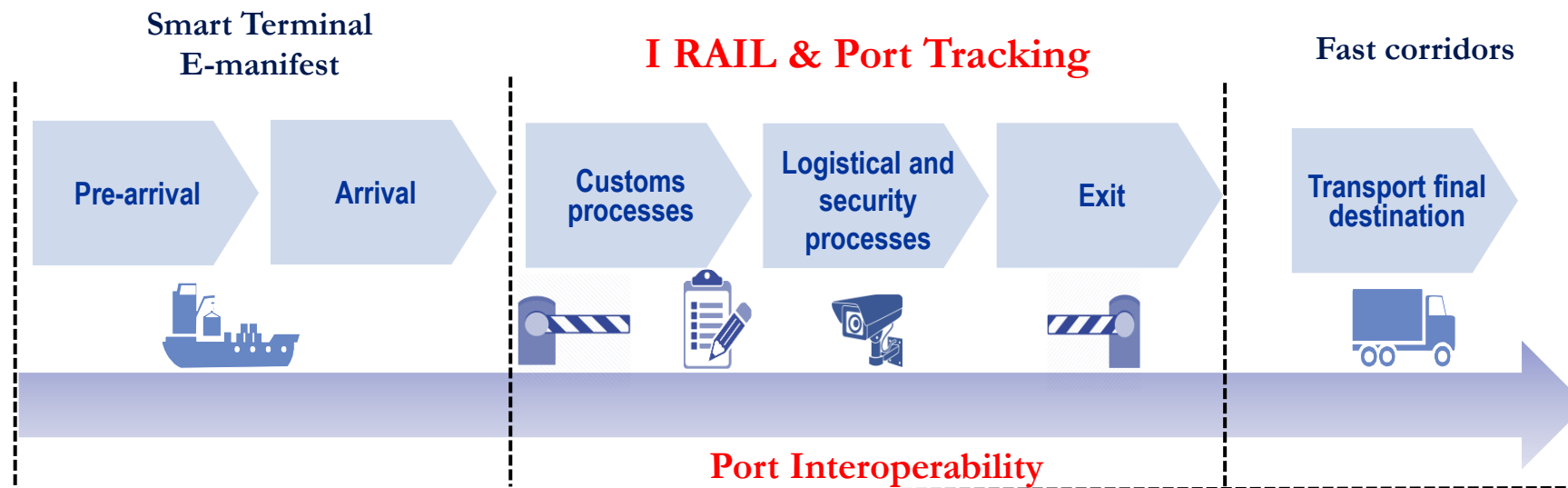
Digital Transformation and European projects

ADM | Projects

The customs and monopolies agency (ADM) has signed with the main port system authorities permanent technical tables (TAAP) aimed at "Port digitalization". This is a nationwide initiative aimed at implementing, in the ports, technologically advanced solutions for the digitalization of customs procedures. In particular Port Tracking aims to digitalize procedures relating to non-EU goods, related to:

- **embarkation/disembarkation.**
- **entry/exit from port nodes**
- **payment of anchorage and port taxes.**

Impetus to the development of export and import trade flows and connection with national strategies for the digital transformation of the country.



Main Actors



Key Factors

AIDA

Internet of Things

Interoperability

Digital Transformation and European projects

AIDA

AIDA is the platform for the exchange of data among governmental entities (Customs Agency/Port Authorities) offering G2G/A2A services. It is an Italian nation-wide initiative to implement advanced technology solutions at ports to digitalise customs procedures related to embarking/disembarking, entry/exit in/from port hubs, payment of port fees.



Features and functionality



System based on the single-window/one-stop-shop approach: integration of processes and unification of controls across multiple administrations.



Standardised processes (customs and logistics), technological aspects (interoperability of data exchange) and methodologies.



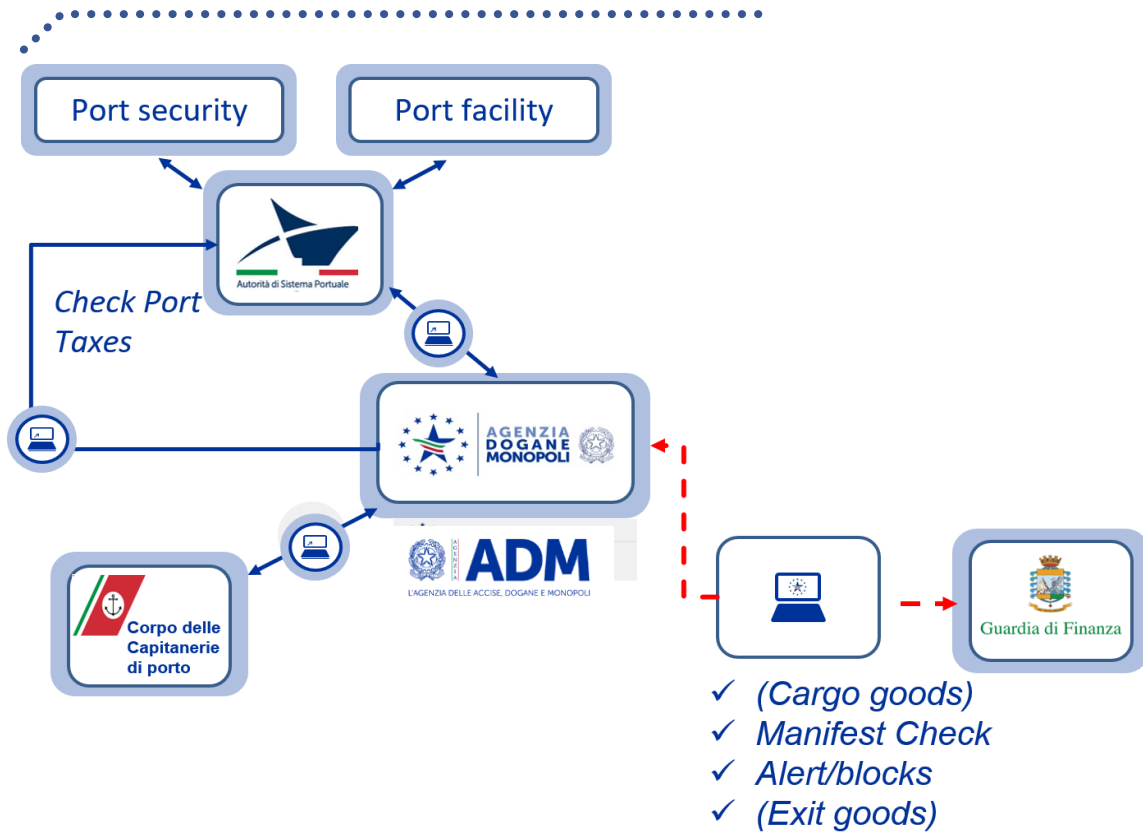
Information from customs processes is made available via the network to interested or competent authority (national and community authority).



Digital Transformation and European projects

Port Interoperability

Port Interoperability



DESCRIPTION

Internet of Things and **Interoperability** are aimed at the complete digitalization of customs procedures in Italian ports for goods transported both by rail and road. Interoperability involves all the main institutional bodies in the port sector: the Ministry of Infrastructure and Transport, the General Command of the Guardia di Finanza, the General Command of the Capitanerie di Porto, the Port System Authorities, the Agenzia per l'Italia Digitale and Sogei.

FEATURES

Technical specifications:

- Security channel
- Security of transaction
- Authorization/Authentication system
- Log Tracking

Web Service:

- With Domain Port
- Without Domain Port

Standard Services Agreements

- ADM
- AdSP
- Capitanerie di Porto

Digital Transformation and European projects

Internet of things

Projects are based on the logic of the **Internet of things**. The objects make themselves recognizable by means of special devices and, by means of special readers, provide data and information about themselves or other objects to the rightful owners. In particular, by means of an **IOT_ID** code (a unique identification code generated in the UUID format of the moving object) issued by the ADM which allows, in interoperability with the Port System Authority, the automatic tracking of vehicles and goods in the port area with a reduction of obligations according to the "ONCE" principle.



Benefits of IOT



Standardize processes for the benefit of traders



Enhance port performances by reducing times for embarking/disembarking of goods in port areas

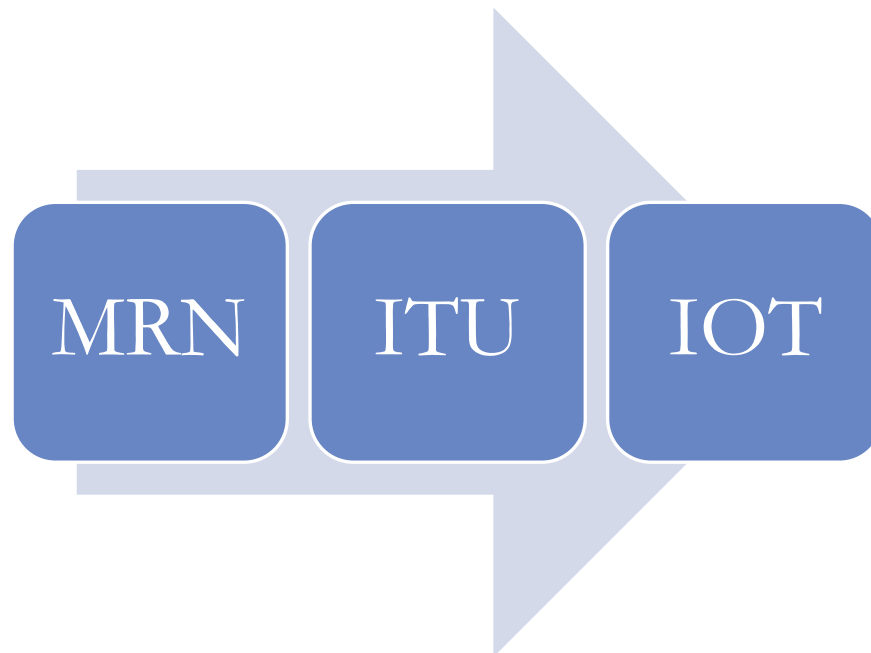


Link the innovative solutions already implemented by Italian Customs administration



Reduce manual procedures to improve security and legitimate trade

MRN and ITU are generated by customs information systems, and is exchanged through interoperability between the subjects envisaged by the process in question in the planned logistic nodes.

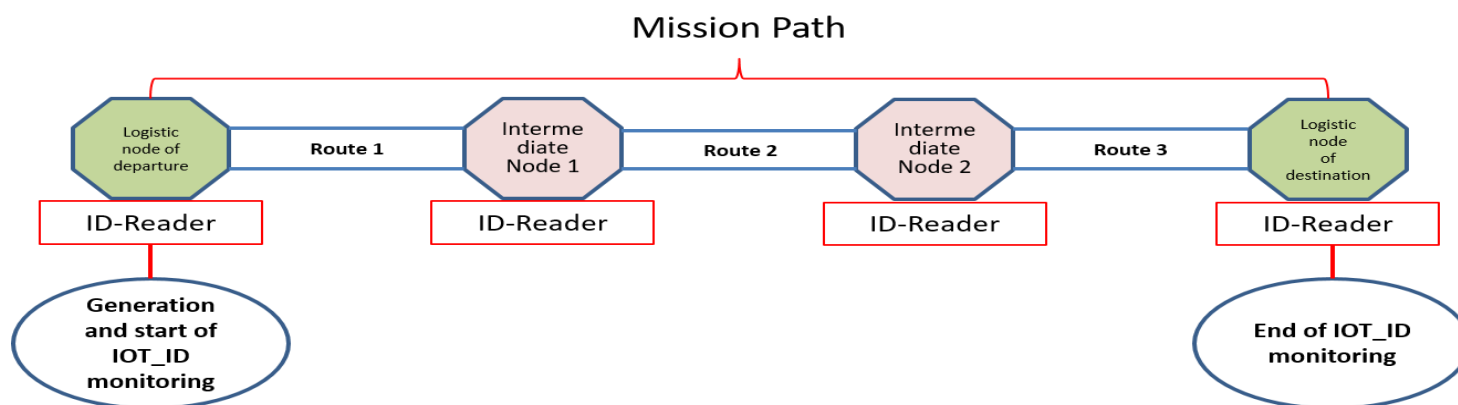


The information included in each logistics node is:

- **Logistic node of departure:** logistics node in which the IOT_ID is generated
- **Destination logistics node:** logistics node where the IOT_ID has generated a definitive status for the purpose of logistics tracking, because the process that requires its tracking has ended.
- **Mission path:** path covered by the IOT-ID in the journey between a logistic node of departure and a logistic node of destination
- **ID-Reader:** manual or automatic reader ("OCR", "RFID", "BARCODE" type device) used for detecting the IOT-ID or information related to it when passing through the logistic nodes

It could be also included a:

- **Intermediate logistic node:** place included in the "Mission path" and distinct from the departure and destination logistic node, where the IOT-ID logistic tracking is carried out because required by the process in question.
- **Route:** route belonging to the mission path, including two logistic nodes, at least one of which is intermediate. The route coincides with the mission path in the absence of intermediate nodes.



Digital Transformation and European projects

Cluster of projects

The digitalization program is implemented based on **four project clusters**.



First cluster

- Bari
- **Ancona - phase 1**
- Trieste - automation entry visa (EV)
- Trieste – notice of arrival



Second cluster

- I-RAIL Genoa/Savona Vado
- Evolutionary Improvements
- Anchor duties
- Venice phase 1
- Livorno phase 1
- Genoa - Port charges
- I-RAIL La Spezia
- I-RAIL Trieste



Third cluster

- Vado Ligure
- Salerno
- Ravenna - TCR flows
- Augusta - Flows RO_RO
- Trieste Buffer Meduri
- Ancona - phase 2
- Venice - phase 2



Fourth cluster

- Taranto
- Naples
- Trieste - Handling between free points
- La Spezia
- Brindisi Manfredonia Barletta and Monopoli
- Livorno phase 2



Operational projects
(operational experimentation is underway or with passed application tests)

In progress
(application testing in progress or application design in progress)

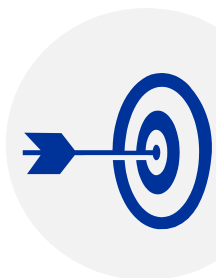
Started projects
(ongoing planning or ended)

Projects to be launched

Digital Transformation and European projects

Example: Port of Bari

Goals



The project aims at rationalizing the exchange of information between the actors of the port cycle. In particular, it is expected to automate the procedures of entry/exit from the gates, embarkation/disembarkation, payment and tracking of the customs and logistic status of goods in the port. The objectives can be summarized as follows:

1. **Activate interoperability services** between the customs information system (AIDA) and the local Port Community System (PCS)
2. **Assessment of the local situation** to define an interoperability model scalable to other local realities
3. **Extension**, on the basis of the most suitable operational model, to other ports in Southern Italy

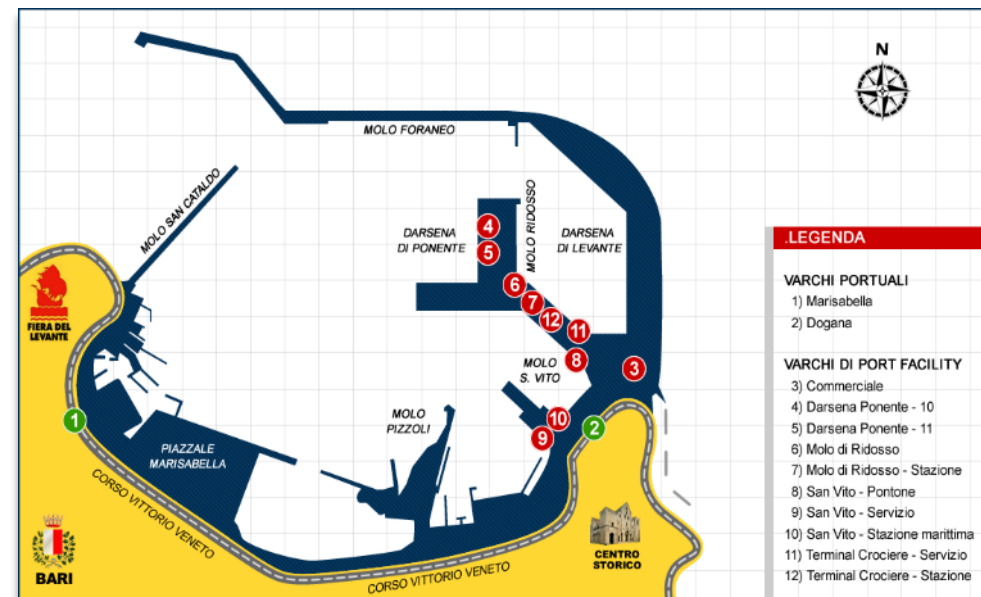
Description

The project, intervenes in the Port of Bari where **the analysis of the existing situation (AS IS) was carried out through an assessment of local systems, the identification of the solution to tend (TO BE) and the interoperability between the AIDA system and the local Port Community System (GAIA) was realized.**

The port community system (**PCS**) allows an analysis of the main management processes of the port area with the aim of integrating them with the processes managed by actors at national level (Customs and Monopolies Agency, Guardia di Finanza). This analysis also provides a representation of the information flows related to the main stakeholders involved.

Activities currently underway.

Operational experimentation in port - Directive Prot. 232685/RU of 07/07/2020



Start date



09/01/2017

End date



07/07/2020

Project progress



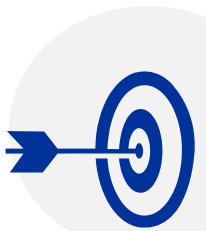
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Digital Transformation and European projects

Example: Port of Trieste



Goals



ADSP MAO and ADM intend to achieve the following goals:

- Optimize cargo unloading and loading times.
- Decongest the port areas.
- Automatically detect anomalies relating to the handling of goods.
- Automated control of incoming visa (in the port) and outgoing visa (from the state).

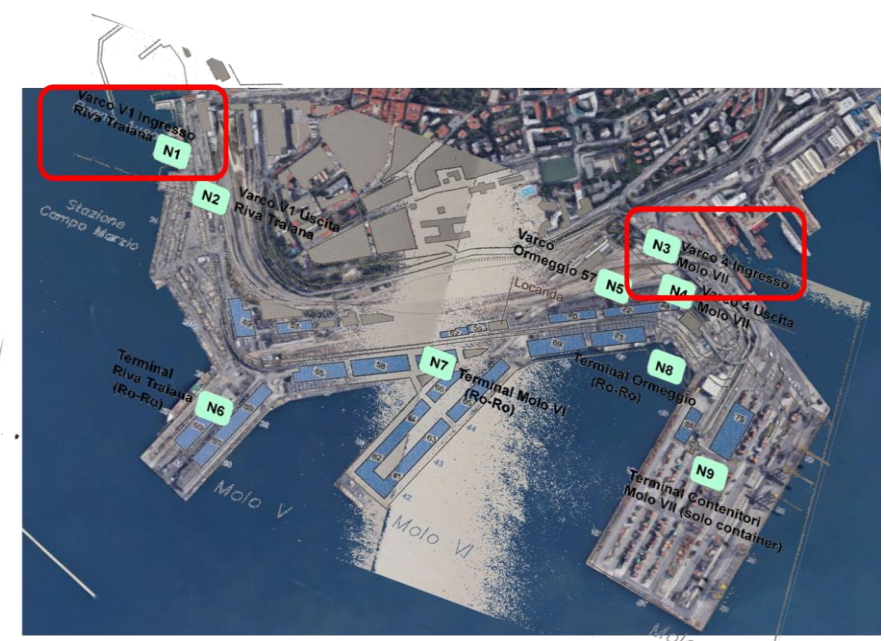
Description

The project foresees the following interventions.

- Implementation of the advance notice of arrival of goods arriving at the port in Export or Transit**, through interoperability between ADM and ADSPMAO. The advance notice is completed with the control of the vehicles arriving at the port at the pre-arrival in the port of Trieste and with the affixing of the visa to enter computerized by the Guardia di Finanza (GDF).
- Digitalization of visa to enter by Guardia di Finanza (GDF)**

Activities currently underway.

Operational experimentation in port with development of evolutionary improvements



Start date



02/12/2019

Estimated end date



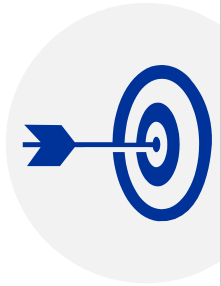
25/01/2021



Digital Transformation and European projects

Example: Port of Ancona

Goals



- Automation of procedures and controls related to goods in port logistics nodes
- Computerization of customs administrative procedures related to the passage of goods and real-time management of the routing of goods flows in the port itself
- Digitalization of the procedures of entry/exit of the gates, embarkation/disembarkation, payment and tracking of goods in the port

Description

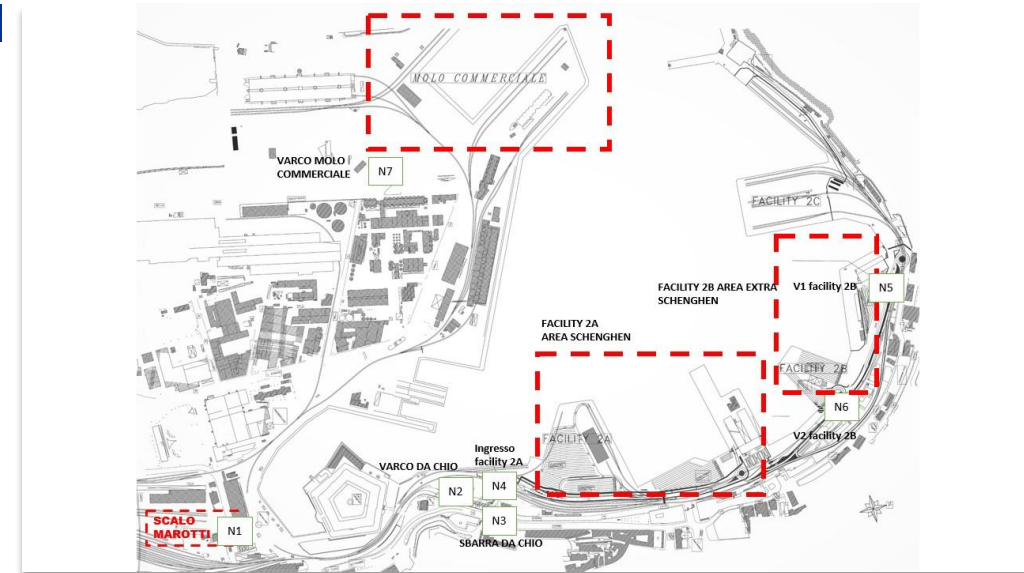
The project will be implemented in two sequential phases.

PHASE 1 - Digitization of AdSP procedures for the ferry dock

PHASE 2 - Digitization of AdSP procedures for the commercial pier.

The project will include for both piers the activities of:

- tracking and monitoring of the means of intermodal flows in transit between the customs parking lot "Scalo Marotti", and the access gates to the port facilities, with automated alarm systems
- realization of infrastructures for customs controls and authorization procedures for goods in transit in the port of Ancona
- promotion of interoperability between traffic flow monitoring software and AIDA and PMIS systems



Start date



12/07/2019

Estimated end date



PHASE 1 - Completed
PHASE 2 - 30/06/2021

Project progress

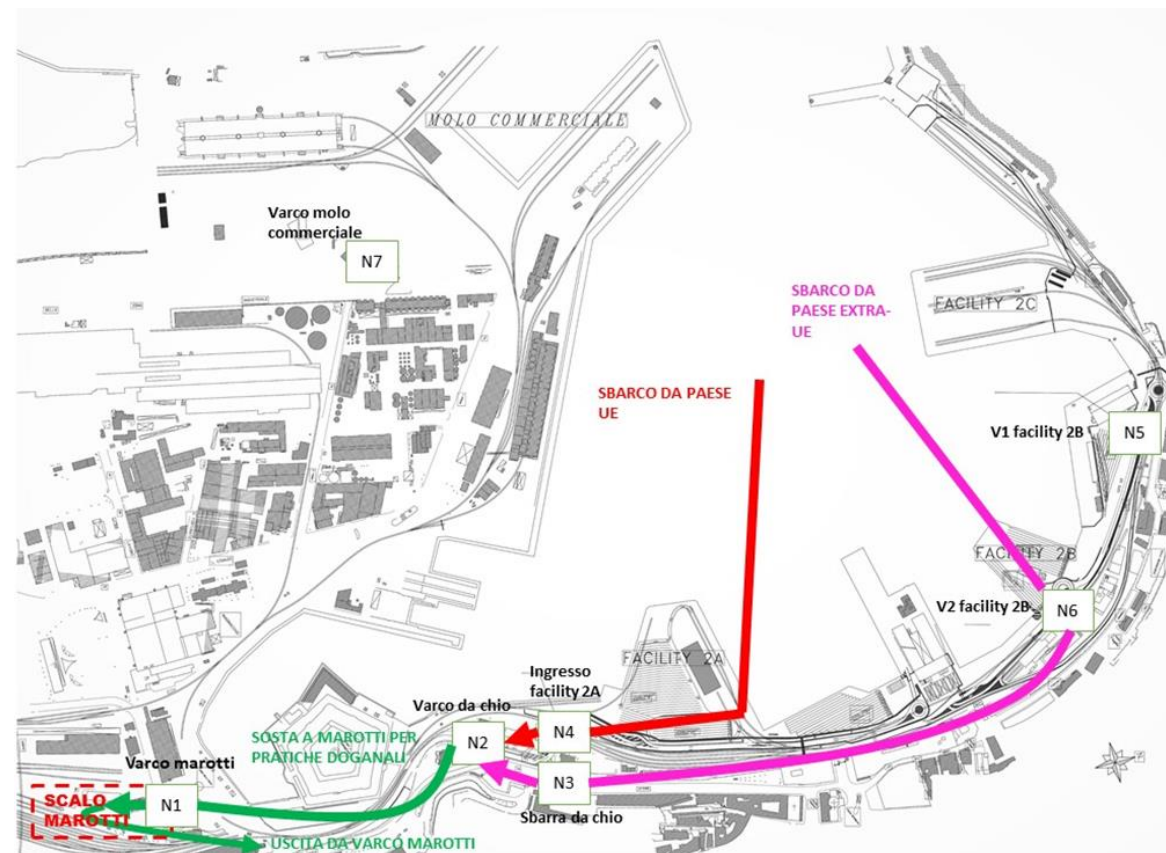
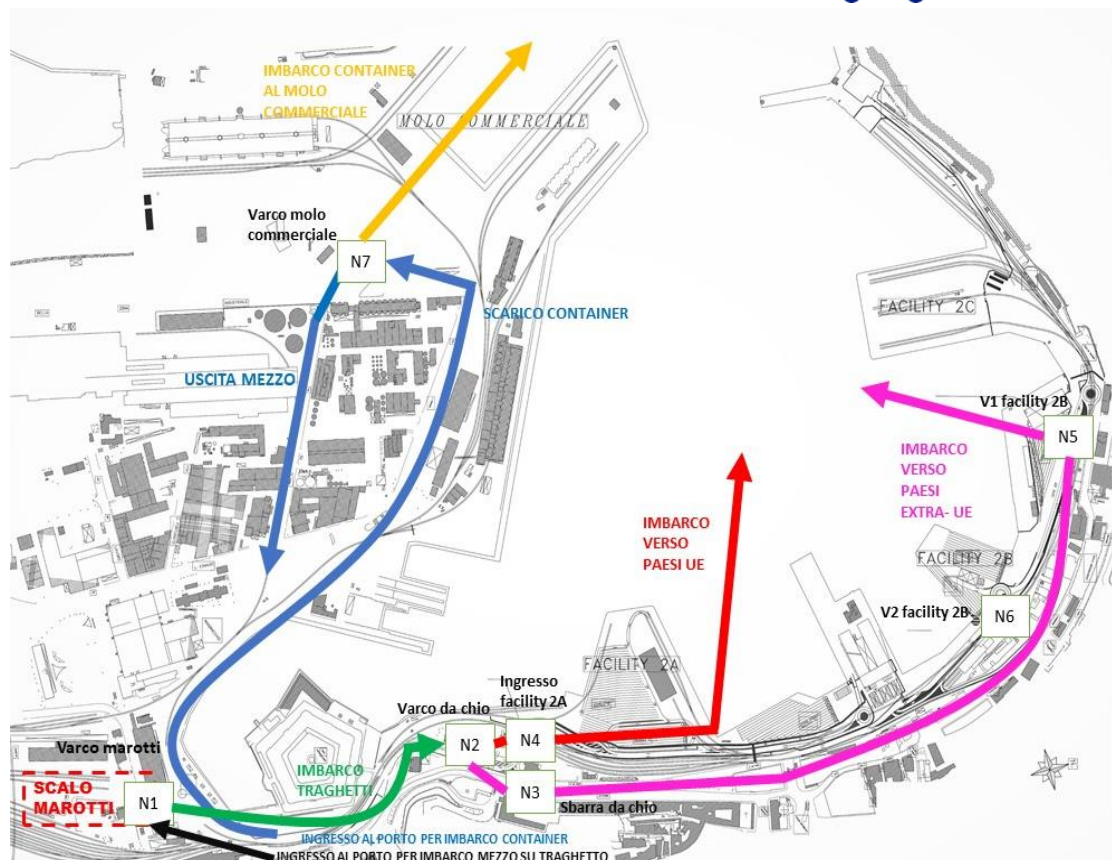


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Port of Ancona: AI + Interoperability + IOT




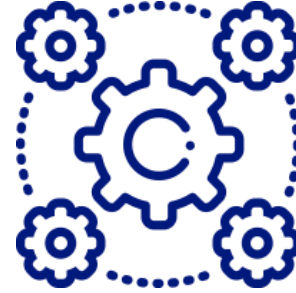
Interoperability



Port of Ancona: System Integration of AI + Interoperability + IOT



Interoperability



- Tracking
- Alert/Warning/Blocks
- MNR
- Goods Manifest
- Customs Controls
- Customs Safe & Security
- Tax Payments

Port of Ancona: Example of Export

Dati generali IOT

IOT: AOI21C10P4346440	Data e ora registrazione: 10/03/2021 16:44	ID mezzo: AB123CD	Segnalazioni sul mezzo: Nessuna segnalazione
Tipo operazione: Esportazione	Corridoio: PFEXUE1 - Molo Traghetti Export Extra UE		

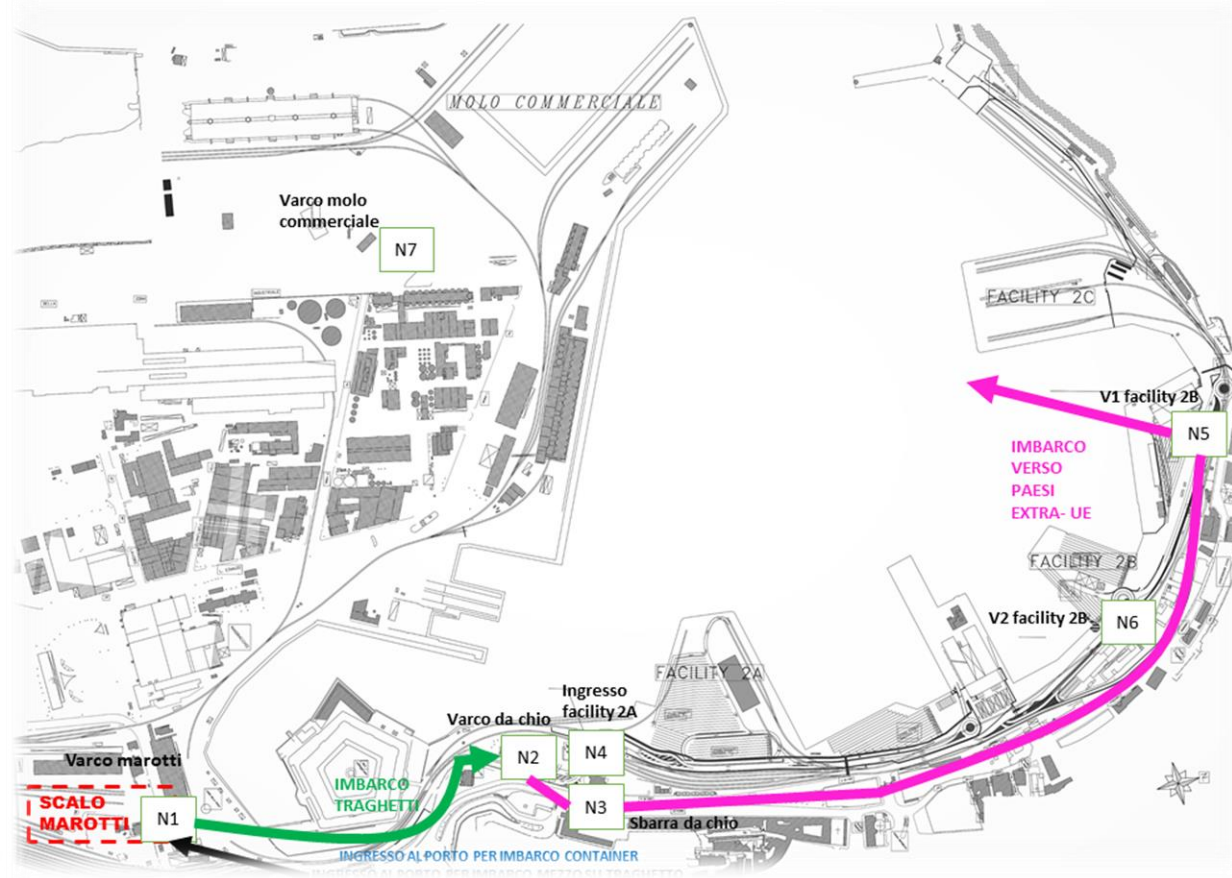
> Tracking

Sono presenti **5 tratte**

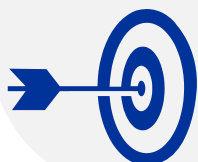
Tratta	Nome tratta	Prog. lettura	Data e ora rilevamento	Differmità		
				ID mezzo	Dich. / MRN	Container
1	Tratta Port Security di ingresso Scalo Marotti	1	10/03/2021 16:43	AB123CD		
2	Tratta da Scalo Marotti a Varco da Chio	1	10/03/2021 16:43	AB123CD		
3	Tratta da Varco da Chio a Sbarra da Chio	1	10/03/2021 16:44	AB123CD		
4	Tratta da Sbarra da Chio a Varco Facility 2B (Extra UE)	1	10/03/2021 16:44	AB123CD		
5	Imbarco da Varco Facility 2B (Extra UE)	1	10/03/2021 16:44	AB123CD		

> Dichiarazioni associate ad ultimo varco di rilevazione

MRN	Rischio	Pagamenti	Estremi A22	Differmità su dichiarazione	
				ID mezzo	Container
09ITQXC080000113T7	✓	✗		CAMION ⚠	



Goals



The project foresees the creation of a **customs model for the digitalization of logistics information related to the goods in the last railway mile**. It represents an opportunity for innovation and digitalization of railway, logistics and customs processes in an integrated vision consistent with European guidelines for the development of an efficient and effective transport.

In this project, the Agency cooperates with the Port System Authorities and other port actors involved (MTO, TERMINALS, Railway Infrastructure Manager).

Description

The project foresees digitalization of the following processes.

- **Import/transit process for goods leaving the port.**
- **Export/transit process for goods arriving from the port.**

The model is based on the interoperability between ADM and ADSP, and does not change the AS-IS process of import/transit, export/transit and the current procedures but integrates them with two functionalities:

1. Import/transit: INFO MRN allows the TA/operator to be able to load the train with customs ready goods.
2. Import/transit, Export/transit: computerization of the A18 paper register with sharing of the train manifest
3. Export/transit: identification of customs declarations made in port for goods entering by train to simplify the exit visa process.



Start date



01/09/2019

Estimated end date



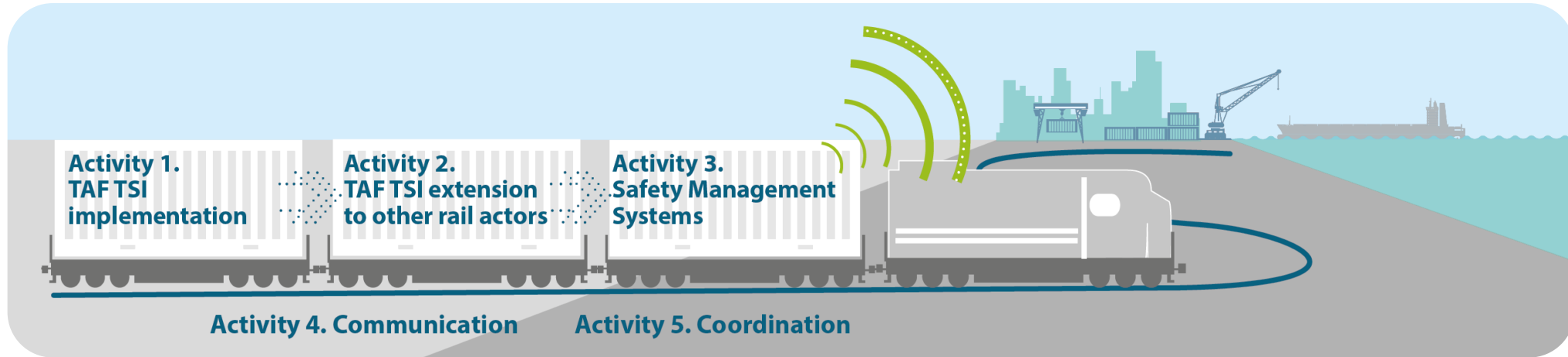
30/12/2021

Project progress



Digital Transformation and European projects

Focus – New technology and future developments – I-RAIL



I-RAIL - Customs model for the digitization and integration with logistics of information related to the goods in the last rail mile.

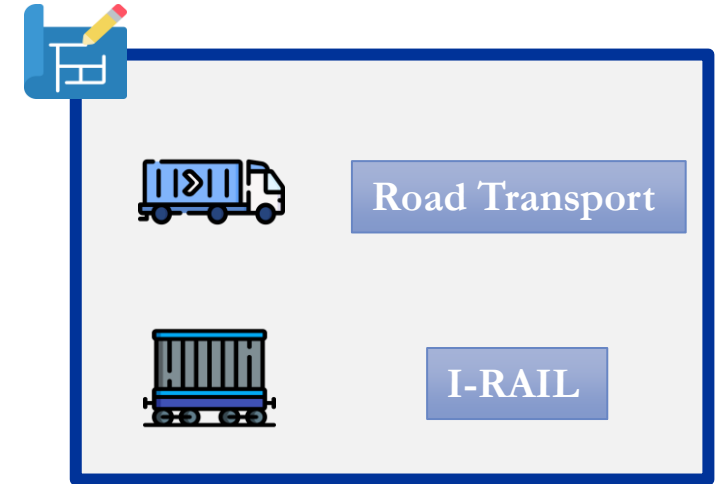
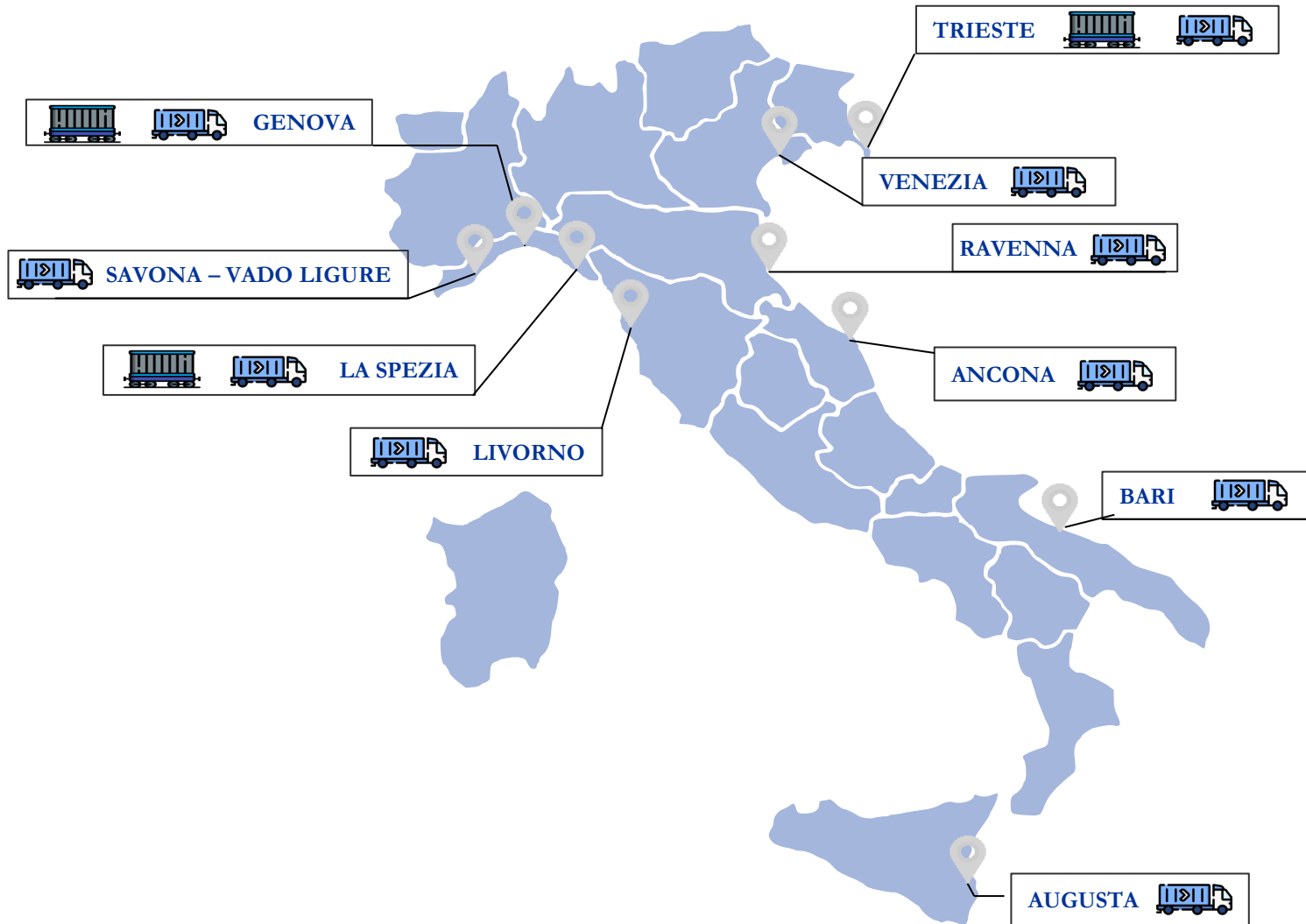
The Customs and Monopolies Agency is one of the partners of the **I RAIL Project**, selected and funded under the Connecting Europe Facility-Transport: the program managed by the **EU Directorate General MOVE** for the promotion of growth through infrastructure investments. The I-RAIL project was created to promote rail freight transport in Europe through the digitization of processes and the implementation of TAF TSI standards (Technical Specifications for Interoperability (TSI) applied to Telematics Applications for Freight (TAF)). The main objective of the project is to improve interoperability in the exchange of information in European rail freight services. The project is divided into 3 activities

- **ACTIVITY 1:** Implementation of the TAF IST subsystems for railway undertakings, infrastructure managers and wagon keepers with the TAF IST standards required by the EU/797/2016 Interoperability Directive.
- **ACTIVITY 2:** Extension of the interoperability foreseen in the TAF-TSI to other actors in the logistics chain including **the Customs and Monopolies Agency (ADM)** interested in identifying customs-relevant goods arriving or leaving ports transported by rail
- **ACTIVITY 3:** Digitization of the current security management system of railway companies operating in Spain.

ADM is the main actor in ACTIVITY 2, which constitutes **an opportunity for innovation and digitization of rail, logistics and customs processes** in an integrated vision consistent with European guidelines for the development of efficient and effective transport.

Digital Transformation and European projects

Projects in the ports involved



Thank You



[dir.organizzazione-
digitaltransformation.organizzazione-
ricerca@adm.gov.it](mailto:dir.organizzazione-digitaltransformation.organizzazione-ricerca@adm.gov.it)



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