

The SMART-C Project

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HoU Development, Promotion and EU projects
Central Adriatic Ports Authority





6 ports

11,8 millions tons of good

1,2 million passengers

9.016 workers

2 regions

3 main cities

2 Maritime Directions

2 Interregional Custom Directions

215 km, the length of the coastline

ANCONA: GATEWAY TO THE EAST

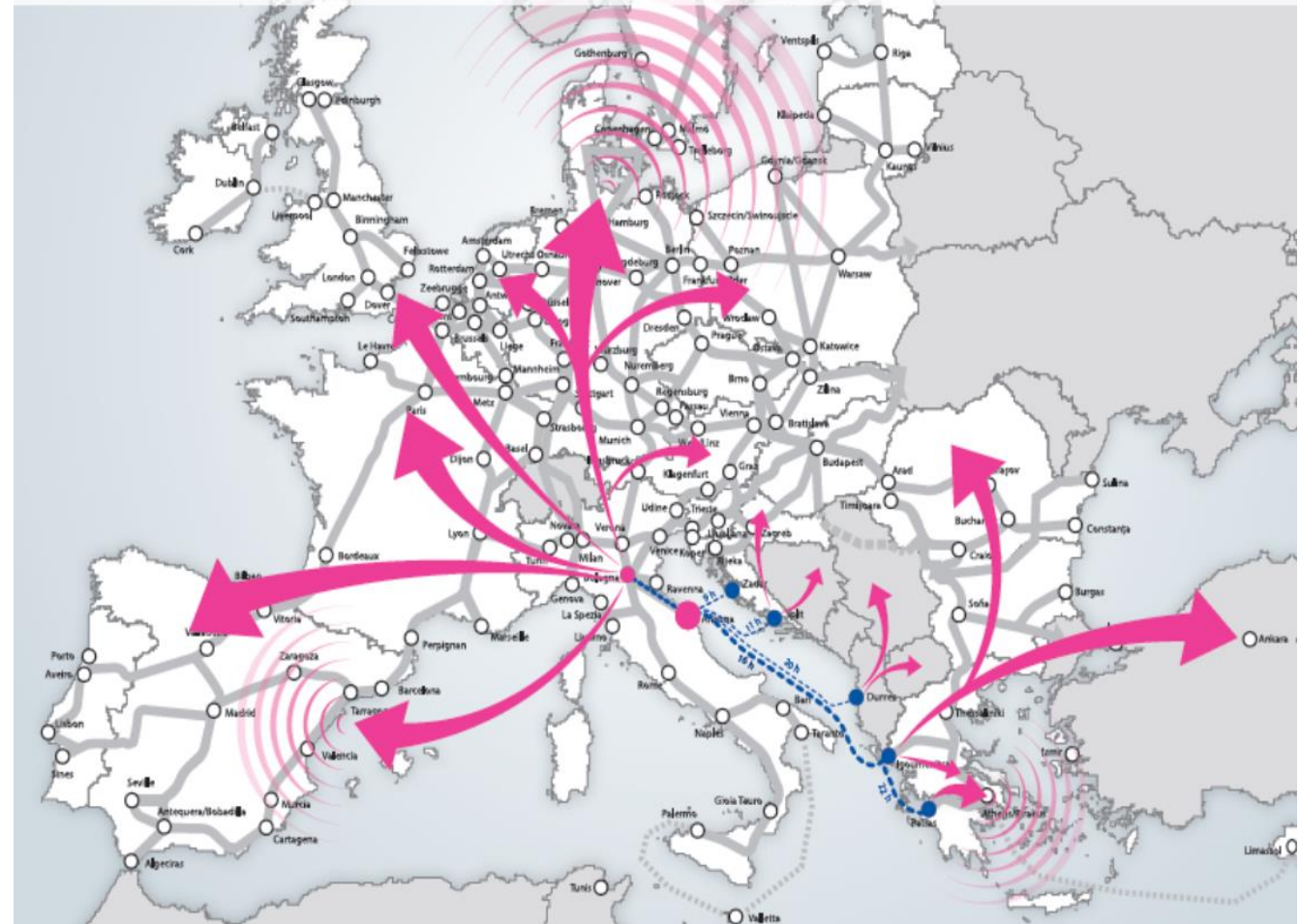
Ancona, core port of the Scan-Med Corridor

Bridgehead of several routes connecting more than 85 NUTS1 EU regions, with Balkan countries, South-East Med and Black Sea area

Main gateway for trade relations with third countries in the Med area, therefore efficient customs services are an added value for trade facilitation

Growing traffic on the Ancona-Durres line: +185% in the period 2015-2019.

Principali flussi di origine e destinazione del traffico merci RO/PAX del porto di Ancona
Origin and destination of the main freight flows of the RO/PAX traffic in the port of Ancona



ANCONA: A CITY PORT FOR INTERNATIONAL MoS



- Ferry terminals are close to the town centre;
- Lack of parking surfaces inside the Customs area;
- Inefficient port organisation as alternative to the lack of spaces

Innovation action to:

- Bypass the port infrastructural weaknesses and improve the quality of service;
- Ensure a proper environment for controls to allow the use of port external areas.



The virtual tunnel links Scalo Marotti with the ferry terminal Customs Gate, using **AI technology** as an innovative solution for the secure transfer of the cargo.

The TinS global project aims at establishing an innovative procedure for customs controls **OUTSIDE** the port area for vehicles related to ferry traffic. The procedure aims at being opened for all kinds of customs formalities to be performed in port without prior registration of the forwarder, to ensure the flexibility requested by operators and shipping lines.

To that extent the Central Adriatic Ports Authority selected an AI system (A3IU) to:

- 1) control the “virtual tunnel” between the ferry terminals and the Scalo Marotti customs parking;
- 2) Ensure the e-dialogue with the Customs Agency AIDA system and its innovative applications, to give real time information about the ferry (containers) cargo flows in port areas.



THE BACKBONE OF THE INNOVATIVE ACTIONS: THE INSTITUTIONAL COOPERATION

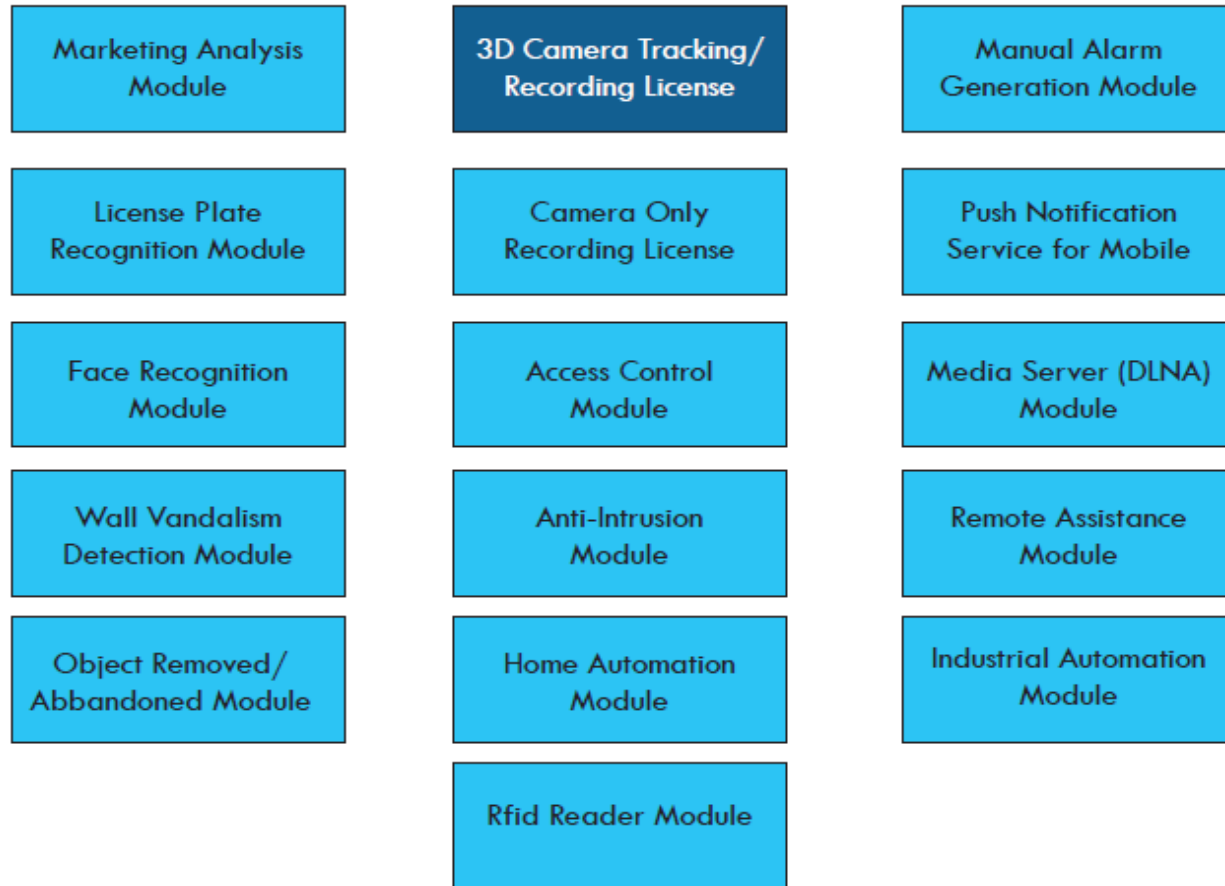


Institutional Agreement
for the digitalization of the
procedures of the port of
Ancona (2019)



MoU establishing a technical working group
between ADM and the Central Adriatic Ports
Authority (Oct. 2020)

ARTIFICIAL INTELLIGENCE TO TRACK AND TRACE VEHICLES FLOWS

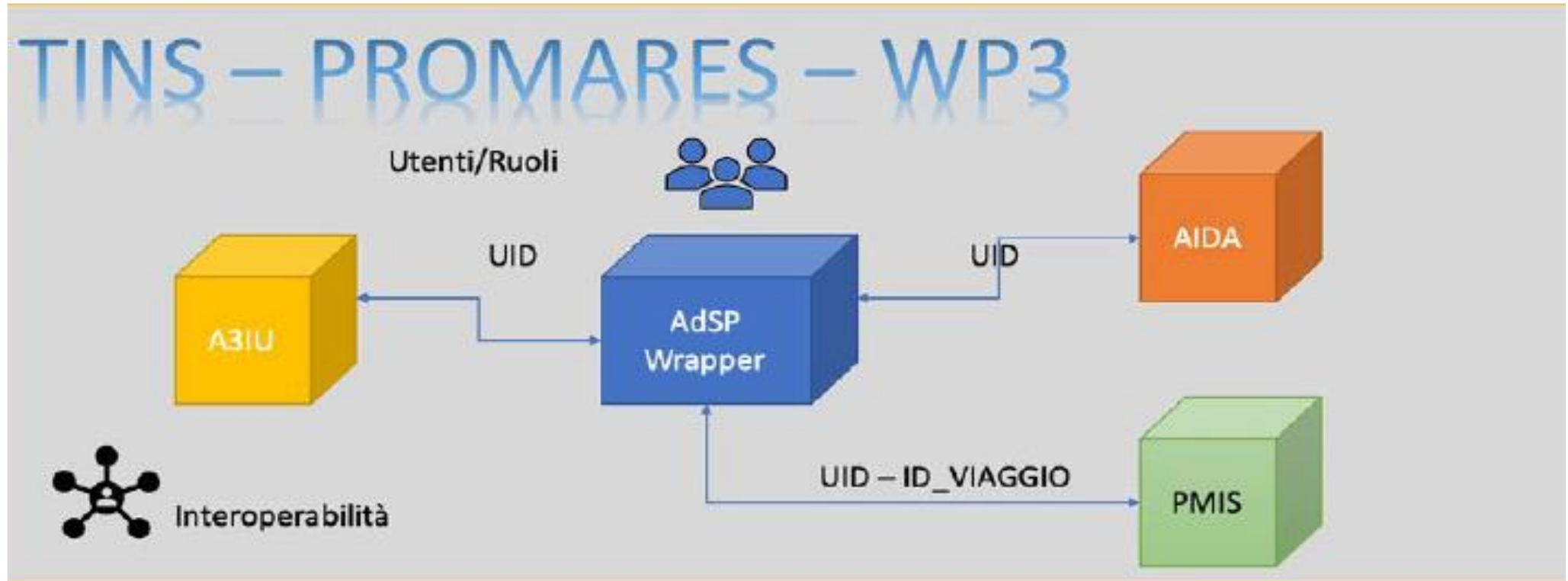


A.I. multitasking advantages. Opportunities in port operations:

- Surveillance and monitoring
- Traffic flows management
- Safety applications
- Security applications
- Data management
- Disaster prevention

Legend:

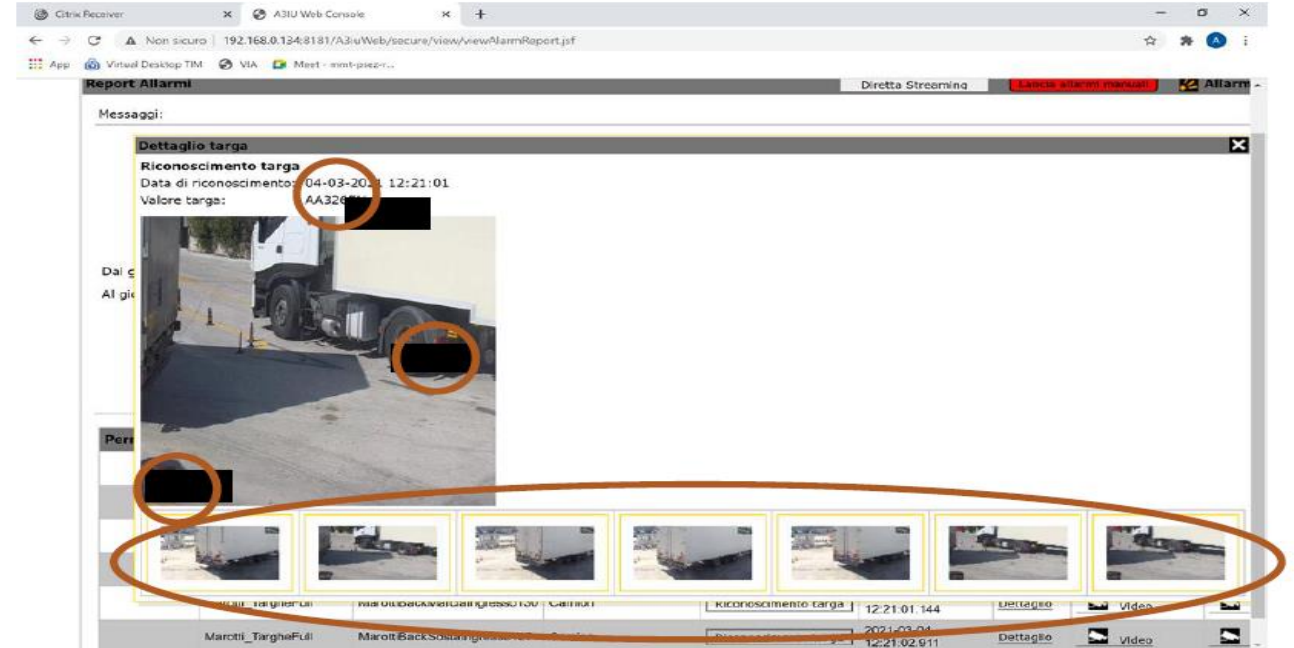
- A3IU Core Software Module
- A3IU Optional Software Module



A.I. needs to be supported by a specific software for the interaction of the different stakeholders:

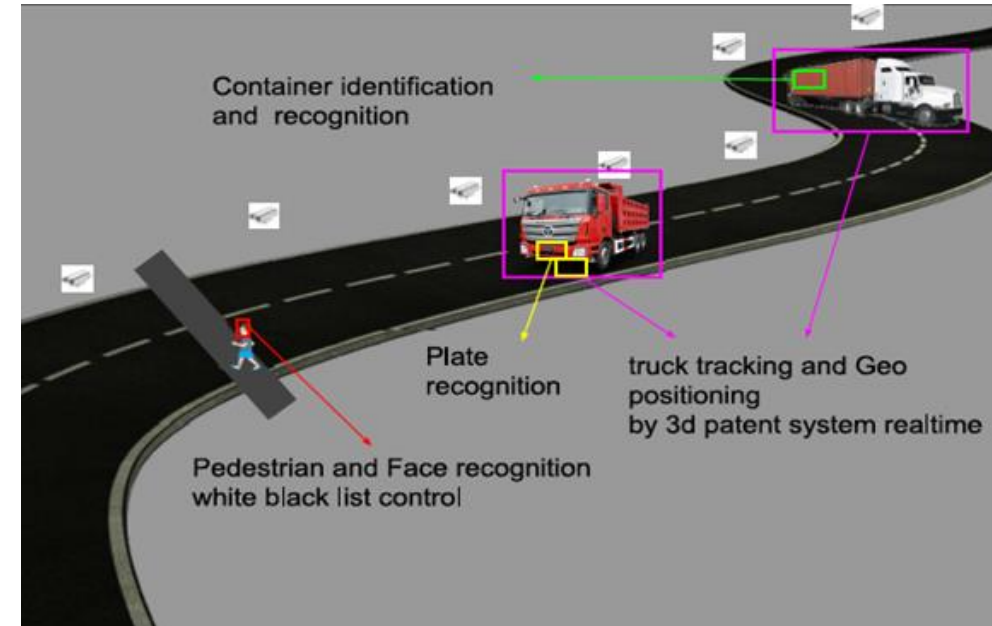
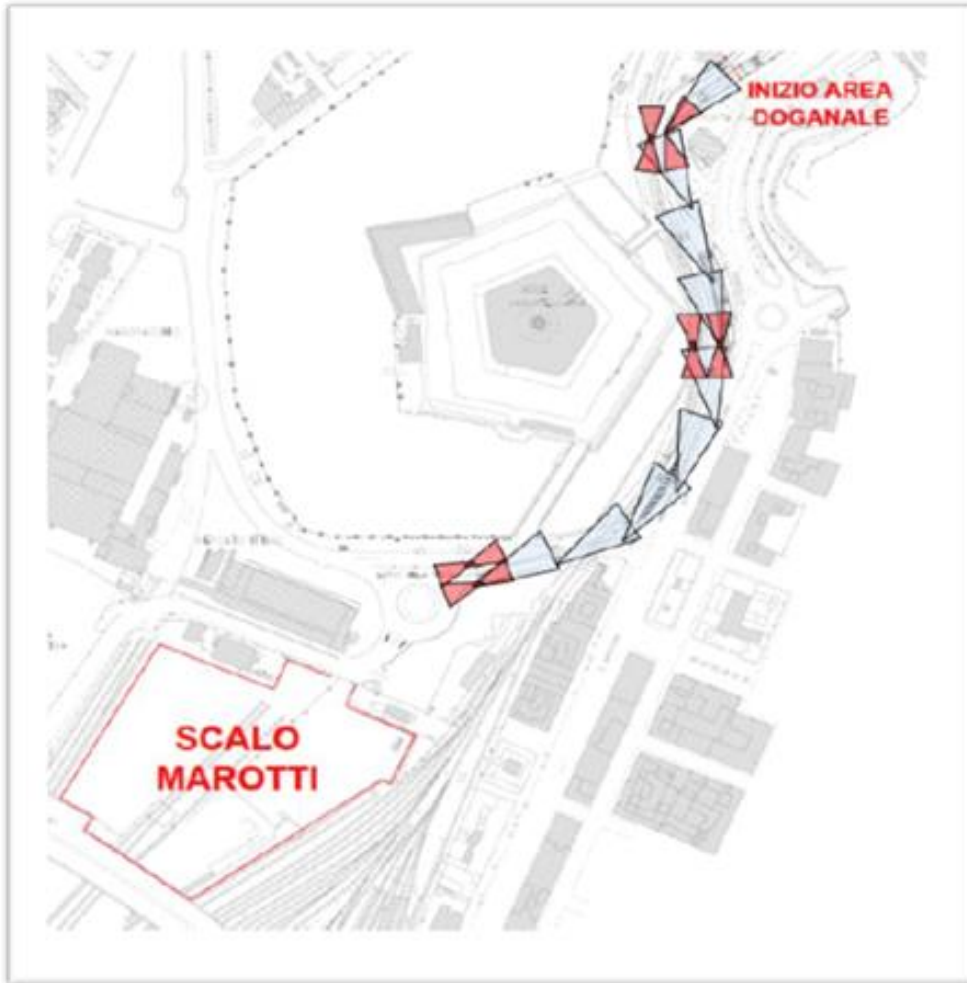
- Maritime agents;
- Customs forwarders
- Customs and GdF
- Harbour master
- Port authority

ARTIFICIAL INTELLIGENCE TO TRACK AND TRACE VEHICLES FLOWS



Gates represent the main node of the project. Physical objects and data are matched at gate and the information are distributed to the different actors

ARTIFICIAL INTELLIGENCE TO TRACK AND TRACE VEHICLES FLOWS



- The virtual tunnel is made of IP cameras that send information to the AI system.
- The AI system recognizes, tracks and traces the different vehicles. It sends real time information to AIDA software;
- The cargo information are provided by an additional application developed to collect freight customs information and vehicles data

Current status of the project

- 4 gates fully equipped
- Interoperability fully tested with ADM (Customs)
- Supply of the full equipment for the implementation of the Virtual tunnel;
- Wrapper software completed;
- Development and implementation phases concluded in December 2021.





Thank you

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