







SMART-C is the innovative ICT action implementing Artificial Intelligence algorithms to manage the traffic of trucks in the port area: the aims are the improvement of the quality of the traffic related to ferry services - embarking and disembarking operations, security checks and custom clearing procedures - and the development of a suitable answer to the truck traffic growth in the port of Ancona with a special care about the environmental sustainability.

In July 2019, the Central Adriatic Ports Authority and Italian Customs Agency signed a **Memorandum of Understanding** for the digitalisation of the procedures of the port of Ancona. SMART-C is the main action of this initiative.

MAIN BENEFITS

- INNOVATION
- ENVIRONMENTAL SUSTAINABILITY (estimated yearly traffic decrease of 60.000 km)
- SECURITY
- EFFICIENCY
- INTEROPERABILITY (dematerialisation of the information flows)
- POSITIVE EFFECTS FOR LOGISTIC OPERATORS



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





WHY PORT OF ANCONA?

Port of Ancona is one of the main Italian infrastructures for **short sea shipping flows** and it is one of the main terminals of the Motorways of the Sea (core node port on the Scandinavian - Mediterranean corridor).

Being a European Gateway to the Eastern Med, the Port of Ancona has:

- More than 4 millions tons of goods per year transported by ferries
- Relevant freight traffic to/from third countries, with the need to find efficient customs services and effective controls
- Limited extension of the port areas that is really closed to the city centre.

A real need to find innovative solutions to maximise the land use



USE CASE 1 PATH 1





If the vehicle remains in Scalo Marotti more than 24 hours the system gives the alarm signal

Procedure accomplished

The cargo has already carried out Customs Procedures (it is in transit or for export)















The driver of the vehicle, at the entrance to Scalo Marotti, must communicate the Movement Reference Number code that must be associated with the export declaration







The vehicle leaves Scalo Marotti and heads for embarking area

If the vehicle heads towards another direction the system gives the alarm signal







Must the cargo carry out Customs procedures? NO

The cargo must not carry out Customs Procedures









Procedure accomplished



The vehicle leaves Scalo Marotti and heads for embarking area

If the vehicle heads towards another direction the system gives the alarm signal





USE CASE 2 PATH 1



Must the cargo carry out Customs procedures? YES

Is the vehicle known to the system because the shipping agents has entered the reservations and plates list? YES



If the vehicle remains in Scalo Marotti more than 24 hours the system gives the alarm signal

The vehicle can access the Scalo Marotti and carry out Customs procedures





The vehicle

carried out

Customs

procedures



The shipping agent

entered into the

clearance code

and the number of Customs declaration

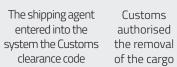












The authorised vehicle must leave the Scalo Marotti







Procedure accomplished

The vehicle heads for embarking area

If the vehicle heads towards another direction the system gives the alarm signal





USE CASE 2 PATH 2



Must the cargo carry out Customs procedures? YES

Is the vehicle known to the system because the shipping agents has entered the reservations and plates list? YES



If the vehicle remains in Scalo Marotti more than 24 hours the system gives the alarm signal

The vehicle can access the Scalo Marotti and carry out Customs procedures









The vehicle can't leave Scalo Marotti



The system gives the alarm signal



The vehicle didn't carry out Customs procedures.



The shipping agent didn't enter into the system the Customs clearance code and the number of Customs declaration



USE CASE 2 PATH 3



Must the cargo carry out Customs procedures? YES

Is the vehicle known to the system because the shipping agents has entered the reservations and plates list? YES



If the vehicle remains in Scalo Marotti more than 24 hours the system gives the alarm signal

The vehicle can access the Scalo Marotti and carry out Customs procedures





The vehicle

carried out

Customs procedures



The shipping

the system the

code and the number of Customs declaration











The vehicle can't leave Scalo Marotti



The system gives the alarm signal





USE CASE 3 PATH 1



Must the cargo carry out Customs procedures? **YES**

Is the vehicle known to the system because the shipping agents has entered the reservations and plates list? **NO**

The vehicle **can't access** the Scalo Marotti until it has a reservation







FINAL CHECK

The **Artificial Intelligence system**uploads the list of vehicles
passed through each gate





The system compares the two lists.

Do the two lists coincide?







Shipping agents upload the plates list of the vehicles embarked on each ship

NO

NO

YES





The system doesn't give the alarm signal **CORRECT LIST**



LISTS UPLOADING

The **shipping agent** uploads the list of disembarking vehicles into the system





The system processes the data of the lists and identifies which vehicles must carry out Customs procedures





Shipping agents upload ENS for ferries from third countries



Shipping agents upload the cargomanifest

The cargo **must** carry out Customs Procedures





The cargo **must not** carry out **Customs Procedures**





Must the cargo carry out Customs procedures? **YES**



The vehicle doesn't go to Scalo Marotti: the system gives the alarm signal









Must the cargo carry out Customs procedures? YES



CUSTOMS **PROCEDURES** CUSTOMS CLEARANCE CODE AND NUMBER OF CUSTOMS DECLARATION













The vehicle can leave Scalo Marotti





The vehicle disembarks and heads for Scalo Marotti

















If the vehicle leaves Scalo Marotti the system gives the alarm signal





If the vehicle leaves Scalo Marotti the system gives the alarm signal







Must the cargo carry out Customs procedures? NO

The vehicle is in transit and has Movement Reference Number













The vehicle disembarks and heads for Scalo Marotti



The cargo has already carried out Custom Procedures

The vehicle **is authorised** to access the Scalo Marotti for customs procedures





Must the cargo carry out Customs procedures? NO

The cargo must not carry out Customs procedures





The vehicle disembarks





The cargo hasn't already carried out
Customs Procedures



If the vehicle heads towards another direction the system gives the alarm signal



PORT EXIT GATE

The vehicle **can leave** the port area







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Click here to find out more about SMART - C



Ports of Pesaro, Falconara Marittima, Ancona, S. Benedetto, Pescara, Ortona

