FACILITATING TRADE & SEA TRANSPORT

IN THE MEDITERRANEAN

19 PILOT ACTIONS TESTED AND MADE OPERATIONAL IN MEDITERRANEAN PORTS

MEDNET

SEAMLESS LOGISTICS

PROJECT

Med L'Europe en Méditerranée Europe in the Mediterranean

Projet cofinancé par le Fonds Européen de Développement Régional (FEDER)

Project cofinanced by the European Regional Development Fund (ERDF)

SUMMARY

EDITO

Sea transport is changing. Mediterranean ports become Europe's frontiers as well as they provide international flows with mainstream accessways. Just like airports, our ports have to combine fluidity of exchanges and citizens' security, and guarantee environmental protection along with a fertile ground to business. Simplifying procedures will cut down costs, and the so-called « single-window » will make commerce easier, and enhance secure and effective border controls.

With 10 countries and 18 public and private partners, MEDNET has built a rich ecosystem, resulting in a perfect experimentation ground to pinpoint and analyse stalemates, and suggest realistic solutions. The ongoing 19 pilot actions shall establish on the field the relevance of the proposed solutions.

Miguel Llop Chabrera
ICT Director, Valenciaport Foundation

« Weaving a network of port authorities and experts, and exchanging experiences »

MORE CO-OPERATION FOR MORE BUSINESS

Environmental and sanitary standards, security, IT interoperability, delays… market demands are strengthening and require harmonization of port procedures, along with better exploiting data. That is what the MEDNET project aims at. As a result: more exchanges, more commerce, therefore more resources. Mediterranean countries are quite concerned with such improvements, and shall thoroughly benefit from conceiving jointly tomorrow's archetypal harbor.

19 PILOT ACTIONS TESTED AND MADE OPERATIONAL IN MEDITERRANEAN PORTS

MEDNET develops cross-functional collaborations and facilitates the founding of partnerships.

For the whole process to extend down to harbour wharves, the project sets pilot actions which enable testing, in a port area, real-world solutions, possibly further extended to more volunteering sites, in so far as they proved efficiency on the field.

Find hereafter in this brochure the contents, the details and stakes of each experimentation.

19 ACTIONS FOR 7 MAIN GOALS DEFINED THROUGH THE MEDNET PROJECT

FACILITATION OF CUSTOMS PROCEDURES

Simplification of customs procedures : ENS, EXS, SDTS and Import/export SAD.

Promotion of the single market : support to the electronic proof of union status system to justify the community status of goods.

Improvement of sanitary, phytosanitary and veterinary controls : introduction of electronics tools.

SIMPLIFICATION OF PORT PROCEDURES

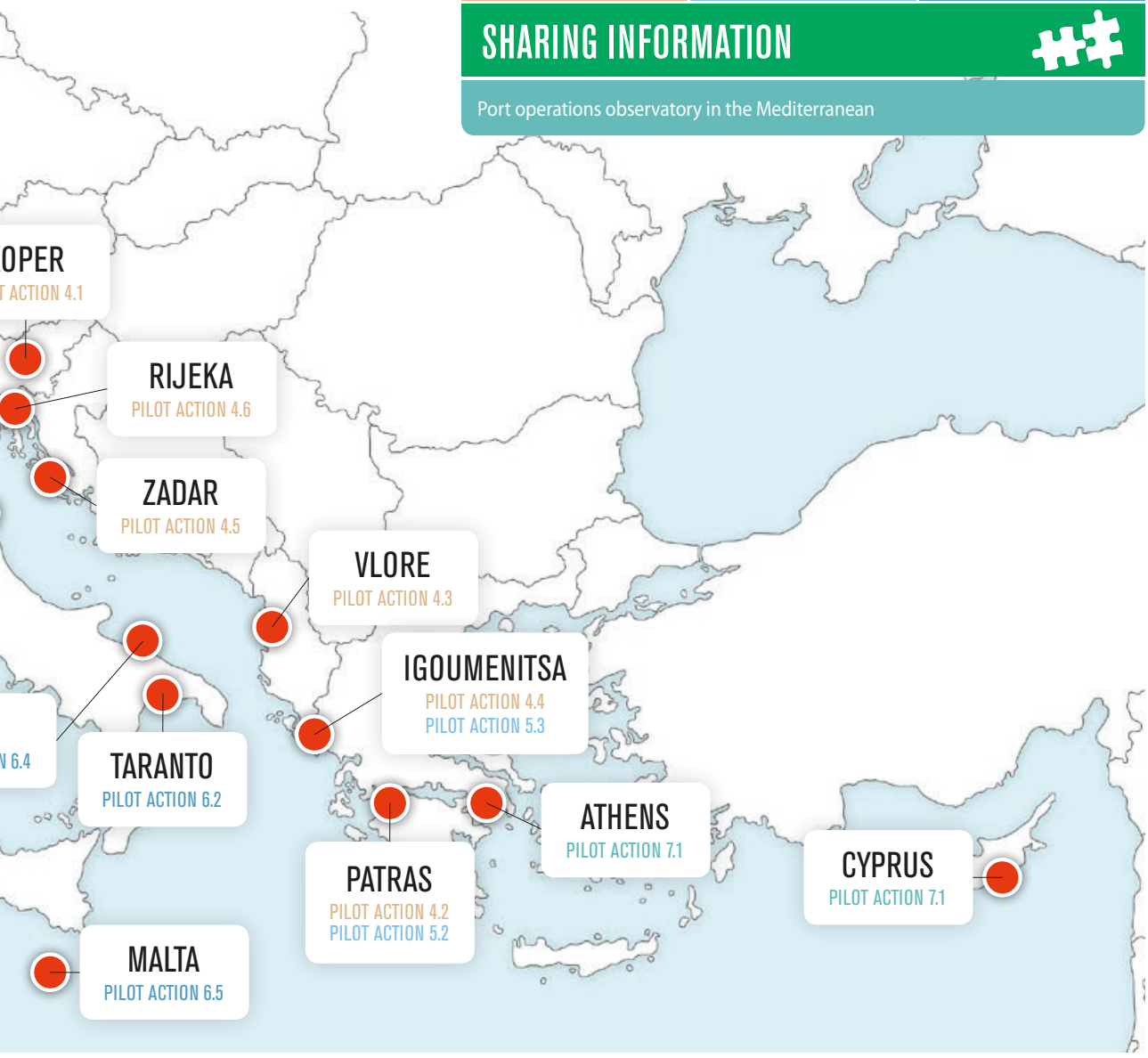
Improvement of Ro-Ro traffic : parking management and customs procedures.

Improvement of RO-RO and cruise ship calls : ship supplies and berth allocation.

Facilitating the implementation of single windows and port community systems.

SHARING INFORMATION

Port operations observatory in the Mediterranean



SIMPLIFICATION OF CUSTOMS PROCEDURES: ENS, EXS, SDTS AND IMPORT/EXPORT SAD

The action will identify the opportunities and recommendations in view of simplifying, speeding up and harmonizing the procedures associated with customs declarations to be considered for security reasons.

The security amendment of the Customs Code has established two new declarations named ENS (Entry Summary Declaration) and EXS (Exit Summary Declaration). It also regulated the use of Arrival Notifications and Summary Declarations for Temporary Storage (SDTS) documents. In January 2011 the ICS (Import Control System) phase 1 was launched in all EU Member States. ICS's first phase initiated the use of ENS-related electronic messages that were specified and harmonized by DG TAXUD for application in all Member States. That first phase of ICS let Member States free to implement the more suitable electronic transmission system for lodging such declarations, and choose any solution for lodging Arrival Notifications and Summary Declarations for Temporary Storage. The aforesaid situation has led to divergent approaches among the Mediterranean European countries; namely, processes for lodging electronic declarations to each EU Member State were not thoroughly defined. As a result, survivals of peculiar specifications keep perpetuated regarding Arrival Notification, Summary Declarations for Temporary Storage and Customs Declarations messages.

The MEDNET project intends to make a significant contribution towards customs procedures and clearance simplification for vessels and cargoes in the Mediterranean area. Accordingly the program comes up with a set of innovative actions, which notably include analyses, improvements and recommendations related to SDTS lodging processes.

The proposed pilot prepares the port systems for future Community Customs Code requirements, so as to enable the agents involved to share information and deal with the bulk of disparate systems in use all over the Mediterranean area.

PILOT ACTION 1.1
NOTIFICATION TO CUSTOMS OF FULL CONTAINER ENTRIES AND THEIR SUBSEQUENT DEPARTURES FROM VALENCIAPORT

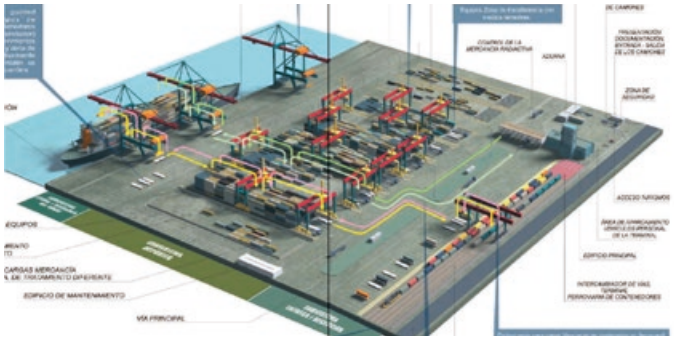
Up to now, Spanish port terminals collect data on full containers entering and leaving their boundaries. Such information is available to agents and operators connected to the port community information system. Yet, not always to customs authorities, as they are not consistently granted access to the PCS. Valenciaport is at the moment testing a simple web application to notify customs services of container movements in a terminal. Customs officers are then enabled to locate in real time any single container. They will be provided with its content data, enabling them to decide whether or not to control the goods.

CURRENT SITUATION

Following Spanish Order HAP/2485/2014 published on 31 December 2014, from 1 June 2015 terminals will be obliged to notify Spanish Customs of containerized goods that are under customs supervision during the entry and exit procedures of goods from the community customs territory.

The new obligation requires that Spanish maritime container terminals notify the reception by inland transport (road or railway) of full containers as well as the delivery of full containers to be exported by maritime or inland transport. This need to report the entry of goods by inland transport as well as the exit of goods by maritime or inland transport is necessary to fulfil the goal of communicating to Customs that goods have been received by the Customs.

The order is designed to harmonise communications procedures between the authorities responsible for all existing customs formalities vis-à-vis maritime traffic flows through the implementation of a single administrative window. This avoids the presence of two communications channels in function of the declaration pending submission.



Dibujo: entrada de contenedor a la terminal por camión y tren y salida por camión, tren y mar

At present, Spanish ports' container terminals are not required to notify Customs of goods entering the terminal by land as well as exiting the terminal by land or by sea; the information is exchanged only between the agents involved in the process for introducing or dispatching goods from the community customs territory.

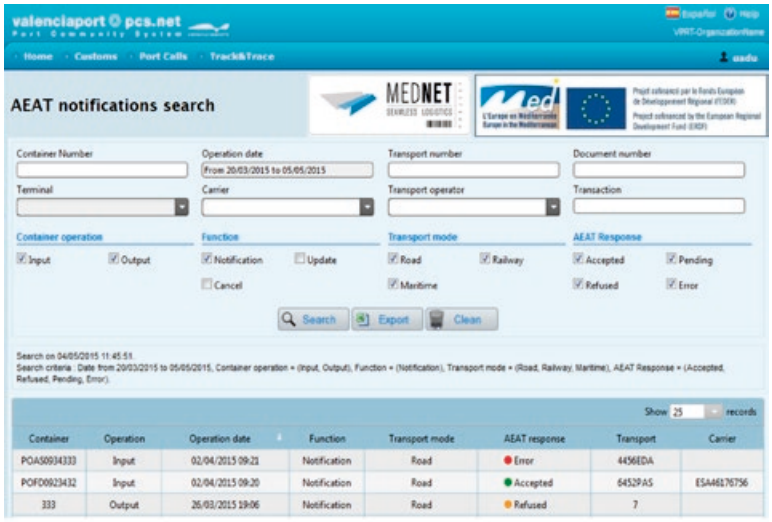
PROPOSED SOLUTION

The Valenciaport Foundation has worked together with the Spanish Customs to help bring the port communities' systems in line with the new legislation.

The Port of Valencia's terminals have been pioneers in the Spanish port system, adapting existing electronic messages generated by their systems, and using them to relay information to Customs and comply with the new regulations in force.

The Spanish Customs proposes a new electronic procedure for notifying container entries and exits at all Spanish port terminals via Web services. Notifications that can be made through this channel include the entry of containers, the exit of containers, modifications of the data of containers previously declared and cancellations of the entry or exit of containers to/from terminals. All of these notifications need to be coded using the message formats established by Customs and signed electronically. As can be seen this notification procedure is significantly different to the one usually followed by maritime terminals to notify such events to shipping companies through the CODECO and COARRI messages. Adaptations need to be made therefore either directly by terminals or through port community systems.

PROTOTYPE DEVELOPED



BENEFITS

Benefits of the newly mentioned procedure go well beyond improvements in customs controls and include two potentially significant simplifications. The first benefit consists of not having to synchronise the export customs declaration, offering the possibility for customs agents to present export declarations at any time although Customs accepts such declarations - assigning a green, orange or red circuit - only after the containers are received in the terminals.

The second benefit is a simplification whereby such notification would also serve as a notification of the arrival of goods to export for the European Export Control System (ECS) the same way that currently occurs in other European countries. This last possibility would however require for Customs to recognise maritime container terminals as 'exit economic operators' and responsible thus for such notifications.

PILOT ACTION 1.2
INTRODUCTION OF A MONITORING SYSTEM OF CONTAINER MOVEMENTS AT PORT OF MELILLA

A new project by Mednet aims at solving headaches with locating container and to control their lay time, based on data forklift drivers and a fleet of PDAs at Melilla harbor.

Partners and stakeholders involved: CENIT, Centre d'Innovació del Transport Port Authority of Melilla

PROBLEMS AND BOTTLENECKS IN PORT

Currently, the Port Authority of Melilla doesn't have any knowledge of the specific containers being stored inside the terminal. Neither registers for specific containers (only the total amount of containers per consignee / shipper is known), nor knowledge of their specific placement within the yard. Nowadays the control is done daily and manually.

Other bottlenecks identified in the port include:

- Special status of Port of Melilla in terms of taxation and fees hindering the speed of clearance.
- Need for intensive control accesses of people and goods, given the role of "boundary port" that the port of Melilla has.
- No automatic information sharing between Customs and Excise office and the Port authority.
- Automatization, simplification and paperless processes are required to increase the speed of customs processes.

NATIONAL REGULATION

Taxation of the containerized goods, whether in or outbound, stationing and/or handed in the Port Authorities depends on the duration.

The time of cargo stay within port premises is critical to calculate the taxes applied and their amount as included in the Royal Decree 2/2011 approving the Combined text on the law on 'Puertos del Estado' public body and the Merchant Navy. Specifically are of interest the articles 211 to 214b and 231 to 236 regarding the applicability of the tax on goods (T-3) and the tax for special use of transit zones (including temporal storage) within the port (T-6).

Additionally time of stay has implications on customs and security aspects, but is not explicitly covered by current national regulations.

PROPOSED SOLUTION

The proposed solution aims to dynamically monitor all containers moved in the terminal by means of installing a control point at the best operational focal point which is the forklift level. In fact, all container movements in the terminal are made by the forklift tracks.

The solution is to be integrated in the SISCOM (Cargo Control System of Port of Melilla). This system is made of two different subsystems that, although different, will work coordinately and using the same hardware equipment with a similar software application.

THE FORLIFT IS THE KEY

The two subsystems are namely the black box (control at the land entry of the port in order to keep track to the containers within the port that are not stored in the container terminal) and the white box (full tracking of the containers within the container terminal). The pilot action is aimed to solve the white box system keeping in mind the feasible future steps in the SISCOM implementation to include the black box.

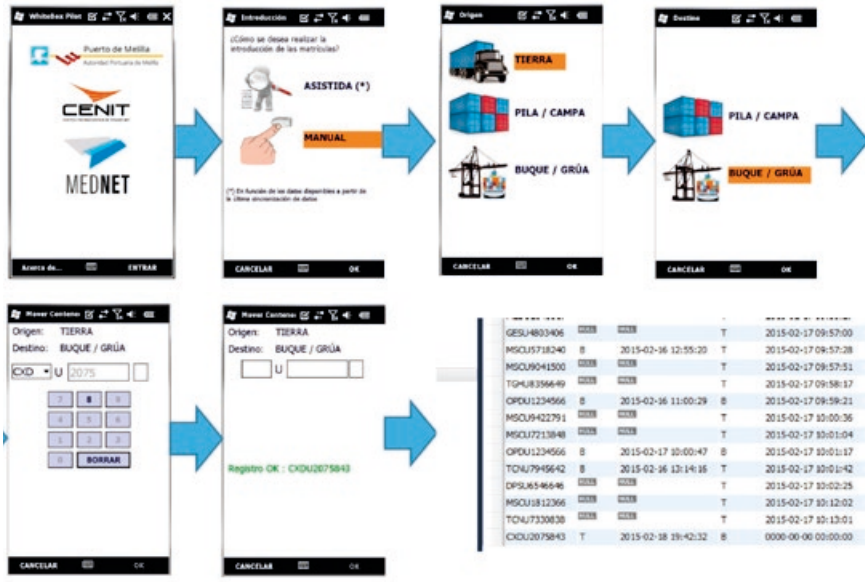
In the proposed solution, a PDA is used by all the forklifts operating in the container terminal (bottleneck of the terminal operation) communication via mobile phone network to the central operating system of the terminal. An application has been developed in order to consult a specific database of the inventory status of the terminal and update its records every time a container is moved within the terminal.

WEB PORTAL AND DATABASE

First, the cargo manifest or the declaration for short stay storage are to be introduced via web portal and loaded to a database owned by Port Authority of Melilla. The information recorded will include the ETA, container plate number, full or empty container, weight, cargo type (ISPS code), etc.

When the container arrives to the terminal ground and is picked up by the forklift, the driver introduces the number to a PDA (by using a menu asking for the kind of movement produced and the plate number of the container), the software checks the preexistence of the container on the Port Authority's database in order to allow its movement, and the status and position of the container is then updated (all different possible moves are considered: from yard to ship, yard to yard, yard to truck, truck to yard and ship to yard, ship to truck and truck to ship).

As a result it is possible to check the database and to know the time of arrival, time of departure, time of rehandling for all containers either import or export, keeping an historical record of all movements produced as well as allowing to sort them considering their time of introduction to the system, the owner of the container, etc.



BENEFITS

Up-to-date and historical register of the containers in the yard terminal.
- Allows assessment of the performance of each stevedore, and cargo owner.
- Register of time of stay inside the terminal, useful for right taxation on the containers.
- Improved monitoring, tracking and localization of containers inside the terminal at any given moment.

2

SINGLE MARKET PROMOTION: SUPPORTING THE «PROOF OF UNION STATUS» ELECTRONIC SYSTEM TO JUSTIFY THE COMMUNITY STATUS OF GOODS

The project aims at extending the electronic T2L initiative, piloting its interoperability among Member States and promoting mutual recognition among Member States of the Proof of EU Community Status by electronic means. The electronic T2L program plans to facilitate and simplify through electronic procedures the fulfilment of Customs regulations in order to prove the Community status of goods transported by sea. A full implementation of the electronic T2L solution by all economic operators in all Member States will provide exponential benefits and foster a seamless flow of goods carried by sea in the Mediterranean area.

The MOS4MOS Action, part of the MoS TEN-T programme, led to identify the relevance of introducing an electronic T2L procedure as a solution to improve short-sea shipping and Motorways of the Sea, especially in the Mediterranean area where many shipping services are calling both at European and non-European ports (e.g. North Africa or Turkey). A first prototype was tested in MOS4MOS jointly with the Spanish Customs Department. The action successfully helped assess the usefulness of the procedure in Spain.

PILOT ACTION 2.1
INTRODUCTION OF THE SPANISH ELECTRONIC T2L FOR RO-RO TRAFFIC AT VALENCIAPORT

The Port of Valencia performed a trial with three electronic document transmission schemes related to the T2L procedure. Results confirmed noticeable delay reductions and prominently smoother exchanges.

Partners and stakeholders involved: Port Authority of Valencia, Spanish Tax Office, Grimaldi Logistica

PROBLEMS AND BOTTLENECKS IN PORT

Although for container traffic an electronic T2L was introduced at the port of Valencia, for roro traffic the procedure to prove the Community status of goods requires paper documents.
The paper T2L documents justifying it are generated and presented by an agent to Customs in the Member State of departure, accompanied by a commercial invoice, and these documents are authorised with a stamp and signature.
Then, these documents have to be sent from the port of origin to the port of destination.
There are several ways used in order to send the documents to their destination. Usually the original documents travel on board the vessel transporting the cargo the documents refer to; or they are posted by mail or express mail.
Once the documents arrive, they have to be presented to Customs in the Member State of destination where an additional stamp and a signature is required before the goods can be picked up and leave the port. The original T2L is retained in the Customs Office at the final EU port.

EUROPEAN/NATIONAL REGULATIONS

The objective of the electronic T2L is to facilitate and simplify the fulfilment of the Customs regulations to prove the Community status of the goods that are transported by sea through electronic procedures. A full implementation of the electronic T2L solution by all economic operators in all Member States will provide exponential benefits in the Mediterranean area allowing a seamless flow of goods by sea in the region.

The MOS4MOS Action in the MoS TEN-T programme allowed identifying the relevance of introducing an electronic T2L procedure as a solution to improve short-sea shipping and Motorways of the Sea, especially in the Mediterranean area where many shipping services are calling both at European and at non-European ports (i.e. North Africa or Turkey). A first prototype was tested at Valenciaport in MOS4MOS jointly with the Spanish Customs Department for container traffic.

PROPOSED SOLUTION

Aiming to design an electronic procedure proving the Community status of goods that would be common for the different possible scenarios of intra-Community cargoes transported by sea, the three different transport cases have been examined.

BENEFITS

A full implementation of the electronic T2L solution by all economic operators in all Member States will provide exponential benefits in the Mediterranean area allowing a seamless flow of goods by sea in the region.

The main benefits identified are:

› Make intra-community sea transportation as simple and easy as intra-community road transportation is.

› Validate additional measures for extending some of the advantages of EU authorised regular shipping services, allowing the creation of virtual bridges carrying goods between ports within the EU.

› Facilitate and simplify Customs controls at ports while enhancing security.

› Reduce existing bottlenecks and delays inherent to manual processes

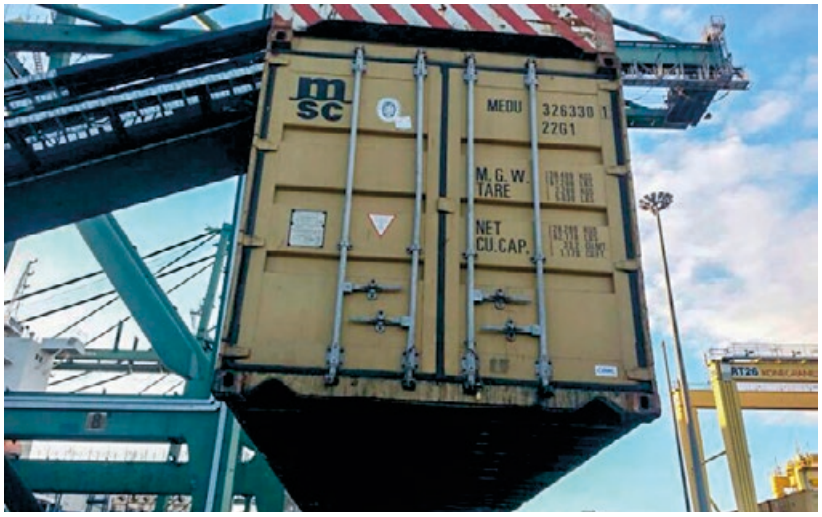
› Introduce new methods for simplifying formalities for ships arriving and/or departing to/from European ports without reducing the level of security and safety.

› Introduce measures like the adoption and recognition of electronic documentation and the use of electronic data transmission systems.

› Eliminate the risks, latency and quality issues common to manual verification of documents at customs controls.

IMPROVEMENT OF SANITARY, PHYTOSANITARY AND VETERINARY CONTROLS: INTRODUCTION OF ELECTRONIC TOOLS

Closely related to both previous items, this action will also pave the way to appropriate monitoring mechanisms, based on the information provided in the Summary Declaration for Temporary Storage with a view to improve Customs, phytosanitary and veterinary controls. These data information will be cross-checked against the list of product types which need a proper surveillance and traceability. Subsequently such products shall be endowed with the available traceability information registered from the physical flows of goods that have taken place and are registered in port authorities or terminal databases at the Mediterranean ports.



PILOT ACTION 3.1
INTRODUCTION OF ELECTRONIC MONITORING MECHANISMS FOR SANITARY, PHYTOSANITARY AND VETERINARY CONTROLS FOR TRANSHIPPED CONTAINERS AT VALENCIAPORT

The ongoing experimentation at port of Valencia (Spain) aims at integrating to the port IT system a new module to improve efficiency of compulsory sanitary inspections on animal products consignments. The basic idea is to take advantage of already available documents and let the software output conclusions through data cross-checking. The target : goods in transit or imported into the country. Beyond simplifying customs officers' job – which proved necessary - the project would help the port of Valencia to achieve compliance with European directives.

Partners and stakeholders involved: Valenciaport Foundation, Customs, Valenciaport PCS, Ministry of Finance and Public Administrations, (Animal Health, Plant Health and Foreign Health public organizations), Port Authority of Valencia, Border Inspection Posts, Cargo operator

PROBLEMS AND BOTTLENECKS IN PORT

ACCELERATING THE FLOW OF GOODS TO BE CHECKED

Currently, at Valencia as well as in many other harbors, inspectors have to compile by hand all documents regarding containers and goods, and analyse the data to find out whether the products have to be checked manually. A time-consuming, burdensome and hardly reliable process. The software being tested will shrink the paralysation time of goods, thus loosening the logistics chain. Public bodies as well as sea transport players will benefit from the application; harbors will be enabled to manage more goods having to undergo that type of inspection.

SANITARY SAFETY, THANKS TO PERMANENT MONITORING OF GOODS CONTAINING ANIMAL PRODUCTS

Using the harbor's IT system, all concerned players will access the data they need. They will consult in a wink of an eye the whole of shipping, commercial, port and customs informations regarding the cargo. The data will be cross-checked automatically against the list of hazardous products. No more discrepancies between recorded data and reported physical flows. Veterinary and sanitary inspection services will work in real time, and unsafe goods will no more escape from investigation.

EUROPEAN REGULATION

A 2004 EC regulation provides that the checking of cargo manifests is an essential step in the process of collecting information on all consignments entering the Community. The text suggests that this task should be computerized given the complexity and excessive consumption of resources involved. Decision 2011/215/EC further specifies the minimum periods after which veterinary checks must be performed, i.e. :

- 7 days on consignments being transhipped from one vessel to ano- ther in the same port for import or transit to third countries ;

- 14 days when a consignment is transhipped from a third country to another third country without stopping at any other port within the Community.

- The maximum period after which consignment must undergo all laid down veterinary checks is 20 days.

PROPOSED SOLUTION

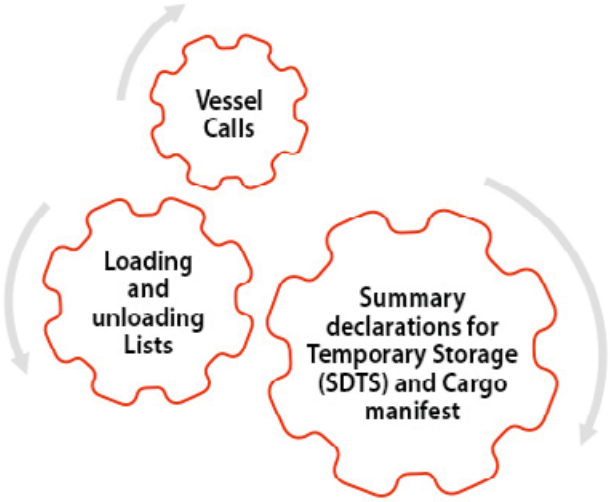
A new application software will be integrated into the existing IT system : a module using agile software tools and data compiled in the Port Community System of Valenciaport so as to monitor animal products before they are transhipped at Valencia harbor. The new program will quickly and effectively identify products to be checked, and reduce time and resources involved in information treatment. Potential risks will be analysed, assisting the process to comply with existing regulations. Development of the module is completed. Tests are being carried out by freight operators and customs authorities, as both will be users of the program.

SANITARY SAFETY, THANKS TO PERMANENT MONITORING OF GOODS CONTAINING ANIMAL PRODUCTS

Using the harbor's IT system, all concerned players will access the data they need. They will consult in a wink of an eye the whole of shipping, commercial, port and customs informations regarding the cargo. The data will be cross-checked automatically against the list of hazardous products. No more discrepancies between recorded data and reported physical flows. Veterinary and sanitary inspection services will work in real time, and unsafe goods will no more escape from investigation.

INFORMATION CONTAINED IN THE PORT COMMUNITY SYSTEM OF VALENCIAPORT

Any container-related data included in the PCS will be cross-checked against the list of products for which inspection is required. The search and results panels will be accessible from the interface, with numerous user-defined selection criteria.



4

IMPROVEMENT OF RO-RO TRAFFIC: PARKING AREA MANAGEMENT AND CUSTOMS PROCEDURES

This action is about how cars, coaches and trucks enter and exit the port, where they park, how the documentation is handled and how they embark on or disembark from ships. In cars and coaches, a large number of passengers keep moving around the port area, for which specific traffic management is required. The picture gets even tenser when they gather in numbers before the ship departure, and thus have to park temporarily. The pilot action will also scrutinize the cut-off time (i.e. latest time before ship's departure) for a car, coach or truck to enter the port area. The parking area management is quite important, moreover if the port handles dangerous goods. The program will develop and test relevant measures to streamline flows inside and outside the port area.

PILOT ACTION 4.1
AUTOMATIC EXIT OF TRUCKS FROM PORT AREAS AT PORT OF KOPER

How to avoid truck queues at port exits? Just by reading the license plates. The implementation of a prototype will soon be tested by the Slovenian Port of Koper.

Partners and stakeholders involved: Prometni institut Ljubljana d.o.o. / Institute od Traffic and Transport l.l.c., Luka Koper (Port of Koper), Customs Administration of the Republic of Slovenia, Trucks Forwarders

PROBLEMS AND BOTTLENECKS IN PORT

Albeit lodging of customs declaration is electronic and the Customs Administration is supporting paperless communication, the exits from the port remain a bottleneck.
The present procedure is as follows: after loading or unloading a truck at one of the port's terminals, a warehouseman hands over to the driver a set of dispatch orders created by TinO system. Then the truck proceeds towards the exit gate, where a Customs agent has to check the documents manually and make sure the vehicle and the goods it carries are clear to leave.

EUROPEAN/NATIONAL REGULATION

The Port of Koper has a status of control type 1 free zone.

What are free zones?

According to the European Commission, free zones are special areas within the customs territory of the Community. Goods placed within these areas are free of import duties, VAT and other import charges.

The free zones are mainly a service for traders to facilitate trading procedures by allowing fewer customs formalities.

Control type I free zones have a perimeter fence so that goods placed there, which is supervised by customs, are automatically under this regime.

Luka Koper d.d. as port manager is responsible of the supervision of the entrances of cargo, vehicles and people to the port, so it is physically present at the port entrance.

Based on the Decision of the Customs Administration of the Republic of Slovenia No. 4240-39/2007-11, the Customs Administration authorized the use of the information system TinO IT system to keep official records of the status of cargo inside the port area.

Customs authorities are physically present at the port exit, but they are verifying the status of the cargo during the stay at the port through the TinO IT system.

PROPOSED SOLUTION

The proposed solution consists in setting up the ANPR system (Automatic Number Plate Recognition) developed by Digitech and linking it up to the TinO system.

The system's OCR camera can read the plate number of every truck entering the port, and provides the resulting data to TinO. When the truck is ready to leave the port, its plate is recognized by the exit camera, which triggers the sending of a message to TinO. The software retrieves the whole of relevant electronic documents and displays them in less than no time on the touch tablet of the customs agent. The latter can then validate the exit quite straightforward using the software (or possibly carry out further checkings).

There is only one entry/exit point at the port of Koper, which means that any non-necessary procedure causes bottlenecks and delays. The prototype solution will disburden both the Customs officers as well as the truck drivers, basing exit controls on improved IT solutions.

PROTOTYPE DEVELOPED

A new mobile website has been developed. The touchscreen will display vehicle data on the one hand, and on the other hand the payload data, most notably when it comes to dangerous goods and customs data. The software will enable the customs officer to open the fence right from his tablet, through a «Release Truck» button.

BENEFITS

› Truck queues get reduced at port exits
› The process is simpler and quicker for customs agents and drivers
› Less paper documents

OPINION OF BENEFICIARIES

Marjan Beškovnik, Operations Manager, Container & ro-ro terminal, Luka Koper, d.d.:
"Today in the globalized economy optimized working processes are required and are connected to resources and consequently to costs. Road transport operators make no exception to that. They are planning arrivals and departures of trucks from port areas as well as delivery of goods to final destinations on the base of on-line tools. Any waiting of trucks at port entrance, warehouse or port exits represents for the owner a loss of time and money; this is why it is important to search for solutions that enable a smooth movement of transport means in the port. This is at the same time also our interest as terminal operator since a more fluid transportation enables better conditions for movements of port vehicles. Passable routes on the other hand contribute also to safer working conditions for people that are present in the port."

Martina Gržančić, Strategic Development, Luka Koper, d.d.:
"Investing in innovative solutions that can contribute to increase the overall efficiency of a port means understanding that Eurporean ports must modernize and must keep up with technological innovations that are already available on the market and often only need to be adapted to the transport sector for ports to really be put in a position to fully support regional economic development. "

MAJOR BENEFIT EXPECTED: TIME SAVING AT THE EXITS

The time needed to finalize exit procedures varies quite a lot. For empty trucks, the time needed for the customs officer to release the truck is minimal. In case it is visible at a glance that a truck is empty, the trucks just slows down. In general however, without considering sealing of containers, the average time needed for the procedures is approximatelly 11,3 seconds[1].

After the full implementation of the pilot solution it is expected that an average of 5 seconds will be needed to release trucks. The system needs about 1 second to recognise the plate and match it in the system, while the custom officers needs few seconds to read the information from the screen.

The estimation of time saving per regular working day with exits of 1140[2] trucks appears to be of 7.182 seconds or almost two hours. On a yearly basis, if we consider only 5 working days (since there is a relevant decrease in traffic during week-ends), the yearly time saving would be of 525 hours. It is important to emphasize that the automation at the exit will help decrease traffic jams that are connecting to waiting queues at peak hours, but such negative influences hasn't been included in the calculation due to the multiple variables that may interfere.

According to a study conducted in year 2002[3] the average CO_2 emissions in idling trucks are 8.224 gr/h. In our case, considering 525 hours on a yearly basis, we can expect a saving of at least 4.317 kg of CO_2 per year.

The spared 525 hours per year will be spent in productive activities by truck drivers, while there will be also a fuel saving. Considering that an idle truck engine consumes about 2 – 3 l of fuel per hour and current prices for diesel (1,1 €/liter[4]), the amount saved in fuel is about 1400 €/ year.

[1] Sampling measurements carried on on the 31st of March 2015 and 1st of April 2015.
[2] Considered data captured on the 23rd of March 2015 during the second analysis of the piloting results.
[3] Study of Exhaust Emissions from Idling Heavy-Duty Diesel Trucks and Commercially Available Idle-Reducing Devices
[4] http://www.petrol.si/na-poti/za-vozilo/goriva-q-max/gibanje-cen-goriv

PILOT ACTION 4.2
PARKING MANAGEMENT AND CUSTOMS PROCEDURES IMPROVEMENTS FOR RO-RO TRAFFIC AT PORT OF PATRAS

Uses and misuses of parking lots dedicated to heavy vehicles at Port of Patras: MEDNET proposes an autonomous, innovative, computerized system based upon simple vehicle occupancy sensors, for a real-time visual display of parking lot usage and dynamic slot allocation. Further developments could be extended to berth management system.

Partners and stakeholders involved: Patras Port Authority, Coast Guard, Customs Authority, Shipping and Forwarding companies, Security Officer

PROBLEMS AND BOTTLENECKS IN PORT

One of the major bottlenecks identified in day-to-day operations in the lack of efficient management dedicated to temporary parking areas prior to passing main gate control.

The Port of Patras presents significant pick during specific hours of day causing a significant parking problem especially for heavy vehicles. Moreover, some heavy vehicle drivers use the available parking lots for reasons not in connection with any port operation. This phenomenon creates further parking capacity problems esp ecially during the peak hours.

EUROPEAN/ NATIONAL REGULATIONS

The Directive 2010/65/ EU, the deployment of national single windows and PCS modules have permitted to reduce duplication of data input through official electronic exchange of information.

There is a dedicated passenger and freight area located inside the Port of Patras gates used as a waiting zone prior to any access given in to the port area.

To this extent Port Authority of Patras seeks to enhance and further improve existing functionality of its Port Community System taking into account operational bottlenecks and drawbacks identified during the previous years.

PROPOSED SOLUTION

The prototype consists of:

› Two dedicated off-the-street heavy vehicle parking areas (*)

› One control room hardware

› Configurated development softwares

› Small LED-lit information message signs (to illustrate real-time parking lot availability)

(*) It is noted that P1 off-the-street parking area has a capacity of 10 heavy vehicles, is located at the south while P2 has a capacity of 16 heavy vehicles, is located in the north.

The proposed solution includes the following activities:

› Installation of a server in order to host the pilot system in the control room provided by the Port Authority.

› Configuration and development of parking management software in view of providing main functionalities.

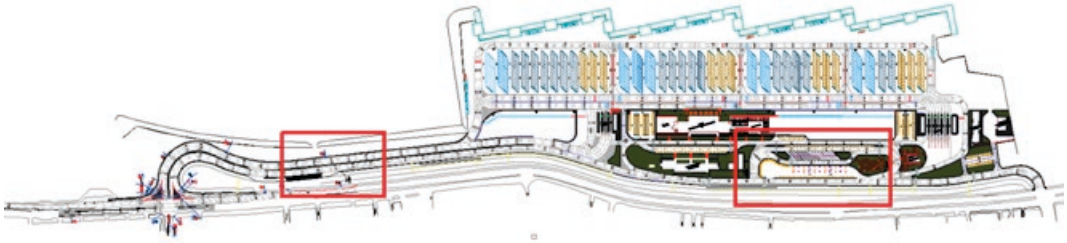
- Calculation of available parking lots;
- Data storage;
- Time of occupancy per parking lot and overall monitoring of the off-the-street parking areas.
- It is an open expandable software

› Installation of 31 parking lot sensors: 10 for P1 and 16 for P2. The parking lot sensors detect the parking lot availability/occupancy.

› Installation of 1 LED-lit information messages sign of 1 series; close to P2 in order to provide parking lot availability information for P2 of off the street parking area.

› Installation of 4 LED-lit information message signs (2 for P1 and 2 for P2).

› Installation of P1 & P2 data transmitters linked to the control room..



BENEFITS

The tool will allow a better management of the dedicated parking areas at port approach, taking into account embarking trucks from the entry gate to the docks and a better management of unaccompanied vehicle movements, in and out of the Port.

It will also offer:

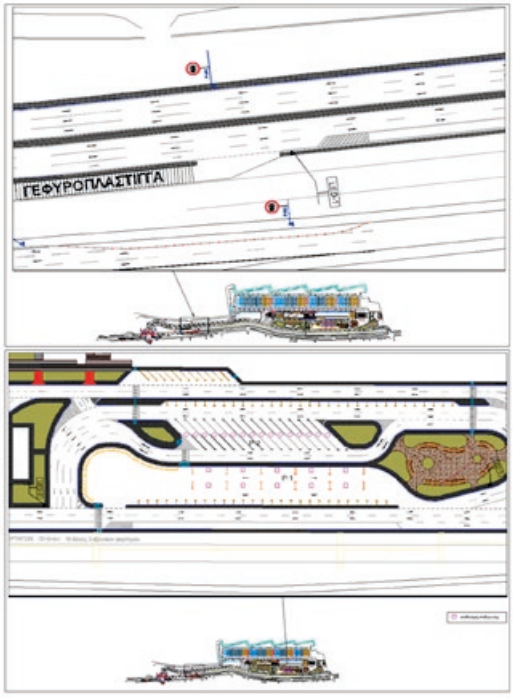
› Real-time representation of the parking areas within the Port.

› Heavy vehicle drivers information messages via LED-lit information message signs strategically located at Port's approach.

› A dynamic configuration of the parking slot allocation process (via a configurable sub-module).

› Sensor data parking areas management useful in exceptional cases (increased traffic, event …)

› Integration with the Berth Management System (BMS);



PILOT ACTION 4.3
PARKING MANAGEMENT AND CUSTOMS PROCEDURES IMPROVEMENTS FOR RO-RO TRAFFIC AT PORT OF VLORE

Port Parking: Spot the Right Slot.

Partners and stakeholders involved: Port of Vlore SH.A, Albanian Institute of Transport (Observer), Customs Regional Directorate, Maritime Agents – Shi pping Lines, Freight Forwarders, Port Security Force

PROBLEMS AND BOTTLENECKS IN PORT

CUSTOMS PROCEDURES BOTTLENECKS

Simplified customs declaration for bulk cargo instead of one declaration for a single consignment..
Each truck has to make a simplified customs declaration – each truck is weighted and declared.
Customs declaration are compiled electronically but must be submitted by hard copy with all commercial documents atached since they are not transmitted electronically.
There are obstacles for full implementation of risk management modules.
There are some delays in the customs controls.
Economic Operator Registration and Identification (EORI) is not implemented yet.
Proof of Community Status (T2L or equivalent) not fully implemented yet.
Authorized Economic Operator (AEO) not fully implemented yet.

PORT OPERATIONS BOTTLENECKS

› Unforeseen port crane brakdowns cause delays and brueaucratic procedures.
› Weaknesses in the management system at the port parking.
› Economic operators are not using digital certificates
› No railways near the port.

NATIONAL REGULATION

Legal Framework ANTP (Albanian National Transport Plan)

In accordance with EU guidelines, the Albanian Government has applied to join the EU and to adapt its transport legal framework with International Standards and Regulations, especially by making Safety (Road Safety, Vehicle Regulations, Maritime safety especially for dangerous goods' transport, etc.); Border Crossing facilitation, and transport networks' upgrading its priorities. Albania has also decided to sign the AGC Agreement on main international railway lines (UNECE agreement and part of the E-rail network legal framework) and the AGTC Agreement on main International Combined Transport Lines and Related Installations (UNECE Agreement).

PROPOSED SOLUTION

The proposed initiative aims to improve the overall efficiency of Ro-Ro port operations with special focus on optimization of available parking space management and controlling access to the port in respective gate-in operations. To that extend the proposed solution covers the possibility for planning of parking space within the port in order to optimize all available resources while at the same time increasing the efficiency by controlling the access and guiding all the vehicles in the correct/assigned position within the port.

FUNCTIONAL REQUIREMENTS

› Parking Management System
› Web Reservations for Parking Space
› Gate-in controls.

PARKING MANAGEMENT SYSTEM IS RESPONSIBLE FOR PARKING SPACES ADMINISTRATION, POSITION FINDING AND VEHICLE GUIDANCE.

› Change parking Names
› Define Parking Position numbers, and slots number
› Changing Parking position availability status (available, reserved, etc)
› Set Parking position characteristics or rules
› Vehicle Type
› Define Different parking areas per berthing area

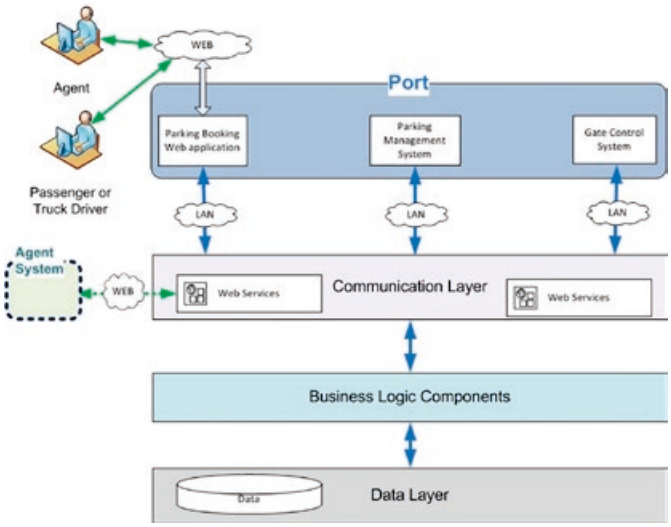
System has the ability to provide:
› Automation on parking slot allocation and finding based on defined rules
› Interface to Berth Management (if is present) for optimum parking slot allocation
› Guiding vehicles to assigned parking slot

GATE-IN CONTROLS

› Access Control in Gate-In operations
› Parking Position Finding
› Guidance vehicle to the parking position
› Automatic recording input
› Multiple Gates (Extension)
› Support VMS Plates
› Support for Driver Control

PROPOSED SOLUTION

PARKING MANAGEMENT SYSTEM – ONLINE RESERVATION – GATE IN CONTROLS



BENEFITS

› Time and costs reduction for port operations
› Enviroment impact reduction
› Improvment of saftey and security in the port area
› Customs Procedures time reduction; Data exchange
› Port database improvement; cross-check controls

PILOT ACTION 4.4
PARKING MANAGEMENT AND CUSTOMS PROCEDURES IMPROVEMENTS FOR RO-RO TRAFFIC AT PORT OF IGOUMENITSA

Toward a more effective automated parking slot management at the Port of Igoumenitsa, as Mednet proposed a new software module featuring real-time display of parking area occupancy, along with dynamic adjustments to atypical cases. En route to more accurate overall control and lightning-fast reactivity!

Partners and stakeholders involved: Igoumenitsa Port Authority S.A., Coast Guard, Customs Authority, Shipping and Forwarding companies, Security Officer

PROBLEMS AND BOTTLENECKS IN PORT

The existing Parking Management System in the Port Authority of Igoumenitsa manages available parking slots within the port area by pre-assigning free spaces. Also, the system interfaces to the existing vessels' Berth Management System.

Parking space bookings are possible via a web interface as shown below. This application also takes into the account the movement of vehicles in the port and the management of parking spaces.

To that extend the existing databases do not take into account dynamic information regarding possible exceptions (such as higher traffic within the port) as well as real–time information on actual status of slot occupancies information (e.g. use of sensors to verify occupied/ released parking slots).

One of the major bottlenecks identified in day-to-day operations is the lack of efficient management of available parking spaces within the port.

EUROPEAN/ NATIONAL REGULATIONS

The Directive 2010/65/EU, the deployment of national single windows and PCS modules have permitted to reduce duplication of data input through official electronic exchange of information.

PROPOSED SOLUTION

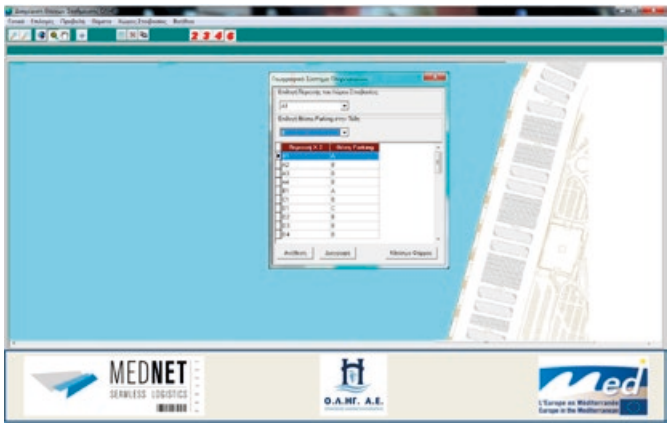
The existing Parking Management System is enhanced with an adaptable module that is able to:

› Define (via respective User Interface) the number of slots per parking area, and their specific rules (via a slot allocation subsystem). Possible rules include the type of vehicle (passenger, bus, cargo etc.), the company/owner, the expected time of departure to visualize the port parking areas and slots via a GIS interface.

› Use real-time data from parking sensors

› Adapt real-time slot allocation pattern based on information permitting to automatically direct vehicles to buffer zones within the port when traffic increasing is noticed.

The system also takes into account information from the administrative Management Module of Igounenitsa's PCS report on customs compliance.



BENEFITS

› The tool provides a better port parking area management for both accompanied and unaccompanied vehicles between port entrance gate and the docks

› A dynamic configuration of the a parking slot allocation

› A real-time supervision of the Port parking areas

› Improvement of the parking space management and allocation of available resources by the implementation and developing the use of data parking sensors enabling to face exceptional events (ex: increase of traffic…)

PILOT ACTION 4.5
IMPROVEMENT OF RO-RO TRAFFIC: PARKING MANAGEMENT AND CUSTOMS PROCEDURES AT PORT OF ZADAR

Port of Zadar: A clever data storage and access control system proposed by Mednet to streamline and speed up clearances and customs formalities.

Partners and stakeholders involved: Customs Department, Republic of Croatia, Department of Internal Affairs, Republic of Croatia – Border Police, Port of Zadar Authority, Port of Zadar ltd., Intermodal Transport Cluster

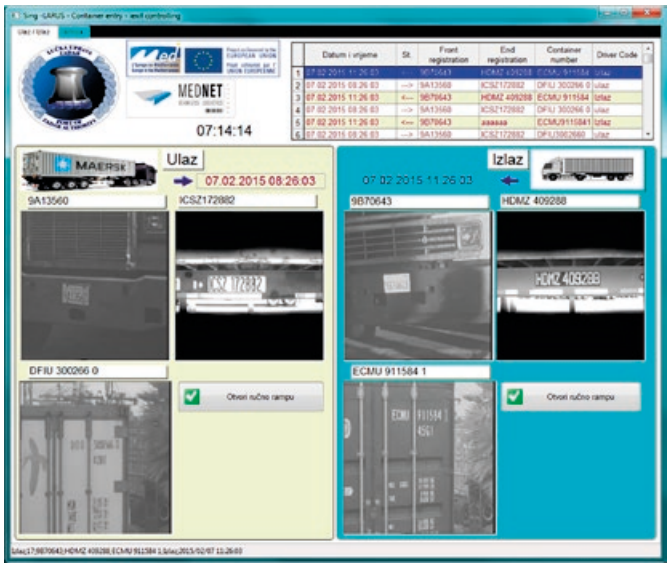
PILOT ACTION OBJECTIVES

› Automation of data collection, as well as input and record keeping of entries to Customs Zone at Port of Zadar (RO-RO Terminal) in accordance with Customs and Police regulations
› Automation of vehicles' and person's entries to Port of Zadar - RO-RO terminal
› Verification and tracking of persons entering and exiting for Boarder needs at mentioned locations.
› Simplification of procedures of multiple entries to mention locations
› Simplified Security staff procedure of drivers' verification at point of entry/exit
› Integration of current systems to the level needed for the proposed process to function

DATABASES AND INTERFACES

In pilot version, data is going to be stored in existing databases, belonging to Port of Zadar Authority. The data that needs to be accessible to ramp card readers is going to be stored in the ramp IT system database. Depending on type of users and their access rights, it will be possible to browse and/or automatically receive stored data. Regardless of which database data is initially stored in, it is always accessible by a unique key (card ID). That way, we created the foundations of the future unique communication interface and system enhancements.

PROPOSED SOLUTION
PORT SOFTWARE SYSTEM



The proposed business process improves and speeds up the fluctuation of trucks from the first sign in, entrance, container handover and exit, with data gathering and verification at each point. By means of permanent card daily activation, the process enables controlled multiple entries to various port basins on the same day, without the need for return to registration point at Port of Zadar (Port Headquarters), including the possibility of card blockage if needed. Furthermore, the data and camera pictures are stored in a database for easy reference at any time. Finally, the proposed system is ready to accept bigger workload of trucks and cargo, fulfilling the set pilot objectives. Moreover, the proposed solution makes foundation for future process automation, e.g.:

› Automated driver announcement via web interface, on the basis of truck registration number,

› The possibility of ID card issue and daily activation without the need to visit registration point at Port of Zadar (Port Headquarters),

› The possibility of card activation for multiple days, in advance (e.g. the driver with an intention to enter port free zone tomorrow and the day after, obtains today the permit for 2 consecutive days),

› Since the card is tied to a particular person, it is possible to control and deny entrance for designated persons (e.g. in case of violation of terminal rules),

› Possible future unique communication interface development: application access for various stakeholders in the port community (e.g. blocking the person by Police or denying access by Customs).

BENEFITS

› Simplification and costs reduction in customs formalities
› Improves customs controls (security, taxes, …)
› Electronic data interchanges among customs for any procedure
› Increase traffic flow, elimination of bottlenecks
› Import and export paperless clearance
› Environmental impact reduction
› Reduction in the number of errors for information contents
› Efficiency increase in the information exchange concerning customs readiness
› Contribute to the reduction of the container dwell time in the terminal

PILOT ACTION 4.6
IMPROVEMENT OF RO-RO TRAFFIC, PARKING MANAGEMENT AND CUSTOMS PROCEDURES AT PORT OF RIJEKA

An electronic sentinel at gates of the Port Rijeka. Improvements expected in customs processes and loosened bottlenecks drop-off.

Partners and stakeholders involved: Customs Department, Republic of Croatia, Department of Internal Affairs, Republic of Croatia – Border Police, Port of Rijeka Authority Port of Rijeka ltd., Adriatic Gate Container Terminal (AGCT) Rijeka, Border Inspection Post Rijeka (BIP), Intermodal Transport Cluster

PILOT ACTION OBJECTIVES

› Automation of data gathering, as well as input and record keeping of entries to Custom Free zone at Port of Rijeka (Container terminal) in accordance to Customs and Police regulations
› Automation of vehicle and person entries to Port of Rijeka – Container terminal
› Verification and tracking of person entries and exits for boarder Police needs at mentioned locations
› Simplification of procedures of multiple entries to mention locations
› Simplified security staff procedure for drivers' verification at point of entry/exit
› Integration of current systems to the level needed for the proposed process to function

DATABASES AND INTERFACES

In pilot version, data is stored in existent segregated Port of Rijeka Authority databases. All data stored in the databases is accessible by a unique ID card. We thus enhances a future unique communication interface and system.

PROPOSED SOLUTION

The proposed business process improves and speeds up the fluctuation of trucks from the first sign in, entrance, container handover and exit, with data gathering and verifying at each point. By activation of a full-day card, the process enables controlled multiple entries to various port basins on the same day.

Return to designated points at port of Rijeka, including the possibility of card blockage is avoided. Furthermore, the data entries and camera pictures are stored in a database for an easier reference at any time. Moreover, the proposed system is ready to accept increased tracks and cargo movements, fulfilling the pilot objectives. Finally the proposed solution becomes the base for future process automation, e.g.:

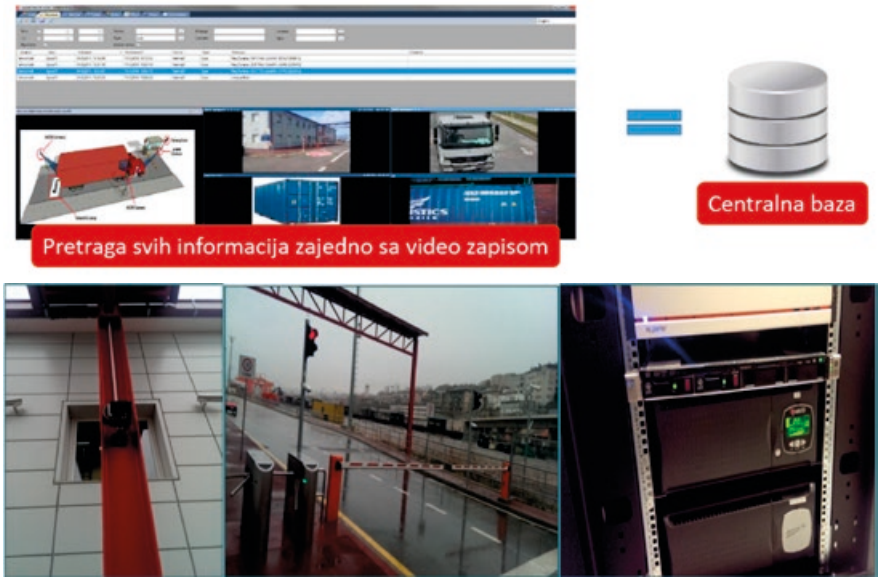
› Automated driver announcement via web interface, on the basis of truck registration number,

› Online ID card issuance daily activation avoiding unnecessary stops within the Port of Rijeka (container terminal),

› Early multiple days card activation (e.g. a driver intending to enter a port Free Zone on days 2 and 3, obtains on day 1 the permit for the desired two consecutive days).

› Port Entrance Control and eventual denial of designated persons (e. g. in case of violation of terminal rules) by blockage of ID card.

› Possible future unique communication interface development: restricted Port access by different Community stakeholders (e.g. a person stopped by Police or denied access by Customs.



BENEFITS

› Simplification and costs reduction in customs formalities
› Improves customs controls (security, taxes, ...)
› Electronic data interchanges among customs procedures
› Increased traffic flow, by reducing bottlenecks
› Import and export paperless clearance
› Environmental impact reduction
› Reduced errors in information contents
› Increase information efficiency related to customs readiness
› Reduced container dwell time in the terminal

With the contribution to the Pilot Project, the system of control and surveillance of entrances to and exits the port of Rijeka area has been developed. The automation of data gathering and integration of software at Skrljevo inland terminal and gate ramps at Adriatic Gate Container Terminal simplifies the security checks and speeds up the flow of trucks throughout the terminals of port of Rijeka. Namely, it enables tracing of exact time of entering or exiting terminal, tracing multiple visits and behaviour notwithstanding the simplified verification of the drivers. The process furthermore enables to control multiple entries to various port basins during a same day, without the need to return to designated points at Port of Rijeka (Port Headquarters) registration point, including, if needed, the possibility of card blockage. Also, the data and camera pictures are stored in a database for easy reference at any time.

It is foreseen that present showed results will favourably introduce further information improvements as well as similar implementation in other intermodal

It must be stated that such implementation has already brought huge improvement in operations particularly in removal of administrative bottlenecks.

Simplifying and harmonizing Port and Customs procedures is also one of the priority goals for the entire Port Community. The specific Pilot Project objectives will also enhance mutual understanding of these procedures.

Most important objectives are achieved by several activities of the Pilot Project:

› Automation of data gathering, as well as input and record keeping of entries to Customs Free Zone at the Port of Rijeka-AGCT, in accordance with Customs, Police and Border Inspection Post regulations,
› Automation of vehicle and person entries to the Port of Rijeka – AGCT,
› Verification and tracking of Free Zone persons' entries and exits for Border Police requirements,
› Simplification of procedures of multiple entries in Port of Rijeka Free Zones,
› Simplified Security staff procedure of drivers' verification at point of entry and exit,
› Integration of current systems to the level needed for the proposed process to function.

IMPROVEMENT OF RO-RO AND CRUISE SHIP CALLS: SHIP SUPPLIES AND BERTH ALLOCATION

Several ports use the same berths for the berthing or mooring of ro-ro and cruise ships. The management of ship berthing during peak periods (e.g. summertime), and its consequences upon the traffic flows inside and outside the port area are crucial. Cruise ships prefer to book a specific berth, even one year in advance, and they require specific traffic measures, since a large number of coaches and taxis are waiting to take the passengers on sightseeing tours . In addition, in some ports, cruise ships are considered extra Schengen, and thus passport and Customs controls have to be enforced. The pilot will develop a reservation system to optimize the use of the existing berths and further test the software prototype.

On the other hand, ship supply procedures and formalities apply to all types of ships and ports, yet cruise traffic is affected peculiarly, as large quantities of catering, fuel and accessories must be loaded and unloaded in a short time. Due to their specific activity, cruiseships are used to call at a port more frequently, so it proves necessary to enforce particular processes and procedures in order to keep them calling back again. The action program will reduce port laytime and grant shipping agents enhanced autonomy to meet all the requirements relevant to ship supplies, thus minimizing delays and supply headaches, especially on non-working days.

PILOT ACTION 5.1
SIMPLIFICATION AND ENHANCEMENT OF PROCEDURES RELATED TO SHIP SUPPLIES AT VALENCIAPORT

The Port of Valencia has assessed several solutions so as to simplify and hasten cruise ship supplying and catering during port calls. The ideal solution: going paperless, i.e. dematerializing procedures.

Partners and stakeholders involved: Valencian Shipowners Association (Asociación Naviera Valenciana), Valencian Customs Office, Port Authority of Valencia

PROBLEMS AND BOTTLENECKS IN PORT

Ship supplies procedures and formalities affect all ships and ports. This is particularly relevant for cruise traffic. Due to large quantities of catering, fuel and accessories to be loaded- unloaded in a short time. The frequency of cruise ship calls make it necessary to streamline all processes and procedures.

Currently, the agent in charge of loading the ship supplies has to manually submit the arrival notification of the AED (Advance Export Document) to the Customs office.

Problems arise when ships arrive after normal Customs Office hours (ie. during the week-end).

The goods cannot be delivered to the vessels, as Customs must verify the documents prior to allowing ships supplies to be loaded. This results in unnecessary loss of time causing ship delays in Port.

EUROPEAN/NATIONAL REGULATIONS

Regarding the ship supplies procedures two aspects to be considered:

Firstly, it is necessarily to verify if the goods loaded are ship supplies (food, beverages as well as, ship stores) and not goods to be transported from one port to another. In the latter case, these goods are to be considered as normal cargo.

Once the type product is defined, it must be distinguished between Community and non-Community goods since it involves the presentation of different documents.

In this case, the Customs Export document referred to in Art. 10.1.5 of the Royal decree 1624/1992 defines the VAT Rules.

The goods delivered to maritime vessels and/ or aircrafts are, in addition to statistical reasons, considered as export operators following Art. 786.2-b of the EU Rules 2454/1992.

PROPOSED SOLUTION

Several solutions have been analysed:

› The ship supplies provider or his agent would have the authorization of simplification to avoid lodging SADs, by simply presenting the sales invoice accompanying the goods, but requires to inscribe on the accounting documents the exported goods and to notify his export operations regularly after the goods had left the community Customs territory. This option requires the ship supplies provider to be an AEO (Authorized Economic Operator). With this option it is possible to carry out the supplies loading on those operations that require an export SAD by simply presenting the commercial invoice that goes with the goods, without making any declaration at the Customs before the supplies loading. Afterwards, the summarizing declarations must be presented.

› The ship consignee having the capabilities to generate EAL and AVI messages, which allows the notification of AED arrival or the receipt of transit and subsequent loading. The possibility that the messages could be sent on a "remote" way will be included. It would be enough to have a laptop with internet and mobile connection to carry this out, with a digital certificate for electronic signatures at Customs and with the required applications to generate these messages. Besides that, with the laptop, the consignee could present export SADs through the web form located at Customs electronic site, as long as he met the requirements for being considered declarant.

› The optimal solution would be the creation of a paperless supply clearance to avoid having to print the clearance documents. Within this paperless procedure, the fiscal receipt could carry out the verifications of export authorizations (SADs or AEDs), of traffic receipts with subsequent loading (AVI) and the automatic transfers (SDS and consignment), using the references from these documents (MRN, SDS and consignment) and not being required the presentation of any paper that justifies these documents. This solution would allow the immediate loading of ship supplies using only the documents accompanying the goods and electronic communications.

PROTOTYPE DEVELOPED

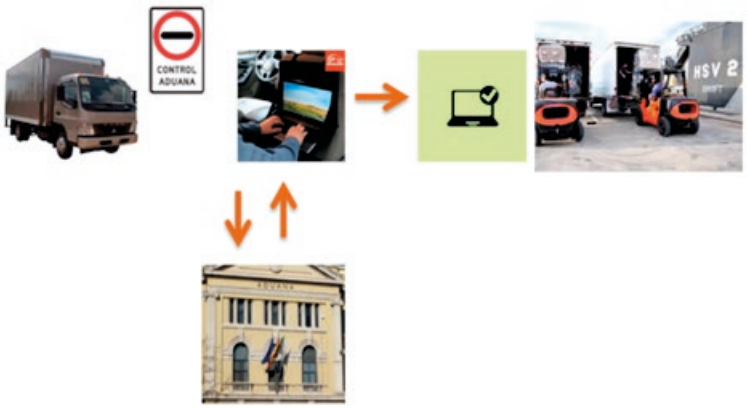
This action will reduce loss of timr so the shipping agents could have greater autonomy to meet all the formalities required to ship supplies, minimizing delays and supplies problems especially during non-working days.

The ship supplies provider would be authorized to simplify by presenting the sales invoice accompanying the goods, thus avoiding to lodge SADs,

This option requires the ship supplies provider to be an AEO (Authorized Economic Operator).

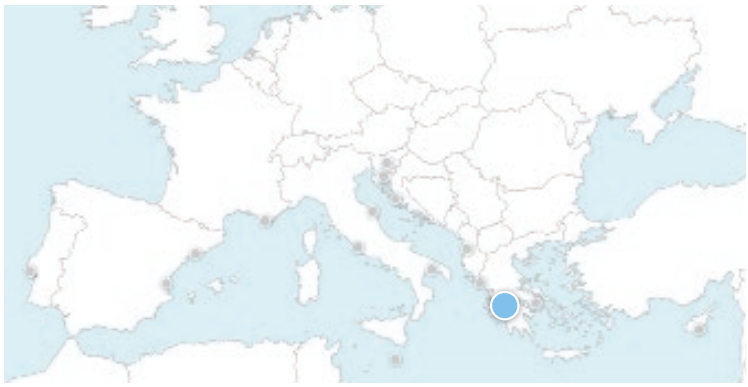
The shipping agent being able to notify the arrival of AED or transit "remotely" with a laptop with an internet connection.

The Exit Summary Notification (EXS) does not need to be lodged for an automatic transhipment.



PILOT ACTION 5.2
BERTH ALLOCATION SYSTEM FOR RO-RO AND CRUISE TRAFFIC AT PORT OF PATRAS

How to locate an available berth at the Port of Patras, especially during summertime when cruise-ships, cruise yachts and Ro-Pax ships overload the standard traffic? Mednet recommended and developed a mere ad hoc software; the prototype is currently tested on-site, and might be further connected to the existing Parking Management System.



Partners and stakeholders involved: Patras Port Authority, Harbour Master, Patras Port Authority S.A., Coast Guard, Shipping and Forwarding Companies, Commercial Companies, Cruise Companies

NATIONAL REGULATION

The Directive 2010/65/EU, the deployment of national single windows and PCS modules have permitted to reduce duplication of data input through official electronic exchange of information.

The BMS tool (as part of the PCS Patras Port Authority currently under development) will allow more efficient management of berth occupancies and represented in a user friendly GIS environment.

The representation of the vessels - allocated to specific berthing slots - will provide the possibility to visually present and alter plans and give an overall view of the port on the imminent time horizon.

The BMS application will allow real-time overall view of the Port vessels specific berth allocations and, when needed, berth modification plans.

PROPOSED SOLUTION

The purpose of the prototype is to provide a Berth Management tool providing more efficient berth scheduling for incoming vessels at the Port of Patras.

OVERALL VIEW

This tool will have a GIS interface allowing a general overview of the Port of Patras as well as a graphical Berth location interface.

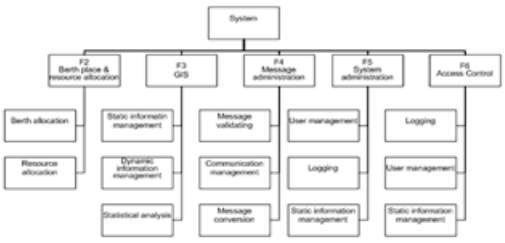
EFFICIENT MANAGEMENT AND VISUAL GIS INTERFACE

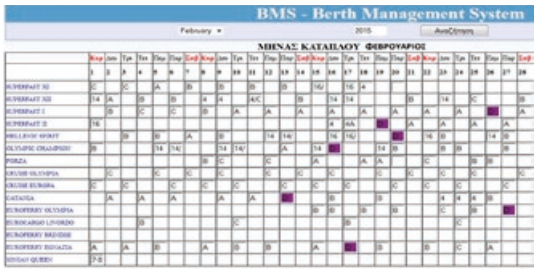
The BMS is an integrated information application permitting to follow the complete vessels berthing process.

The system consists of five basic models:

› User access control to the system
› Initialization and configuration of the system
› Communication interface with other systems
› GIS presentation tool
› Berth Allocation and resource reservation
› Printing of administrative documents

HIERARCHICAL DIAGRAM FUNCTIONS OF THE BMS





BENEFITS

Major benefits from the developed system are:

› Increased efficient management of berth availability

› Management of user resources (e.g. cranes)

› Historical data collection

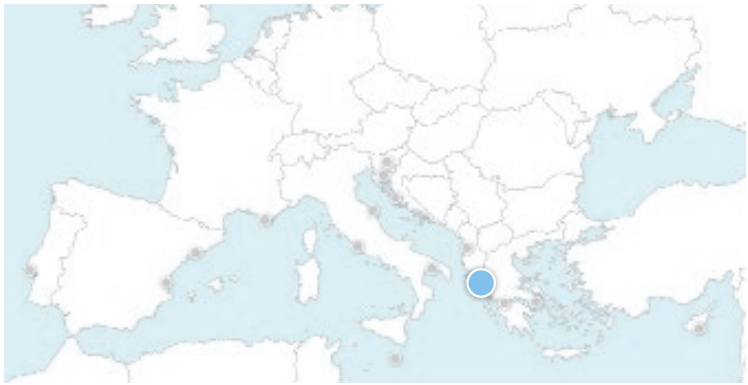
› Automatic berth allocation based on statistical/historical data

› A friendly GIS environment

› Possible future integration with Parking Management System for efficient parking slots assignment (attached to berthing spaces)

PILOT ACTION 5.3
BERTH ALLOCATION SYSTEM FOR RO-RO AND CRUISE TRAFFIC AT PORT OF IGOUMENITSA

Tens of vessels to berth every day, with just a limited number of quays. Cruise ships want to book a specific berth up to one year ahead, and have coaches and taxis waiting for their customers right down the gangway. Container ships need cranes to load and unload their cargoes, and trucks to pick boxes up. Every vessel wants to berth as soon as possible and get fast turnaround. Berth allocation management and planning are a real everyday puzzle for most ports. Including the Port of Igoumenitsa, on the north-west coast of Greece.



Partners and stakeholders involved: Igoumenitsa Port Authority S.A., Harbour Master, Coast Guard, Shipping and Forwarding Companies, Commercial Companies, Cruise Companies

PROBLEMS AND BOTTLENECKS IN PORT

The existing Berth Management System (Part of Igoumenitsa Port Authority PCS) is an integrated GIS information system that supports in real-time the entire process of vessel berthing. The system consists of five basic modules:

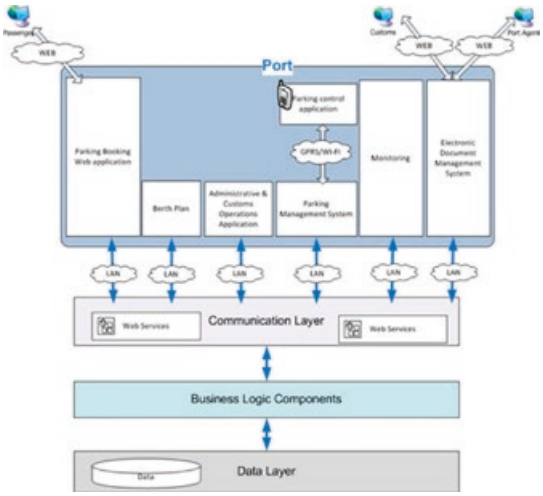
› User access control to the system.

› Communication interface with other systems

› GIS presentation tool

› Berth Allocation and resource booking

However, the system has not yet a future planning application. To that extent the Port cannot minimize the impact on the traffic flows, in the port area and in the surrounding area, through proper management of berthing mooring of Ro-Ro, Ro –Pax and Cruise -Ships.



EUROPEAN/ NATIONAL REGULATIONS

The Directive 2010/65/EU, the deployment of national single windows and PCS modules have permitted to reduce duplication of data input through official electronic exchange of information.

PROPOSED SOLUTION

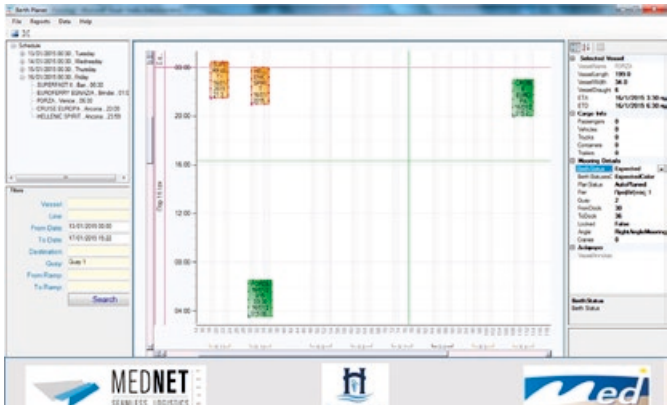
The purpose of the pilot is to improve the Igoumenitsa PCS by providing a berth allocation on an alternative interface e.g. a time-berth linear representation enhancing by a future birthing allocation based upon a time axis.

The representation of the vessels - allocated to specific berthing slots - will provide the possibility to visually present and alter plans and give an overall view of the port on the imminent time horizon.

The existing PCS (GIS based) is thus enhanced by a complete set of planning and visualization modules.

The new module becomes the core planning module for Berth allocation within the PCS while the existing web GIS tool is exploited as a viewer for all involved Port stakeholders (Coast Guards etc.) Cooperation between the stakeholders in this manner improved.

Finally, the system is extended with a set of KPI measurements (as defined within MEDNET) and relevant statistics from stored data in the PCS.



BENEFITS

› The berth planning tool is a time berth linear representation based upon pre-announced information and/or on coast guard data updates.

› The system is enriched by KPIs which enable to produce statistics based on PCS historical data.

› Traffic flows impact in the port and in the surrounding areas is berthing/ mooring is minimized through the proper management of Ro-Ro, Ro-Pax and Cruise-Sips.

6

FURTHER IMPLEMENTATION OF SINGLE WINDOWS AND PORT COMMUNITY SYSTEMS

The action aims at preparing port management, port community systems and business stakeholders' systems to efficiently comply with the requirements of the Directive on reporting formalities for ships calling at or departing from Member States ports. (2010/65/EU). The purpose of the directive consists in simplifying and harmonizing the administrative procedures applied to maritime transport by establishing a standard for electronic data transmission and rationalizing reporting formalities for ships arriving in and departing from European Union ports. Every EU country must ensure that the reporting formalities at their ports are requested in a harmonized and coordinated manner.

PILOT ACTION 6.1
ELECTRONIC PROCEDURES RELATING TO CONSOLIDATED CONTAINER CARGOES AT VALENCIAPORT

Not so easy to swiftly clear goods in a consolidated container… Unless all operators share their data on a unique IT system. The evidence was set forth through this pilot action.

CURRENT SITUATION

Despite the progress achieved in recent years in maritime transport information systems, there are a number of underlying problems affecting efficiency, performance and quality of services related to maritime transport.

For consolidated shipments administrative procedures are complex and time-consuming and, even today, paper transactions are not yet the exception.

In order to simplify administrative procedures, the EU e-Maritime initiative is aimed at fostering the use of information technologies promoting interoperability between all stakeholders in the maritime transport sector.

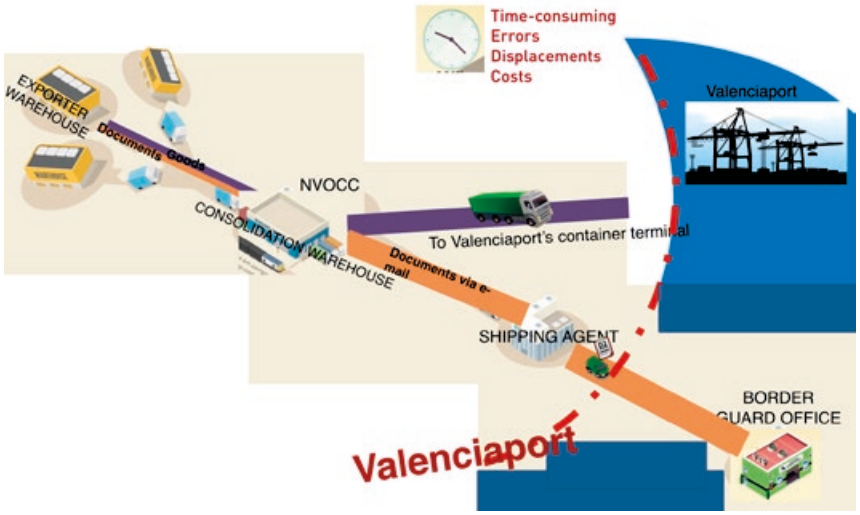
Less-than-container load shipping is consolidated by freight forwarders called non-vessel operating common carriers (NVOCCs)

Goods consolidated in a container may be subject to different customs procedures for authorizing the shipment, which then entails complex administrative procedures.

The process for authorizing the shipment of goods consolidated in a container is carried out as follows:

1. After the goods are received and warehoused, they are then consolidated into a container. Goods consolidated together in a container may be subject to different customs procedures for authorizing the shipment, which then entails complex administrative procedures.
2. The customs documentation associated with the goods must be presented to Customs in order to authorize the shipment. The NVOCC manually processes the documentation received from the customer and completes all the necessary information. The NVOCC fills in the number of the container in which the goods have been consolidated and groups the customs documents of all items.
3. A hardcopy of the information is passed to the shipping agent for controlling purposes.
4. The shipping agent wil in turn submit, via his Customs Broker, the documents to the Customs Boarder Guard.
5. The Customs Boarder Guard manually checks the documentation submitted on paper and compares it against the information held by the customers and authorizes the shipment.

Manually processing this information is a waste of resources, a source of errors and time-consuming.



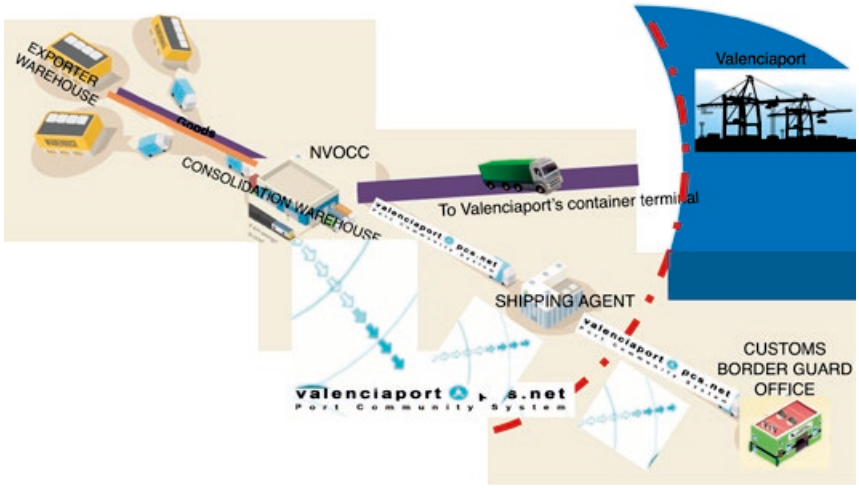
PROPOSED SOLUTION

The Valenciaport Foundation has developed an electronic notification system for customs documents authorising the shipment of consolidated container cargoes.

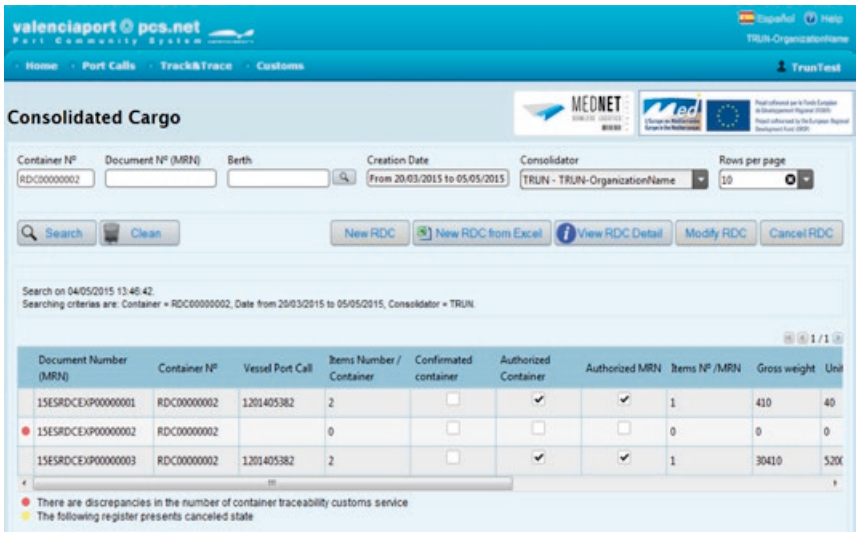
The integrated application in the Port Community System of Valenciaport allows NVOCCs to exchange information on container loads in an agile, paperless way, thus saving time and resources.

Both the shipping agent and the Border Guard Office check all the information that NVOCCs enter in real time via the Port Community System of Valenciaport, which facilitates the shipment authorisation of the container.

The tool developed by the Valenciaport Foundation optimises port and logistics processes through a single data window, eliminating any problems originating from the manual processing of information.



PROTOTYPE DEVELOPED



BENEFITS


interoperability
reduce
time
errors
resources
sharing
information
Single
data window
up-to-date
paperless
safety
security
simplifying
procedures
seamless
logistics
Cutting edge technology

PILOT ACTION 6.2
SETTING UP OF AN INTEGRATED, USER-FRIENDLY AND COMPUTERISED PROCEDURE TO IMPROVE ACCESSIBILITY AT PORT OF TARANTO

«May I enter the port ?» By now, at the Port of Taranto, it takes rather long to get access passes. Paper declarations, administrative roundtrips, checks performed by authorities... it may take up to sixty days to be granted a pass. The Taranto Port Authority accordingly planned to test a way of streamlining its access procedures. The project targets two procedures : enrolment in the Port's registers, and access pass deliveries.

Partners and stakeholders involved: Taranto Port Authority, National/Local Customs Agency, Harbor Master's office, Border Police, Financial Police, Port Security Service, Private operators operating in the port

CURRENT SITUATION

The enrolment in the Taranto Port Authority (TPA) Register is required by all companies operating in the port. The Port Authority enrolls the operator, but the competent Public bodies involved have up to 60 days to finalize the control check and give authorization.

Currently, port operator when applying for the enrolment in the Register, as stated in the art. 68 of the Italian Navigation Law, is requesting for a paper authorization (pass) for both employees and vehicles. It is a double request (referred to two different procedures) to be submitted having mostly the same requested supporting documents.

Requests for accessing the Port are currently managed as manual procedures. They are generally inefficient and costly, especially if more procedures for the same objectives imply duplication of information (forms to be submitted are complicated and redundant).

The procedure of issuing of the passes (authorizations) to enter the port is currently carried out by the local Harbour Master Office but, in the very near future, the activity will be under the TPA's control. The activity is now characterized by significant delays in issuing the required passes, in particular when applying operator is a company with many workers to be all authorized. Also in this case, the Harbour Master Office has to involve other public entities for any kind of controls (i.e. Customs, Police, Financial Police, etc.)

PROPOSED SOLUTION

The proposed solution is an effective IT based multi-user management tool with a single interface register of all port operators.

The interface is based on functionalities coming from the integration and re-engineering of two different procedures: 1) the enrolment in the Register foreseen in art 68 of the Italian Navigation Law; 2) the procedure of issuing of passes, for vehicles and people, to enter the port area.

The computerised system will be handled throughout a single interface by storing and managing the Register of all port operators that the TPA has to manage.

The system allow other competent public entities operating in the port (which need to be kept informed about every enrolment in place in the Register and every pass issued) to monitor access permit requests by entering the system.

The application will not only allow to accelerate the procedure but also avoid the provision of redundant information which are currently requested in two different submission procedures (and now handled out separately with two different templates), being required the same information to be provided by operators.

The final stage will foresee the testing and validating of the system.

The TPA's Ordinance no. 04/14 of 04.28.2014 approved the «Regulations for issuing the port entry permits» for people and vehicles.

The ordinance has introduced significant changes to procedures linked with the issuing of passes.

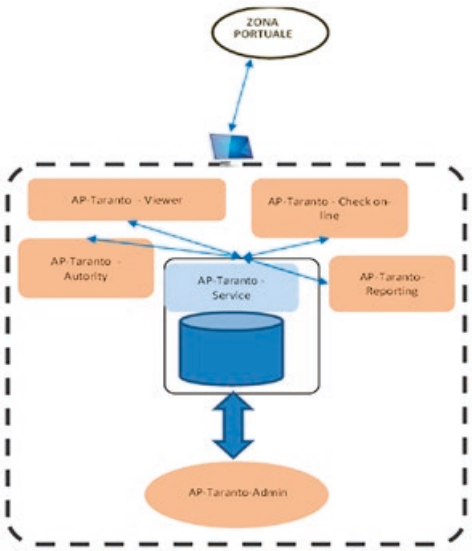
Main changes, compared to the previous manual procedure, refers to:

› The passes of the vehicles do not need no more to carry over the relevant plate, but only the data of the person who is authorized to access by his own vehicle;

› The new procedure foresees a fee for the issue of passes.

EXPECTED RESULTS AND IMPACTS

› Enabling the Port Authority to manage and store permissions electronically/digitally
› Streamlining the procedure for issuing permits for vehicles and people
› Reducing the total number of permit requests
› Reducing average number of days needed for issuing a permit (from 60 up to 5/7 days)
› Reducing average time (hours) for managing documents (internally to the TPA)
› Reducing average time (hours) for submitting requests for permits (including all relevant documents) by port operators
› Reducing internal staff costs for releasing the permission
› Reducing the number of errors
› Increasing overall efficiency of port operations



BENEFITS

› Time saving for the whole procedure: from 60 days required by the manual procedure to 5/7 days for the new procedure
› Reducing average time to submit reporting formalities
› Increasing speed and timely reporting formalities
› Reducing administrative costs for traders and shipping agents ("reporting parties")
› Reducing administrative costs for competent Authorities
› Improving time-release of customs declaration
› Reducing time costs connected to waiting times for goods storage at ports
› Time-related cost savings (e.g. personnel costs, etc.)

PILOT INITIATIVE DISSEMINATION ACTIVITIES

Organisation of an international workshop at TPA to exchange information on main benefits and lessons learned, transfer achieved knowledge, experience and the potential of innovation of this solution with recommendations.

Public information on the final results of the Taranto pilot initiative will be accesible by the MEDNET Port Operations OBSERVATORY for a broad dissemination and knowledge sharing accross port authorities and stakehoders at regional, national and European level.

PILOT ACTION 6.3
INTRODUCTION OF NATIONAL CUSTOMS SINGLE WINDOW AT THE PORT OF ANCONA

As part of the ongoing PCS trial and error process at the port of Ancona, MEDNET suggests key functional improvements to the ongoing project, primarily for better communications with Harbour Master as well as Customs and Health offices. Process spurring and productiveness gains on their way indeed!

Partners and stakeholders involved: Ancona Port Authority, Italian Custom Agency, Italian Coast Guard, Maritime agents and freight forwarders, Border Inspection Posts, National logistics platform manager (UIRNET)

PROBLEMS AND BOTTLENECKS IN PORT

Currently, a first experimentation of the port community system is ongoing, in agreement with maritime agents and freight forwarders. The system is able to:

› Manage the cargo manifests and the import and export document flows (ENS, EXS, cargo manifests…) by interacting with AIDA (customs main software for the assessment of controls);

› Collect statistical data according to the national standards and provide port traffic statistics to the port authority and to ISTAT (national institute for statistics);

The system must be improved to manage also other functionalities as:

› Interface with the PMIS (managed by the harbor master);

› Improvements requested by the Customs experimentation related to the activation of the custom clearance procedure for some types of goods before the ship calls the port. This functionality requires the modification of the cargo manifest layout and the interface with the PMIS system;

› Integration with the national logistics platform, by ensuring the capacity of exchange information;

› Cooperate with other customs agencies in order to speed up the import flows.

NATIONAL REGULATION

The Italian Legislation has defined that the customs single windows and the maritime single window are implemented by the Customs Agency and the Italian Coast Guard.

The Italian Custom Agency has developed its own software (AIDA) for the dialogue with the operators. As it represents the best practice in the Country on the informatisation of a whole procedure, AIDA has become the reference also for the other administrations involved in the import and export processes (up to 18 different administrations). The Custom single window in ports is referred to the integration of the controls of the custom office and of the other competent administrations (if they need to be involved) in the import process, in order to avoid that the different administrations control the same goods in different times. Moreover, the system AIDA allows the input of the controls of the sanitary and veterinary offices in port to ease the information flows between the maritime agents and the freight forwarders. In this framework, the role of a port authority is to provide an adequate ICT tool, the port community system, to ease the dialogue between the AIDA system and the port community. Furthermore the system must act as one stop shop, whenever possible, to reduce the administrative burdens of the economic operators and to assure that the same input is inserted only one time.

PROPOSED SOLUTION

The proposed solution is based on the acquisition of a port community system for the management of the functionalities and of the future tools that currently the customs agency and the harbor master are setting up.

Regarding functional requirements, the core tool for the port community system is the cargo manifest and the related data. In particular, the cargo manifest allows the early start of the import authorization process (ENS, early custom procedures, activation of the single window for joint controls for customs and health offices) as well as the early activation of the logistics chain for the forwarding of goods to final destination. The ENS is transmitted via the port community system to the customs software AIDA that provides the reply on the control: green light for no checks, yellow for documents controls, orange for scanner and red for physical check.

EARLY ACTIVATION

Actually, the customs office is coordinated with the health ministry office for the organization of joint visits in case the goods need to be checked by the 2 administrations. According to the reply of the custom software, the port community systems transfers the information to the freight forwarders on the custom clearance to allow the delivery of goods.

CLEAR-CUT INFORMATION

Concerning the experimentation carried out by the custom administrations, if the ship is monitored by the VTS system the customs procedures can start before the ship calls the port. To that extent, the port community system must provide the adequate information of the ships that can start the custom procedure. When the ship forwarder has closed the import cargo manifest (Manifesto merci in arrivo) and the customs and the harbor master allow the early custom process, the freight forwarders can start the procedure for custom clearance via port community system.

TRUCK MONITORING

During the pilot test carried out by the Customs administrations, the ship is monitored by VTS system, and customs procedures can start before the ship calls the port. The, the post community system provides the adequate information of the ships that can start the custom procedure. When the ship forwarder has finalized the import cargo manifest (Manifesto merci in arrivo) and the customs in the harbor master have allowed the early custom process, the freight forwarders can start the custom clearance procedure via port community system.

Concerning the national logistics platform, the port community system of related freight data to implement the customs clearance in an inland office during import process. The system monitors the truck to insure it does not stop and it follows the predetermined route to the custom office where the custom clearance is to take place.

BENEFITS

› Time and cost reduction for the MMP creation
› Environmental impact reduction
› Reduction in the number of errors for information contents
› Efficiency increase in the information exchange concerning customs readiness
› Contribute to the reduction of the container lay time in the terminal

PILOT ACTION 6.4

ANALYZING ITALIAN CUSTOMS OF THE ITALIAN CUSTOMS SYSTEMS AND ADOPTING OF DIRECTIVE 65/2010

A new software set proposed and developed by MEDNET Consortium could solve, as a whole, compliance, complexity and electronic data collection and communication issues related to shipping, port, customs and administrative matters. A prototype was produced based on Venice and Bari current port operations. Worth keeping an eye on that!

Partners and stakeholders involved: Rete Autostrade Mediterranee S.p.a., Italian Ministry of Infrastructure and Transport, Italian Coast Guard Headquarters, Italian Customs Agency, Venice Port Authority, Levante Port Authority

PROBLEMS AND BOTTLENECKS IN PORT

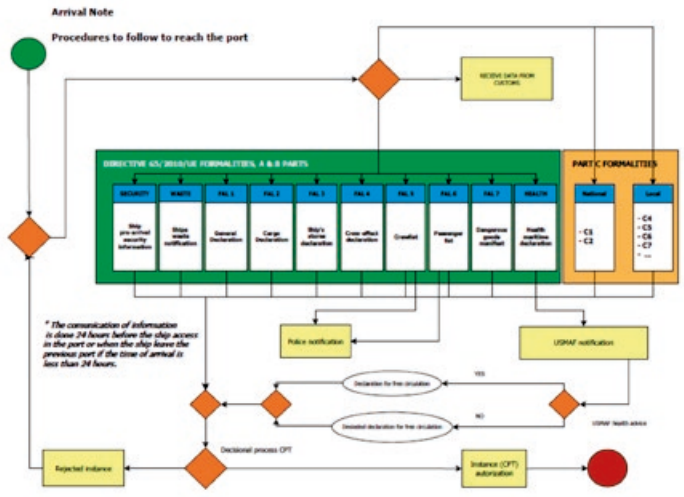
Exchange of ship and cargo information between ship-owners, ship-agents and/or vessels masters and maritime authorities, Customs and other relevant departments has shown to be an intensive exercise to collect in an electronic format through a Single Window framework.

Electronic transmission of information according to current EU legislation ("Reporting Formalities Directive") , national laws (Italian Law n. 221/2012) as well as local regulations (at single ports level) is not harmonized among Italian ports and is is still paper based in some ports.

The complexity in integrating the existing ship-port interfaces with a national Single Window system in compliance with Directive 2010/65/EU.

Administrative formalities in ports needs to be processed in coordinated manner between competent authorities and agencies , enabling interoperability among different information systems.

Port Community Systems (PCSs) are not sufficiently integrated with information systems of national competent authorities and agencies (e.g. Coast Guards, Customs Agency, Health, etc.)



NATIONAL REGULATION

Approved Directive 2002/6/EC aims to provide
« Reporting formalities for ships arriving in and/or departing from ports of Member States".

The purpose of Directive 2010/65/EU is to simplify and harmonise the administrative procedures applied to maritime transport and to rationalising reporting formalities for shipping companies. Member States shall accept the fulfilment of reporting formalities in electronic format and their transmission via a Single Window no later than 2015 June 1st .

Directive 2010/65/EU has been transposed in Italy by the Art. 8 of the Italian Law Decree n.179

of 18th October 2012, that provides "further urgent measures for the Country's growth",suddenly converted in national Law n. 221 of 17th December 2012.

Law Decree n. 179/2012, in order to bring the national legislation with Community provisions, amended Art.179 of the Italian Navigation Code providing for the application of FAL forms for information exchange, fulfilling requirements of Directive 2010/65/EU.

Italian Law n.221/2012 establishes, among the others, the following issues:

› Port Management Information System (PMIS) is the National Maritime Single Window ;

› Submission of FAL1, FAL2, FAL3, FAL4, FAL5, FAL6, FAL7 and Declaration of Health;

› Submission of any additional information required according to current EU legislation and any other information in response to national laws and/or local regulations;

› Interoperability of PMIS with SafeSeaNet (SSN), Customs (A.I.D.A.), Port Community Systems (PCSs) as well as other National Competent Authorities (e.g. Health).

PROPOSED SOLUTION

National Single Window (NSW) will be definitively an environment made up by two interoperating systems allowing the "reporting once" of relevant formalities:

› Maritime Single Window (PMIS);

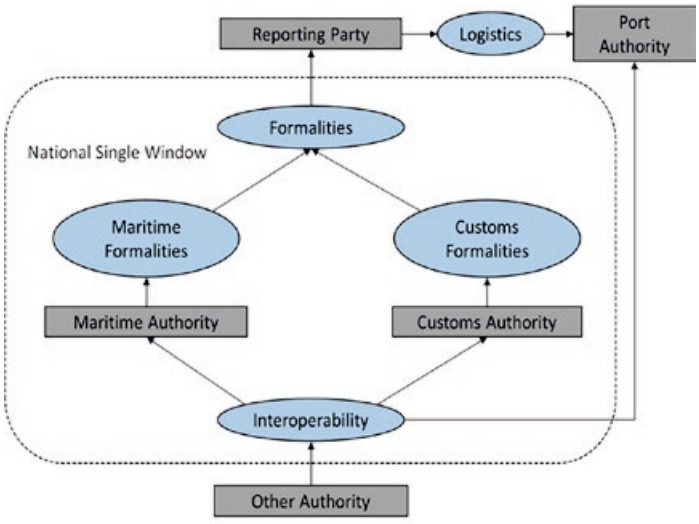
› Customs Single Window (A.I.D.A.).

NSW in Italy is a "centralized" system: the reporting formalities will be submitted by ship data providers directly to a single system which will collect all information and will make it available to competent national and local authorities via web-based and system-to-system interfaces.

Data transmission is performed through two different approaches for both Business-to-Administration (B2A) and Administration-to-Administration (A2A) services related reportingformalities: graphical web user interface (GUI) and system-to-system interface (SOAP, XML).

PMIS will be interoperable with A.I.D.A. through A2A data exchange and messages sent through domain gateway, as established by the Italian Law (Code for Digital Administration).

The pilot action focused on two Italian cases (Venice, Bari) for defining possible scenarios to ensure integration and interoperability between existing PCSs and National Single Window .



PROTOTYPE DEVELOPED

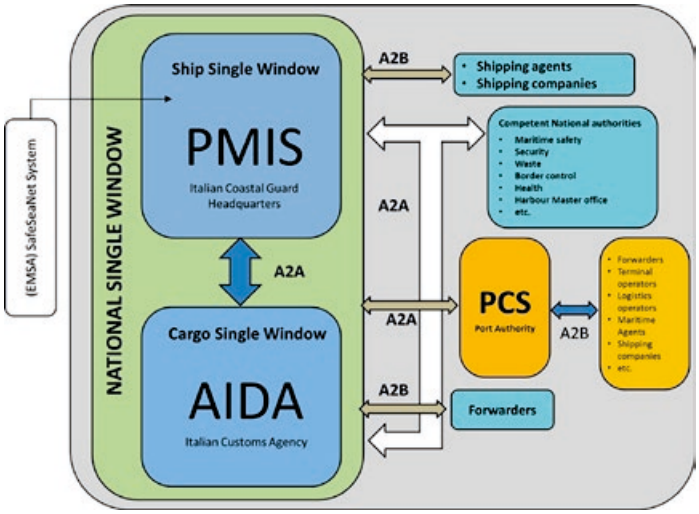
The prototype has been structured in three layers:

› Presentation layer

› Interoperability layer,

› Business and Data.

Presentation layer is a web-based GUI for interaction with business operators. Interoperability layer is a middleware of integration operating within SOA (Service Oriented Architecture) paradigm, interfacing with informative systems used by competent authorities (including PCSs) and reporting parties. Business layer is a business logic enabling execution of applicative processes related to reporting formalities. Data layer is a database for information and data storage through Database Management System (DBMS).



BENEFITS

› Accelerating reporting formalities

› Reducing administrative costs for traders and shipping agents ("reporting parties")

› Reducing average time to submit reporting formalities

› Reducing administrative costs for competent Authorities

› Improving time-release of customs declaration

› Reducing time costs connected to waiting times for goods storage at ports

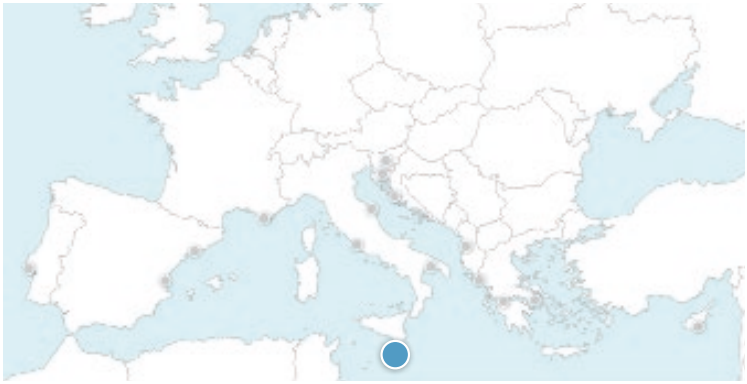
› Time-related cost savings (e.g. personnel costs, etc.)

› Time cost savings (mainly connected with the suitable reduction of door-to-door transport time and waiting time of goods at ports)

› Decrease of container laytime in ports

PILOT ACTION 6.5
MASTER PLAN OF MALTA TO SET-UP A NATIONAL MARITIME SINGLE WINDOW

How come, in the era of worldwide networks, so many documents still have to be dispatched to so many recipients ? A unique electronic sending, to all involved administrations : this is the « single window » logic.



Partners and stakeholders involved: Authority for Transport in Malta, Department of Customs, The Immigration Section of the Malta Police Force, The Environmental Health Directorate, The Veterinary and Phytosanitary Regulation Department, The Plant Health Department

Transport Malta issued a tender document published by the Department of Contracts on 12 December 2013 for a Master Plan for the set-up of Malta's National Maritime Single Window. The objective of the exercise is to provide the Contracting Authority a detailed study, which will serve as a Master Plan for a practical implementation by the designated entity responsible for the implementation of the NSW. The contract was awarded to Pricewaterhouse Coopers (Malta) who used the following methodology to deliver the Master Plan.

› Best Practices and Obstacles
Following the review of current systems and the initial definition of requirements that has been established as a result of the desk review and stakeholder consultation, it was possible to start establishing best practices which were already evident in the present systems and well as any circumstances which may pose a challenge to the implementation of the NSW

› SafeSeaNet Review and Analysis
It is understood from the initial Steering Committee meetings formed from local stakeholders that the NS need to interface with the SafeSeaNet ("SSN") system to transmit certain information captured in compliance with the relevant reporting requirements. The SSN system logic and architecture need to be reviewed in order to ensure that the functional requirements for the NSW factor in any interfacing requirements. The SSN logic and architecture is described in detail in a number of technical documents freely available on the EMSA website. However, additional input from the responsible Authority may be required in order to ensure that all relevant aspects of SSN are being captured in the analysis, particularly in the event of relevant information which is not freely available on the EMSA website.

› Requirement Mapping
Based on the above review and findings, the functional requirements has been mapped to detailed system requirements, including the identification of any interdependencies.

› Tender Document Preparation
The tender document for the procurement and implementation of the NSW has been prepared, based on the functional system requirements and the time plan.

PROPOSED SOLUTION

Currently, Ship Agents/ Masters have to submit information to the Maltese authorities in a mixed manner. This is due to the fact that whereas Transport Malta and Customs have IT systems in place, other departments are still relying on manual paper based systems. Furthermore, within the current operating environment there is a lot of duplication of data since the Ship Agent/ Master is submitting quite a number of information elements more than once. From its end, the European Maritime and Safety Agency (EMSA) has been actively involved to support Member States to address the Directive's requirements. In this regard some while back EMSA had engaged a third party software house to develop a prototype of the National Single Window (NSW) system . The prototype is still under development but the final version is expected to be completed by March 2015. Over the past months EMSA has been providing technical assistance to Transport Malta and there have been various workshops, meetings and calls organised for different stakeholders to familiarise themselves with what the EMSA prototype has to offer.

When assessing local reporting requirements with EMSA functionality, there appears to be a high level of functional fit. Furthermore the prototype solution provides seamless integration with the latest SSN version 3. Naturally each Member State would then need to customise its own reporting and interfacing requirements with existing national systems. As expected the cargo manifest declaration is an area whereby the EMSA prototype captures information relating to Customs. Besides the FAL Form 2 Cargo Declaration, the EMSA prototype also provides for additional cargo data elements including ENS (Entry Summary Declaration) data. An added advantage of the EMSA prototype is that it is based on open source and there are not license fees related to its use. In this regard, Transport Malta as the proposed national NSW agency, can use and enhance further in a flexible manner. There is also the added advantage that the system allows ship agents and operators to connect to the NSW through a system-to-system protocol. On this basis, on 22 October 2014 a Steering Committee meeting was held with all key stakeholders. During this meeting a strategic decision was taken to base Malta's NSW solution on the EMSA prototype.

This decision was mainly driven by:

› The extent by which the EMSA prototype cover the Directive's reporting formalities;

› The fact that the prototype is being promoted and supported by an EU agency;

› The very limited timescales available to develop a solution before 1 June 2015. Any alternative and/ or bespoke options would need to consider this factor; and

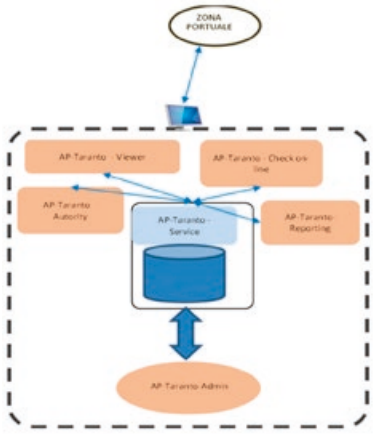
› The fact that the EMSA prototype is open source and the platform can therefore be managed by Government IT resources in the long term.

COMPILATION OF A COMPREHENSIVE MASTER PLAN TO BE USED AS A GUIDE FOR THE SET UP OF A NATIONAL SINGLE WINDOW.

BENEFITS

› To make Europe more competitive
› To improve interconnectivity (national-international and public authorities-business)
› Top reduce existing barriers
› To create a level playing field between various opertors and transport modes
› To develop a one stop shop approach (Maritime Single Window)

EXPECTED RESULTS AND IMPACTS



PORT OPERATIONS OBSERVATORY IN THE MEDITERRANEAN

The objective of this action is to create an observatory of port operations in the Mediterranean, facilitating the interchange of solutions and best practices, thereby further disseminating know-how between European countries and port communities.

PILOT ACTION 7.1
PORT OPERATIONS OBSERVATORY IN THE MEDITERRANEAN

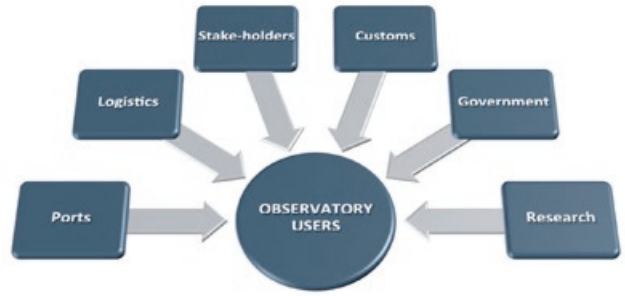
Based on MEDNET's peculiar expertise, the collaborative platform launched the genesis of a common web-based area provided with state-of-the-art knowledge and best practices, harbour KPI records, communication and exchange facilities. Assets furthermore encompass a specific port- and shipping-related database, notably featuring GIS applications. The initiative is bound to become a major instrument all over the Mediterranean.

Partners and stakeholders involved: National Technical University of Athens, Cyprus University of Technology, Maritime Institute of Eastern Mediterranean, TIS.PT, Data collection / input from all partners & participating port authorities, Port Authorities, Ministries, Transport agencies and related public bodies, Relevant stakeholders, EC, TEN-T; Trans-national Programmes and Initiatives, Transport organisations outside EU

SUMMARY OF THE PROBLEM THE PILOT ADDRESSES

Currently, there are a lot of available information sources related to port operations and customs procedures for the ports of Europe. The identified problem is that information is not classified and organised all together in a unified and harmonised system and additionally, its accuracy is sometimes not verified by authorised organisations.

Therefore, it is necessary to develop a platform that addresses the deficiencies and inconsistencies of port observatories, by creating a «Port Operations Observatory in the Mediterranean» which monitors port related activities in the region.



OBJECTIVES, MOTIVATION & REFERENCES

The Observatory of Port Operations in the Mediterranean Sea is an allinclusive information centre and knowledge base on port administrative requirements, logistics procedures, port operations and customs formalities.

The observatory allows for recording and disseminating best practices, as well as for understanding the technical parameters related to port operations' performance, through the use of a specialised database, while highlighting at the same time strengths and weaknesses of port operations.

Moreover, it provides a communication platform at European, national and regional levels, relying on an open thematic discussion forum.

Until recently, various projects have focused on ports' operation and the development of information systems. Concerning the design and operation of transport observatories, a number of projects have been developed, such as the Mediterranean Electronic Marine highway Observatory (MEMO) project elaborated under the MED programme, focusing on the development of an observatory for Mediterranean Electronic Marine Highways, and the PPRISM project, led by the European Sea Ports Organization (ESPO) attempts to identify a set of sustainable, relevant and feasible port performance indicators to be implemented at EU level in order to develop a European Port Observatory.

The MEDNET Port Operations Observatory is an innovative platform, where it has also been attempted to develop synergies with the observatory of the relevant project FUTUREMED. The two observatories are hence complementary and inter-reliant.

THE PROPOSED SOLUTION

The MEDNET Port Operations Observatory is an advanced web-based platform for port authorities and stakeholders, to disseminate adhoc knowledge and best practices, facilitate exchange of views, and record port operations related activities and procedures, allowing for port system planning and decision-making. The system itself will be hosted at the NTUA premises and its architecture will accommodate:

1. A Reference Library and Knowledge Centre that will include (a) legislation, guidelines, projects/ studies related to port operations, customs procedures, port formalities, safety/ security issues etc., (b) recommendations and best practices, (c) trade and transport statistics through external links (e.g. world port source, world port index etc.) and data providers (e.g. Eurostat for freight and transport mode related data/indicators, ETISplus information system for model-generated data and forecasts).

2. Reporting and monitoring tools based on Key Performance Indicators for each port, updated through the development of a self-assessment application.

3. A Database incorporating GIS applications, associated to port operations, cargo flows, shipping lines, qualification, status of expansion plans, hinterland network structure and flows etc. for all participating ports. Any update of data due to improvement of port performance or the introduction of new ports in the pilot system will be recorded in the database.

4. A Communication Platform creating new interactions and cooperation between port authorities and stakeholders at regional, national and European level. This forum will take into account the experience and requirements of MEDNET Communication strategy, and organise and classify all discussions and views according to thematic clusters. Links and synergies with other Observatories (e.g. MEMO, ESPO, FUTUREMED), will also be implemented, provided mutual agreements are reached.

PROTOTYPE DEVELOPED

BENEFITS

INFORMATION, ASSESSMENT AND COMMUNICATION

The main benefit from developing the observatory is the implementation of a platform at regional level that will become a useful and essential tool for port community members, such as: port authorities, stakeholders, maritime companies, logistics companies, etc. This system contains information for European ports, as well as communication and assessment tools for port operations and customs procedures.

REGULATIONS AND BEST PRACTICES

In more detail, the creation of the observatory provides port authorities and other stakeholders with a contemporary solution to circulate knowledge, views and best practices, and to record port operations, activities and procedures, allowing for short-term and long-term planning, management and evaluation of the port systems.

PERFORMANCE MONITORING

This is eventually an effort to monitor the regional port system and to regularly update pre-defined performance indicators, by collecting and analysing network data. The presentation and dissemination of the outputs, along with the re- evaluation of the indicators enable the relevant decision makers and port actors to continually monitor their operations, as well as the entire intermodal logistics chain.

MEDNET

Contact:
Rete Autostrade Mediterranee
Project Lead Partner
progettieuropei@ramspa.it

More information:
www.mednetproject.eu

Projet cofinancé par le Fonds Européen de Développement Régional (FEDER)
Project cofinanced by the European Regional Development Fund (ERDF)