



2013/2014 ANNUAL REPORT



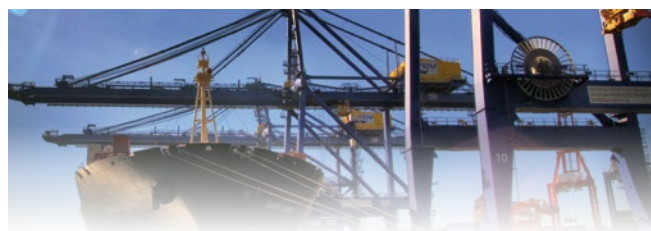
INDEX



1. Introduction

06

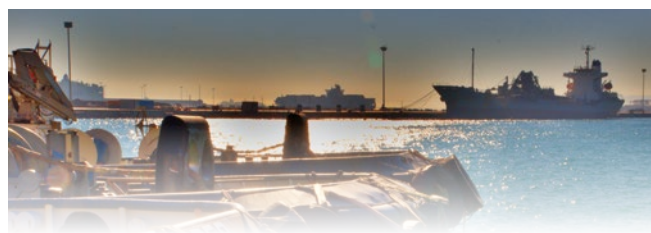
1.1. Letter from the President	06
1.2. Corporate Information	08
1.2.1. About Us	08
1.2.2. Objectives	08
1.2.3. Location	09
1.3. Organizational structure	09
1.3.1. Valenciaport Foundation Governing	09
1.3.2. Human Resources	11



2. Projects

12

2.1. Introduction	13
2.2. Research programmes	15
2.2.1. Logistics & Intermodality	15
2.2.2. Intelligent Port Logistics	33
2.2.3. Sustainability	52
2.2.4. Security & Protection	65
2.2.5. Others	75
2.2.6. Internationalization	87
2.2.7. Databases & Simulators	99



3. Agreements

102

3.1. Introduction	103
3.2. List of Agreements	103
3.3. Europhar	105

0



4. Valenciaport Foundation's membership of associations 106



5. Seminars & Workshops 108

- 5.1. Introduction 109
- 5.2. List of Seminars & Workshops 109



6. Publications and participation in forums and conferences 112

- 6.1. Introduction 113
- 6.2. List 113
 - 6.2.1. Articles & Chapters in books 113
 - 6.2.2. Books 113
 - 6.2.3. Chapters in Books 113
 - 6.2.4. Presentations 114



7. Training 118

- 7.1. Background of IPEC-Training 119
- 7.2. The Cornerstones of Training & Achievements in 2013-2014 120

7.3. Lines of Work 122

- 7.3.1. Postgraduate University Training 124
- 7.3.2. Training for the Cluster 125
- 7.3.3. Online Training for Latin American Managers 126
- 7.3.4. In-Company Training for the Cluster 128
- 7.3.5. Seminars and Forums 128
- 7.3.6. Training Materials 129
- 7.3.7. International Cooperation in Education 129

7.4. Valenciaport Foundation Alumni Association (AAIPEC) 132

7.5. What IPEC-Training brings to the sector 133



8. Documentation 134



9. Corporate & Social Responsibility and Cooperation 138



10. Financial Information 144



11. 2013-2014 in pictures 148

INTRODUCTION



Rafael Aznar Garrigues
Valenciaport Foundation President



1.1. LETTER FROM THE PRESIDENT

The Valenciaport Foundation, which I have had the pleasure of presiding for the past six years, celebrated its 10th anniversary in 2014. It has unquestionably been a decade of hard work, not only serving the interests of the port logistics cluster, but exhaustive efforts have also been made to adapt to the situation arising from the current economic crisis.

The creation of the Valenciaport Foundation in April 2004 meant the provision of a tool for companies from the sector (small, medium-sized or large), which in addition to subsuming earlier achievements such as training or contact with the universities, enabled us to build a powerful R&D&I motor, and at the same time to raise the international profile of Port of Valencia.

Looking back, I am pleased to note that there has been a great deal of cooperation. We have had the opportunity to collaborate with Regional Administrations (the regional governments of Valencia, Andalusia, Castile-and-Leon, Madrid and Aragon), with the Spanish Government (Ministry of Public Works, Ministry of Economy and Competitiveness, Ministry of Industry, Energy and Tourism, Ministry of Education and Science, Ministry of the Treasury and Public Administration, the Spanish Credit Institute, the Ministry of Foreign Affairs), and with more than fifty countries, primarily those that border on the Mediterranean, the rest of Europe, Asia and Latin America.

There have been a number of mechanisms that have enabled us to carry out our activities, from public calls for tender for R&D funding, to technical support contracts, European RfP's and international tenders. At this point, I would like to highlight the tireless endeavours of the Valenciaport Foundation's Management Board, stepping up its efforts, with considerable success I might add, to encourage internationalization and European projects, having either managed or taken part in 22 projects during the 2013-2014 period with funding from the European Commission. This hive of activity has brought with it great benefits for the whole port and logistics cluster, having been allocated a budget of €5 million for 2014 to carry out European projects, of which €3 million went directly to companies and organizations that are part of the cluster to implement improvements and technology innovation in their respective specialized areas.

At the same time, the Foundation has continued with its activities to bolster the international reputation of the operational and management best practices that govern the activities carried out by the cluster, managing to forge partnerships with ports from different continents, promoting positive mutual experiences, interest and trust that lead to growth in trade relations. In this period, work has been carried out with ports in Peru, Brazil, Colombia, Uruguay and Mexico, to name but a few.

With regard to training, there have been some remarkable successes such as the completion of the 2nd international edition of the Master's in Port Management and Intermodal Transport (Colombia), the continuation of training initiatives in Latin America and Africa, the start of the 23rd Master's programme in Valencia in association with the Comillas Pontifical University, the boost to the In Company training programme in subjects such as trade, customs, logistics, ports and languages and the renewal of the ISO 9001:2008 quality management system standard that attests to the quality of all its training programmes.

As far as the challenges for 2015 are concerned, we are going to continue with the same work plan that has brought success for the Foundation, in areas such as energy efficiency, Liquefied Natural Gas (LNG), port information systems and intermodality; we will also be embarking on new activities that are of great interest to the cluster, such as, cyber-security in ports, sustainable transport and the deployment of drones; and we will re-launch international cooperation activities, focusing particularly on Latin America and North Africa.

I could not draw this short address to a close without first mentioning and congratulating Valenciaport Foundation's primary asset: its human capital. A wonderful combination of different experience, training and methodological approaches, all with a common denominator: youthfulness, professionalism and zest to perfectly fulfil their function, namely to meet all objectives placed before them.

In short, we are very satisfied with what we have achieved over these past 10 years. As far as the short-term future is concerned, we will continue to work at the same rhythm to ensure that more and more companies that are part of our cluster, as well as their respective collectives (shipping companies, shipping terminal companies, forwarding agents, transport companies, loading companies, amongst others) consider Valenciaport Foundation an associate when defining their R&D&I policies, and a partner when elaborating their training plans.

What is certain is that regardless of the sector each company is from, there are three cornerstones to bring the economic crisis to an end, and these have been mentioned on numerous occasions at numerous gatherings: training and developing human capital, R&D&I and internationalization. Valenciaport Foundation provides support for all three.



1.2. CORPORATE INFORMATION

1.2.1. ABOUT US:

Valenciaport Foundation is an **Applied Research & Training** centre providing services to the port and logistics cluster.

It is an initiative of the Port Authority of Valencia, and has been joined by outstanding businesses, universities as well as institutions from the port community. It currently collaborates in more than twenty countries, primarily those that border on the Mediterranean, the rest of Europe, Asia and Latin America.

1.2.2. OBJECTIVES:

The main objective of Valenciaport Foundation is to create some degree of cohesion within the port and logistics community and to continue to train and develop its human resources to enable it to achieve a framework of excellence in research, innovation, training, cooperation and internationalization so that it might help to bolster the competitive edge of our economy so that the services provided by the Valenciaport cluster to its clients as a whole meet the high quality requirements that will allow them to continue to spearhead activities in the Mediterranean.

This objective is founded on a number of different action points:

- Encourage **innovation**, collaborating with businesses, institutions, training centres and R&D&I centres to implement groundbreaking projects to enhance the competitive edge of businesses in the Port of Valencia.
- Active **cooperation** with other maritime and port-related clusters, spearheading knowledge generation and management initiatives, implementing **best practices** from an international perspective for the benefit of the Port of Valencia.
- Knowledge management initiatives, promoting **training** for continued improvement to the human capital of the port and logistics community.
- **Stimulate and invigorate** the Valenciaport cluster, promoting the design, deployment and execution of **R&D projects** aimed at raising the competitiveness of businesses that carry out their activities at the Port of Valencia.
- Raising the international profile **Know-How of the Port of Valencia**, through a policy that actively encourages cooperation between port communities from around the world, providing support to Spanish logistics operators in their **internationalization** activities.
- Cohesion within the **port and logistics community**, encouraging cooperation within the sector, and rapprochement and dialogue with civil society within the framework of a collective strategy of **social responsibility**.



1.2.3. LOCATION:

Valenciaport Foundation headquarters are located in the APV Phase III Building at Av. del Muelle del Turiaín.



1.3. ORGANIZATIONAL STRUCTURE

1.3.1. VALENCIAPORT FOUNDATION GOVERNING BODY

BOARD:

The Board is the highest governing, administrative and representative body of the Valenciaport Foundation. It comprises ex officio and elected trustees up to a

maximum number of twenty-five. There are currently twenty-one members, all Ex Officio Trustees, from sixteen different entities..



Patronato Fundación Valenciaport, junio 2013

INTRODUCTION

FOUNDING BODY	REPRESENTATIVE
Valencia Port Authority	Mr. Rafael Aznar Garrigues Mr. Ramón Gómez-Ferrer Boldova Mr. Manuel Guerra Vázquez Mr. Federico Torres Monfort
Valencian Institute of Business Competitiveness, IVACE	Mrs. Mar Casanova Llorens
Bancaja Foundation	Mr. Emiliano García Domene
Valencia International Trade Fair Centre	Mr. José Vicente González Pérez
Valencia Chamber of Commerce, Industry & Shipping	Mr. Francisco J. Corell Grau
Valencia Business Confederation	Mr. Salvador Navarro Pradas
Valencia City Council	Mr. Alfonso Grau Alonso
Valencia Regional Council	Mr. Alfonso Rus Terol
University of Valencia	Mr. Guillermo Palao Moreno
Polytechnic University of Valencia	Mr. Vicente Esteban Chapapriá
Noatum Ports Valenciana, S.A.U.	Mr. Gustavo Ferrer Soriano
TCV Stevedoring Company, S.A.	Mr. José Luis Alabau Vázquez
Remolcadores Boluda, S.A.	Mr. Vicente Boluda Ceballos
ATEIA - Valencian Association of Freight Forwarders	Mr. Luis Rosa Vidal
Maritime Association of Valencia	Mr. Vicente Boluda Fos
Valencian Association of Customs and Commissions Agents	Mr. Emilio Guardiola Huertas

CHAIRMAN:

The board elects its chairman from among its ex officio members, the choice based on their professional expertise, suitability and track record in the port sector, and the appointment is then made by the Valencia Port Authority. Since 2009, the **Chairman** of the Valenciaport Foundation Board has been **Mr. Rafael Aznar Garrigues**.

1.3.2. HUMAN RESOURCES

Valenciaport Foundation has a staff of 45 highly qualified professionals working in the different departments.

The Foundation also enjoys regular collaboration from researchers and interns from Valencian universities.





2

PROJECTS

2.1. INTRODUCTION

2013 and 2014 have been particularly important years for Valenciaport Foundation to consolidate its position as an international benchmark for applied research in the port and logistics sector. On one hand, major breakthroughs have been achieved in identifying the needs and providing solutions to the challenges facing the Valenciaport cluster, and involving a growing number of businesses and institutions from our immediate environment. On the other hand, the Foundation has spearheaded major innovation initiatives, which have enabled the Port of Valencia to position itself at the forefront of European port R&D&I.

From a thematic perspective, we continue to make headway in the traditional activities of the Foundation, but have incorporated new research programmes dealing with the latest trends to hit ports and logistics; so in addition to the logistics and inter-modality, security and protection, transport economy, information technology, and port management and planning programmes, we now also include new challenges that are of enormous interest to our particular sector, such as energy efficiency, the use of alternative fuel in shipping and ports, as well as cyber-security.

All these subjects are contained within the innovation and international cooperation programme and designed in collaboration with Valencia Port Authority, and is complementary to the huge effort being made at a European level. Along the same lines, we have made headway in consolidating the presence of the Foundation in European networks, by taking part in projects financed through different research programmes (primarily the 7th I Framework Programme, now called Horizon 2020), interregional cooperation (MED and INTERREG programmes), Infrastructures and transport networks (TEN-T, now Connecting Europe Facility), etc.

With the aim of highlighting certain of these initiative that are of particular importance to the future of our cluster, we could mention FUTUREMED, which focuses on the development of inter-modal rail and maritime transport, MONALISA 2.0, an initiative to create a European system to manage maritime shipping, MEDNET, for customs, GREENCRANES and SUSPORTS, aimed at improvement to the energy efficiency of container terminals, or B2MoS, that focuses on the creation of ICTs that will make Short Sea Shipping more efficient. Then there are the smaller projects that are nevertheless just



Part of Valenciaport Foundation's R&D&I team



as interesting for our cluster that deal with promoting the use of LNG GNL (COSTA, BUNKER-LOGIX), the environmental sustainability of port activities (CO-EFFICIENT, CLIMEPORT), security (SUPPORT, CONTAIN, CYSM) or technologies to facilitate tracking and process automation at port terminals (INTE- TRANSIT, MEDITA), to name but a few.

It is also worth highlighting the long-established, close collaboration with the Sub-Directorate General for R&D&I of the Spanish National Port Authority to provide support to the activities of the Inter-Port Authority R&D&I Commission, as well as the drafting of a R&D&I Plan for the Spanish Port System, an essential tool in the development of a well-structured policy to govern all initiatives within the state-run port system.

Outside Europe, cooperation with other countries has also had very positive results, transferring the accumulated expertise of the Port of Valencia from a number of different fields; for example, port planning, with the creation of the Port Master Plan for the port of Lambayeque (Peru), process automation (with the Latin America Division of Hutchinson Port Holdings), security and access control in collaboration with port customs in Montevideo (Uruguay), logistical planning (in Colombia and Uruguay) and the development of community information systems for Australian ports.

In addition, we have given a boost to a large number of our own projects, for the good of Valenciaport logistics community. All together, we have taken part in some 60 initiatives in collaboration with prestigious universities and research centres, institutions and businesses.

In summary, and in conclusion, we continue to make headway in what we consider to be our primary mission: consolidate our role as the main motor for R&D&I in the Valenciaport cluster. There has been some very close collaboration with collectives, some admittedly closer than others, but always striving to achieve our goal of not only attending to the needs that businesses and associations have expressed to us, but also to be proactive in our approach, putting forward new ideas and encouraging innovative projects.

The following pages provide an overview of the projects carried out in each of the different research programmes.

2.2. RESEARCH PROGRAMMES

2.2.1. Logistics & Intermodality

The logistics and intermodality programme further develops the field of expertise of Valenciaport Foundation, going far beyond the purely port-based activities, and providing it with an overall view of the logistic chains and infrastructures. This integrated perspective of the logistics system is essential when tackling the current situation (and the future one) in a global village where logistics becomes the primary element of competitiveness and where ports play a key role in the supply chains.

Container logistics, connecting ports to their hinterland, the integration of maritime and rail transport, logistic hubs and inter-modal logistics platforms or the integration and competitiveness of port and logistic clusters are just some of the fields that we have continued to work in, from both a strategic and planning perspective, and from an operational optimization and efficiency improvement perspective.

In the past two years, these areas of expertise have been implemented in a number of projects that have been used to provide support to both institutions with experience in the logistics and transport sector, and associations and businesses from the port and logistics community, who have entrusted their projects to the know-how and experience of the Valenciaport Foundation. The European and/or international scope of many of the projects have enabled us to have direct contact with other realities, share our experience and transfer best practices that help to improve the supply chains.

So over the course of this period, we have been involved with projects such as FUTUREMED, which is making headway in improving the accessibility of Mediterranean ports and the connections to their respective hinterland. Other milestones include the project that enabled the development of new solutions to improve the maritime-rail operations in the Valenciaport cluster, facilitating the integration of the

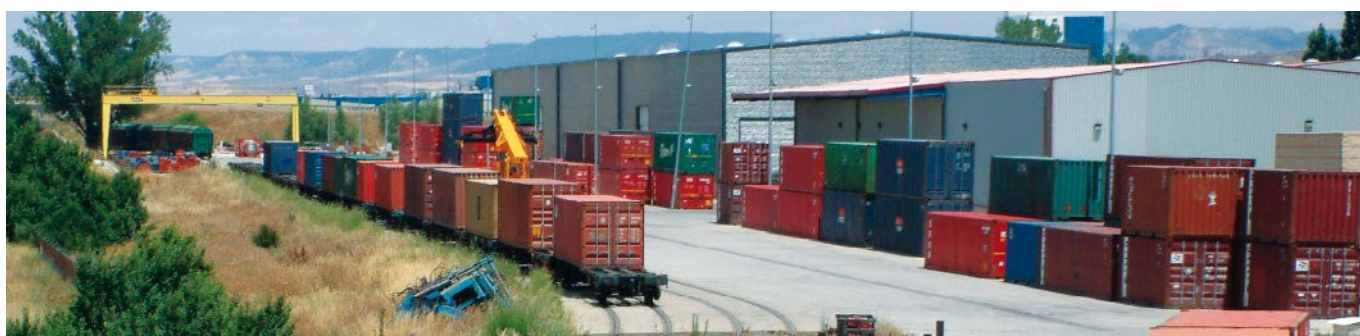
actors involved. The launch of new projects such means we can continue to work on the integration and maritime and rail transport, in this particular case providing the logistics and port cluster with an insight into the future of rail freight, as defined by the railway industry, and anticipating the future infra- and super-structural needs to be able to respond to the needs of the railway sector with a view to 2050.

Other projects such as MEDITA and STIMULO are helping to bring about operational improvements to intermodal logistic hubs through the implementation of new technologies such as RFID to assist with the management of roll-on-roll-off traffic, or prototyping of complex systems that are able to manipulate real-time information from a number of sources and integrate innovative systems such as machine vision, aimed at improving the planning and scheduling of road traffic at large logistic hubs. The study of an APPOINTMENT BOOKING system for container terminals and the PLECTRA project, are also aimed at improving traffic planning.

In this time, our involvement in the SMILE project has marked a milestone for the Valenciaport Foundation, extending its scope of work far beyond that of port-related logistics, collaborating in the development of Smart Cities with the design and implementation of innovative strategies, measures and solutions to improve urban logistics.

At an international level, Valenciaport Foundation has been involved with other interesting projects such as the drafting of a Strategic Intermodal Transport Infrastructure Plan for the Colombian government (PEIIT Colombia), as well as other cooperation initiatives that come under the heading Internationalization.

In short, the logistics and intermodality programme, in keeping with the rest of the Valenciaport Foundation areas of expertise aims to propel the port and logistics community to the forefront of know-how and consolidate Valencia's position as the logistics benchmark of the Mediterranean.



MEDITA – “MEDITERRANEAN INFORMATION TRAFFIC APPLICATION”

PROJECT PARTNERS:

Interporto Toscano Amerigo Vespucci S.p.A. (Italy) - (coordinator); Region of Tuscany (Italy); Port Authority of Livorno (Italy); CFLI - Intermodal Logistics Training Consortium (Italy); Interporto Marche S.p.A (Italy); University of Piraeus Research Center, Transportation Systems Group (Greece); Patras Port Authority S.A. (Greece); CTGC – Container Terminal and General Cargo (Montenegro)



TIME FRAME: February 2013 - June 2015

FUNDING BODY: Project co-financed by the European Commission through the MED Programme

MOTIVATION AND PROJECT OUTCOMES:

The MEDITA project aims to set up a network of port and dry ports to facilitate the easy and rapid movement of freight in the Mediterranean area using low-cost technologies such as passive UHF RFID tagging. The network was established within the framework of the MOS4MOS project by the Port of and the Interport of Toscano, being not only a “network of intent”, but also a procedural and technological network capable of becoming a Motorway of the Sea and as such able to overcome the territorial boundaries by using a single system with shared procedures.

RFID is a standard and consolidated technology that is very versatile and is increasingly being used for commercial purposes and in logistics. The MEDITA project evaluates its deployment in the demanding port environment for freight at roll-on-roll-off terminals. The pilot projects, within the framework of this project, will try to lay the foundations to improve the tracking of lorries, semi-trailers and manufactured vehicles.






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

Project cofinanced by the European Regional Development Fund (ERDF)

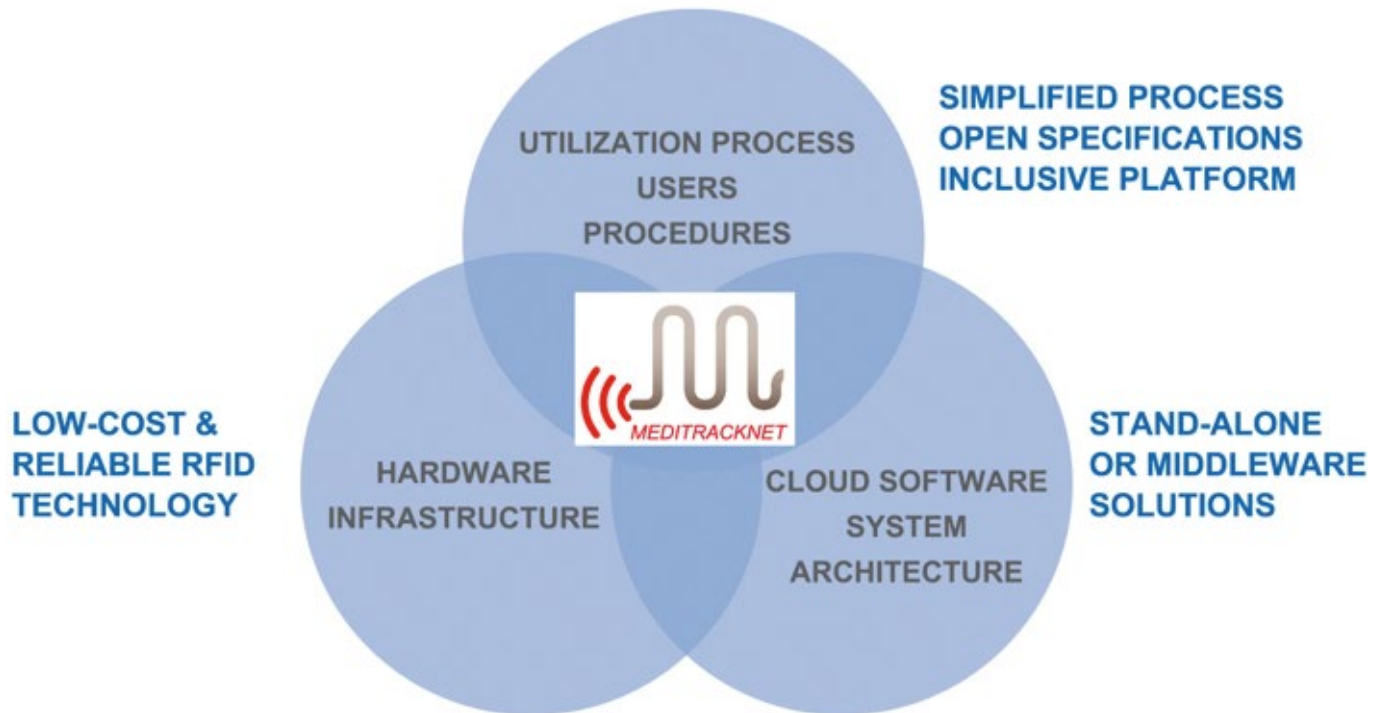
EUROPEAN RFID TRACKING SYSTEMS FOR RO-RO UNITS

- **Lorry and Trailer Tracking**
- **Route-Port-Dock-Ship Tracking**
- **Integration of Passive RFID and IT solutions in the Cloud**
- **Open and Scalable Architecture**









With the experience gained from the MEDITA project, it should be possible to analyse the origins and destination of freight, the type of freight and the quantities transported. The project will involve four European countries from the MED area: Italy, Spain, Greece and Montenegro.

MEDITA has captured the interest of different stakeholders involved in the transit of roll-on-roll-off freight, primarily ports, customs, terminals, shipping and transport companies, due to time and cost savings that could facilitate its deployment to traffic, a product that would require much simpler procedures and processes.

General and specific objectives of the project:

- 1) Reduce the waiting time required for check-in, something that currently causes long queues at the access gates to the ports;
- 2) Reduce pollution stemming from non-optimized routes and stationary vehicles;

- 3) Create a virtual network of specific infrastructures for the automated control for vehicles and vehicle identification along the route, with a special focus on freight that is susceptible to the protection of the marine environment;

- 4) Create ad hoc procedures to collect information for the basis of statistical information about the most popular routes according to a classification of the roll-on-roll-off freight;

- 5) Implement a single platform to share information between MED.ITA stakeholders and interested parties.

For the project to meet its objectives, it will continue with the initiative started at the Port of Livorno and the Interport of Toscana, to create an information system for roll-on roll-off freight brokers who, through the use of low-cost technologies, will enable them to speed up the access control procedures and data capture from the freight. The selected tracking technologies will be twofold: on one hand in the use of a passive UHF RFID system on land (ports and terminals) and on the other hand, a Web Platform (Meditracknet Central System) for the exchange of information between members of the MEDITA project.

MEDITRACKNET – Hardware requerido



Antena Fija para entrada/salida Puerta



Antena Móvil



Lector / escritor RFID pasivo



Eseal RFID pasivo (Remolques)

**Pegatina RFID pasivo
(camiones y vehículos)**

In the Central System, the exchange of data between different operators ensures the storage of all events of the series that are produced in real time and will include a particular process that is able to analyse this data and print out its own reports, with the aim of helping operators to improve their activities by using this system.

Some of the expected outcomes are as follows:

- Optimization of logistic procedures and an increase in levels of safety in the transport of roll-on-roll-off freight by applying the low cost RFID technology.
- Promoting intermodality, reducing the access time, generally between 3 minutes and 30 minutes, depending on the individual port and the level of congestion.

- Improvement to tracking management, both of new vehicles and of roll-on-roll-off freight, facilitating an unmanned and automated control of the platform locations.
- A reduction in CO₂ emissions by reducing the length of the queues when accessing the port and any adjoining roadways, as well as the transit time of trips.
- Infrastructure planning: public administrations are often required to acquire data to be able to plan their infrastructures; the collection of data is frequently carried out using special surveys. MED.I.T.A. is able to provide interested and qualified subjects with all aggregated and non-aggregated data.

- Security: the marine environment is a secondary beneficiary of the project, but a no less important one. Know-how in freight transported by ship is a useful tool when it comes to preventing accidents, making it easier to detect the causes of dangerous situations or ones that might damage the environment.

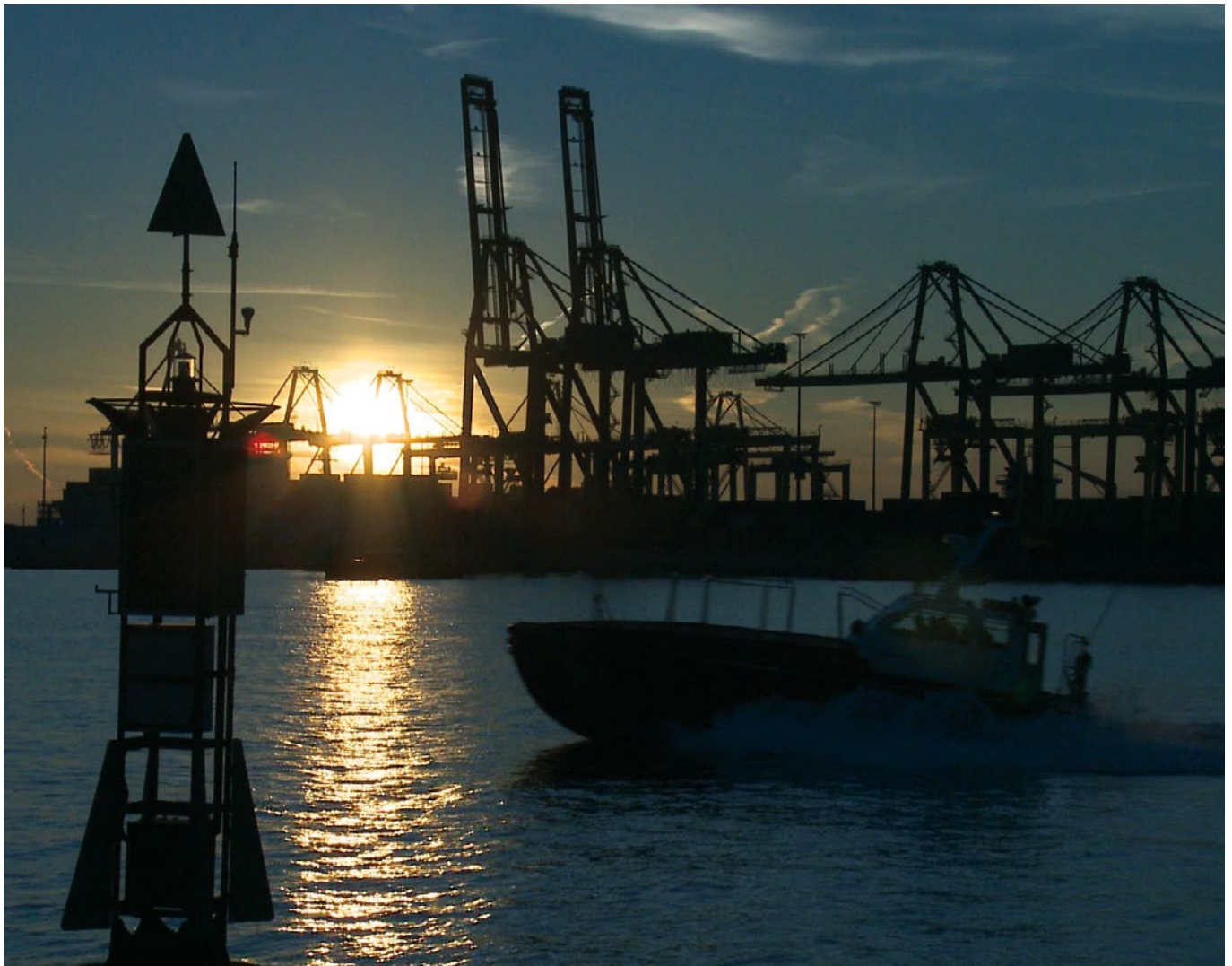
To launch the project, a number of Pilots had to be developed in the different ports taking part in the project. Specifically, in the Port of Valencia, the solution designed will initially be tested at the roll-on-roll-off terminal of the Europa Terminal, later being deployed in the second stage of the project to the south access of the port.

The pilot project in Valencia includes the design of new experimental units that will be used in different locations of roll-on-roll-off terminal of the

Europa Terminal. This is the case of the mobile unit used to identify new vehicles that load and unload from the boat ramp as well as a reading unit installed on board one of the terminal tractors that will collect information for the semi-trailers when loading and unloading. It also includes regulating the access gates to the terminal using barriers or access control; installing a stationary reader for RFID labels on doors and the creation of an access point for the Internet Platform.

The MEDITA project can potentially achieve some major results, and a key factor for carrying forward these activities is the atmosphere of collaboration between the project partners and the support of the interest groups who are guiding and will be putting the MEDITA project through its paces.

WEB: www.meditaproject.eu



STIMULO

PROJECT PARTNERS:

Prodevelop, S.L. (coordinator); CBT Comunicación Multimedia, S.L.; Answaretech, S.L.; Innovalia Association; Alcala University; Valencia Polytechnic University



TIME FRAME: December 2012 - February 2015

FUNDING BODY: INNPACTO – Innovation Plan 2012 – Spanish Ministry of Economy and Competitiveness

MOTIVATION AND PROJECT OUTCOMES:

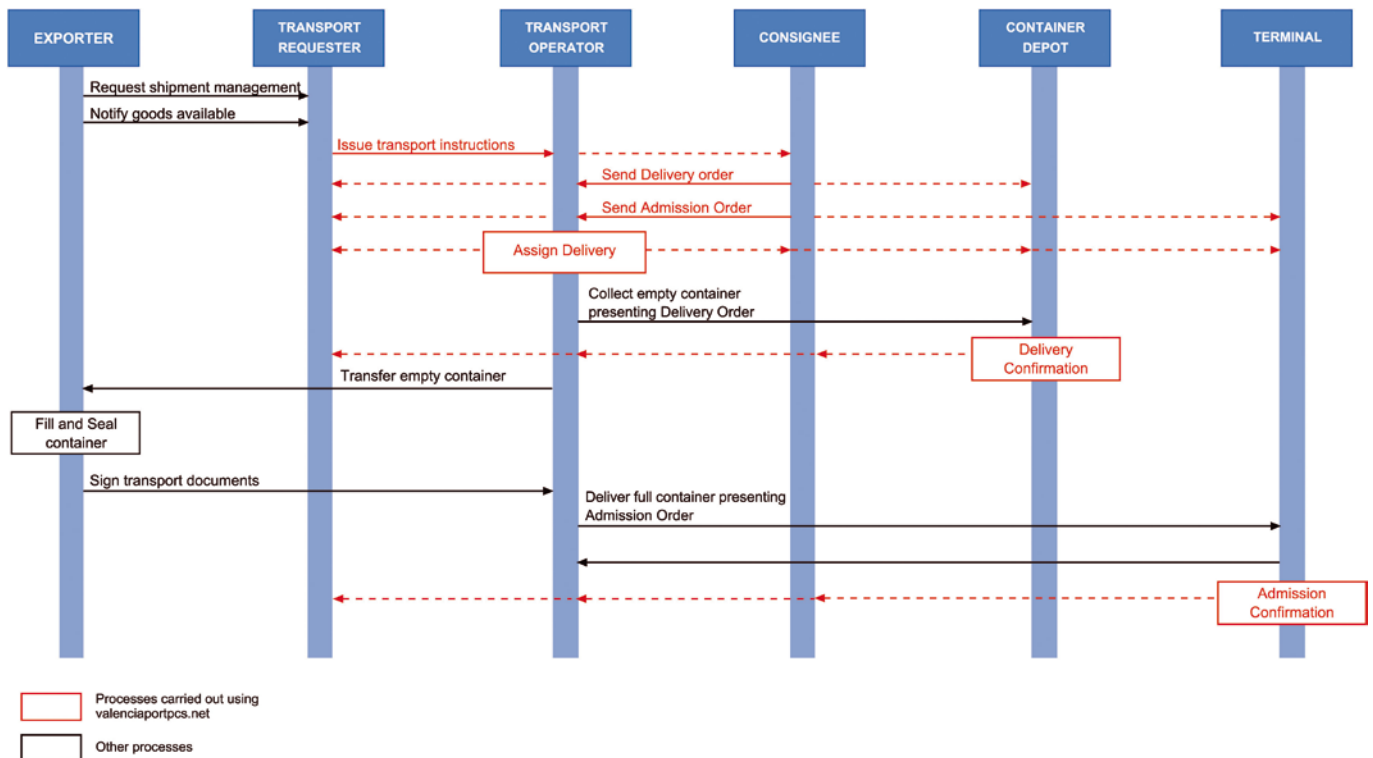
Transport systems play a major role in present-day society, and have a considerable influence on a variety of aspects such as energy consumption, pollution, social welfare, security, industrial productivity and economic prosperity. Transport systems positively contribute to welfare, ensuring the easy and effective movement of people and merchandise. Nevertheless, the continued growth of demand for transport stemming from new life models, the concentration of economic activity at large urban hubs, globalization, delocalization and new productivity models make the negative effects or external costs of transport (congestion, noise, accidents, pollution from exhausts, etc.) continue to rise.

Faced with this scenario, ITS (Intelligent Transport Systems) aim to bring about the integration of information and communication technologies with current transport infrastructures, with an eye to reducing congestion, improving safety, reducing CO₂ emissions etc. Specifically, for some time now, there has been growing interest in cooperative strategies based on vehicle to vehicle and vehicle to infrastructure communications, and in data collection followed by subsequent fusion of data from heterogeneous sensors. Nevertheless, we still need to carry out more in-depth research to identify the most suitable technologies that will ensure the success of these initiatives in such a way that it guarantees it being well received and accepted in society: easy to use, workability and limited infrastructure requisites.

The main objective of the STIMULO project is to develop highly efficient transport systems through a combination of simulation models and the provision of real-time information from different information sources, sensors and both stationary and mobile equipment (road and city traffic services, mobile devices in vehicles, weather conditions, video cameras with images of current traffic conditions, etc.) as well as access to historical data.

The main elements of the infrastructure proposed in the STIMULO project are: the simulation model, real time data mining of data from heterogeneous sensors, generating traffic indicators and using these indicators together with collective intelligence techniques to be able to provide the transport system with associated services that provide the system with improved efficiency and performance. Below is a details list of the specific objectives:

1. Design and develop a transport-system simulation model that incorporates all the necessary aspects to be able to implement the proposed decision-making mechanisms and services.
2. Design and create a distributed data mining and acquisitions system that allows one to add information from the different elements of the transport system (infrastructure, vehicles, users...) in real time, paying careful attention to the extracting information from images captured by cameras in the infrastructure.
3. Conceptualize and assess innovative services aimed at achieving a greater efficiency and sustainability in transport systems, such as preparatory re-routing of vehicles or distributed management between fleets.
4. Design and create new services for the proposed intelligent transport infrastructure.
5. Develop a demonstration serving to validate the infrastructure and services being proposed and facilitate its subsequent use by third parties.



Sequence Diagram: Export Flow

Methodology and results::

The STIMULO project was carried out at different stages and these are described below.

The first task was to identify the cases of uses to test the efficiency of the technology developed, analysing the flow of goods in the Port of Valencia, specifically the part of the flow carried out on land (road transport). The cases of use are as follows:

- Importing container goods
- Exporting container goods

The primary contribution of the STIMULO project to cases of importing and exporting container goods are:

- The **“Notification of arrival schedule of lorries to the Port of Valencia”** which could be a very specific use case. The main objective is that both the Port Authority of Valencia (and other organizations that might have an interest, such as Customs) and the container terminals have prior information available about the expected arrival of lorries to the port and to the gates of the terminals, based on the results of a real-time traffic simulation.

- The potential **“Dynamic management of a future Appointment system”**.
- Support of the **“Management of ground transport”** by suggesting and updating routes based on real-time traffic information and incidents from a number of different sources.

In addition to the use cases, the system requirements (software and user) have also been identified and analysed, as well as any functional requisites (system actions and performance).

To obtain the detailed requisites, analysis was carried out on each of the specified actions for each use case, taking into interaction from the following actors:

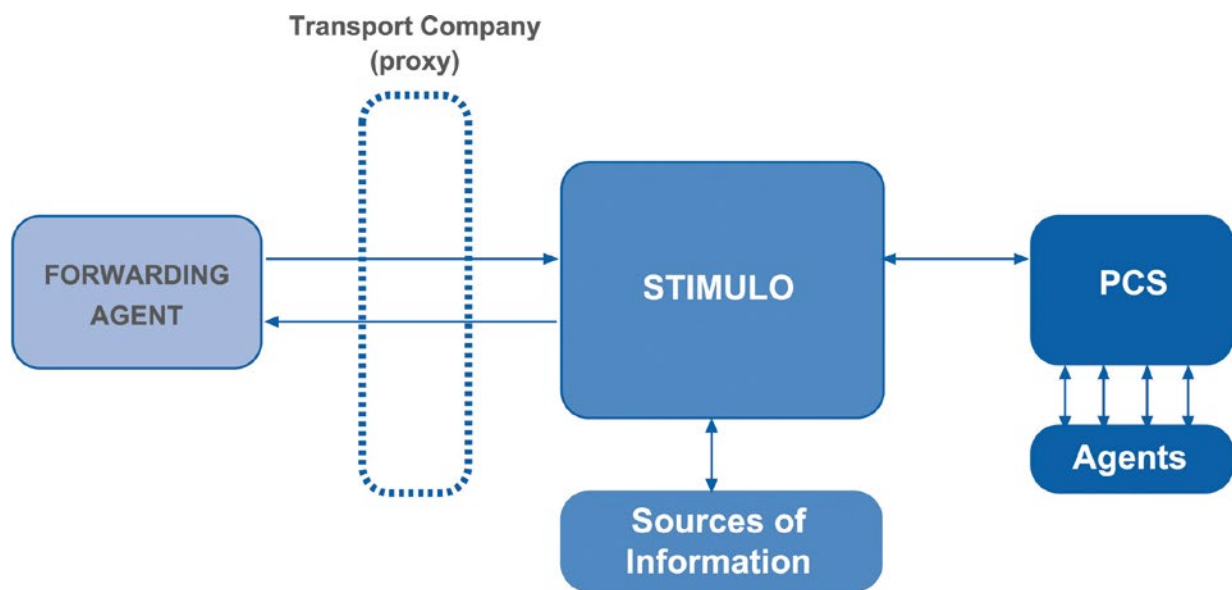
1. Machine Vision (MV) System
2. Communications network
3. Data acquisition system (DAS). The Camera Acquisition System is a subsystem of DAS.

PROJECTS

4. Data model
5. Data processing system
6. Traffic model and simulation
7. Transporter (TR): interacts with the STIMULO platform via an application (or a set of apps) through their mobile device. It is a toolkit that provides different functionalities for the transporter, such as access, ETA, alternative routes, etc.

8. STIMULO system: encompassing different sub-systems

The following is an analysis of the system and the design of the architecture that can be used within the framework of this project, taking into account that the STIMULO system should be able to generate notifications of the arrival of lorries to the port of Valencia.



High-level view of the system architecture of STIMULO

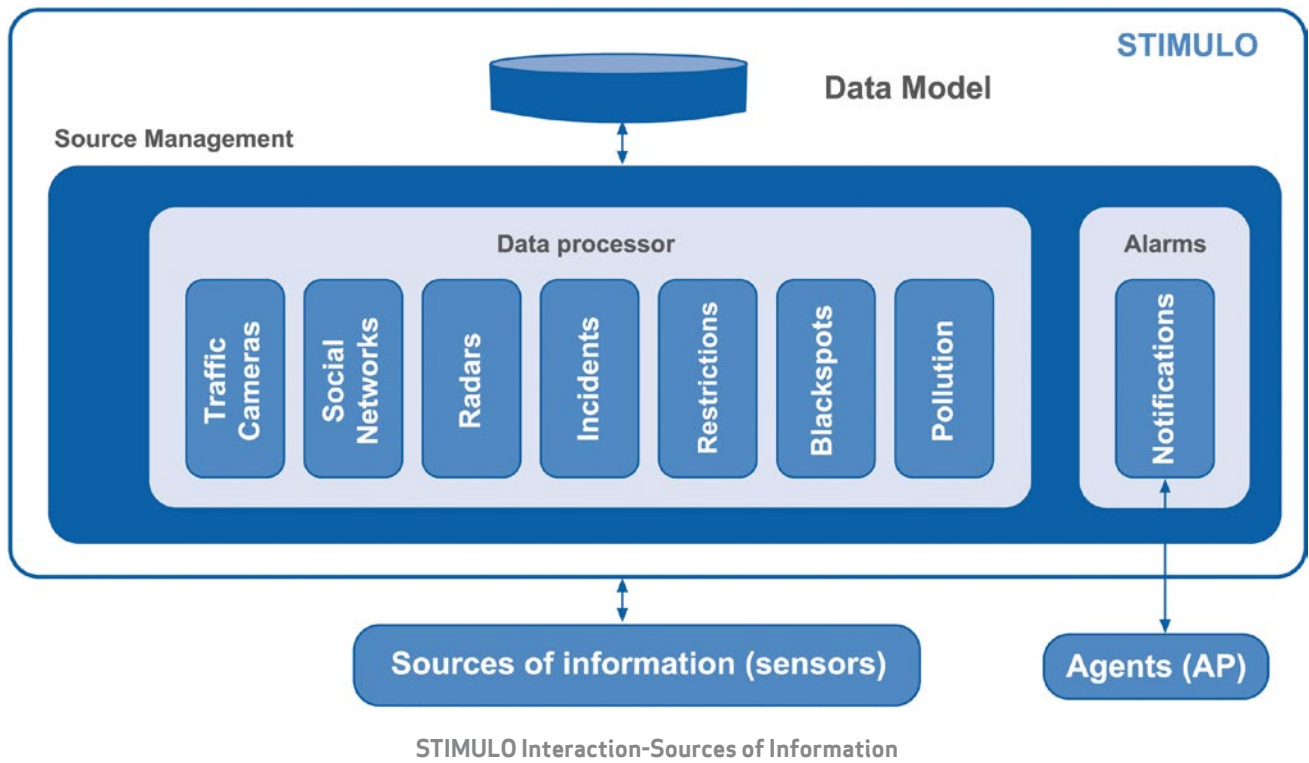
The main blocks of the system are as follows:

- **STIMULO:** The nucleus of the system, providing intelligence and interacting with the rest of the modules and agents involved in the service.
- **PCS (Port Community System):** System currently in use at the Port of Valencia. The PCS primarily interacts with the main block (STIMULO) to request an arrival schedule for one or more vehicles for one or a number of transfer orders (TO) respectively.
- **Agents:** represent all agents who currently interact with the PCS. Although this interaction is already operational, it is interesting to consider that some of the messages (interactions) of the agents might generate an event for STIMULO.
- **Sources of information:** Represent all external sensors able to provide relevant information to estimate traffic on a stretch of road or a whole

route. Some examples are the traffic cameras belonging to Valencia City Hall, the Spanish Directorate-General of Traffic (DGT) and the Regional Government of Valencia and that of Catalonia. Other examples might be traffic information web pages of the DGT or social media networks etc.

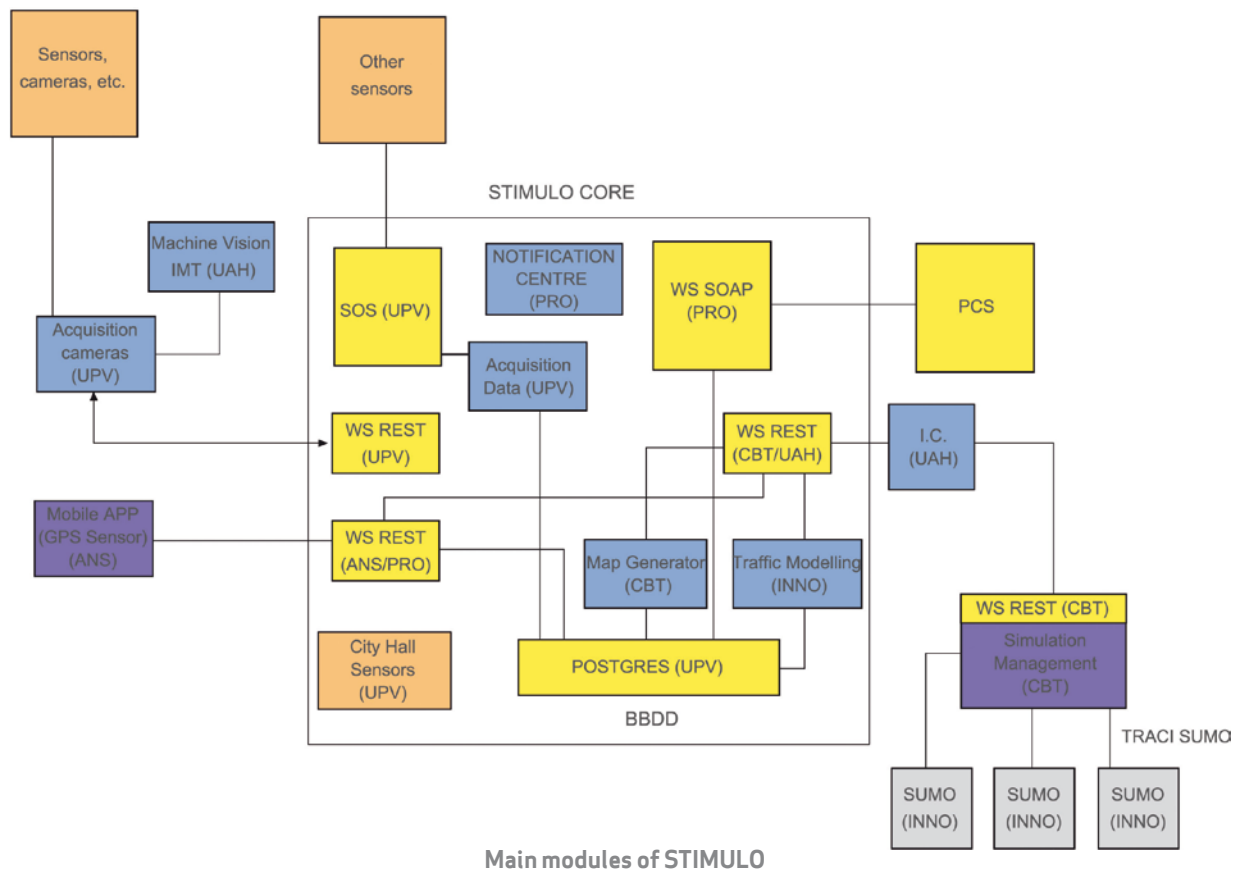
- **Transporter (TR):** Represents the remote, mobile element that interacts with STIMULO to indicate its position and obtain route plans. The transporter collective is basically divided into two groups: transport companies and independent fleet management systems.

With regard to the design of the architecture, there is a description of the interaction of each one of the main blocks with the STIMULO nucleus for the identified uses. The following illustration shows interaction between the STIMULO nucleus and the Source of Information block.



After the high-level identification of the blocks comprising the STIMULO system and the definition of the way in which each one interacts with the STIMULO nucleus, there is a

detailed composition of each of the blocks that provides a more complex vision as each block is composed of a group of blocks or modules.



PROJECTS

In the earlier illustration, all the aforementioned modules are represented. As can be seen, it is basically an SOA (Service Oriented Architecture). Furthermore, it is a distributed architecture in such a way that the blocks are executed in physically different facilities.

It can be seen that the central part, Core, groups together a series of basic services:

- Map Generator: Module for generating a map to proceed to simulation, including nodes and road section. It also generates the routes of the different lorries that it wants to simulate. The map is generated from the information contained on the DB.
- Traffic modelling: Module for generating background traffic from information contained on the DB.
- Sensor Observation Service: Service that provides a uniform way to integrate third-party sensors using communication standards (SensorML and O&M).
- Data acquisition: Metadata block for getting data from different sources:
 - SOS: Module for getting data from third-party sensors and introducing them into the DB.
 - City Hall Sensors: Module for getting ATI (Average Traffic Intensity) scores from certain stretches of road for map generation and facilitated by Valencia City Hall. The scores are written to the DB.
 - Other Sensors: Module or other library for each of the identified sources of information (e.g. radars, blackspot etc.).
- Notification Centre: System that records the events (alarms) produced by the system. In other words, the different system modules are able to generate events that are sent to the Notification Centre. Furthermore, these events are forwarded to the other modules involved. The communication mechanism could be via publication-subscription or any other that is adapted to the requisites.

In addition to the basic services, the system is also equipped with a DB that houses the system data model. This DB stores all data from the data acquisition module (e.g. the ATI scores for stretches of road that appear on the map). The DB must have Geospatial functionalities (e.g. PostGRESQL + POSTGIS).

External to the nucleus (CORE) of STIMULO are the following external modules, described below:

- Specialised module for camera acquisition for getting pictures from traffic cameras and send them to the MV module. This module processes the image and extracts a series of conclusions, typically the ATI score for the stretch of road being monitored. This score is introduced into the SOS, and it perceives the information as a whole <camera, acquisition, VA> as a single sensor.
- Collective Intelligence (CI) Module for calculations and predicted ETA of one or more lorries, setting up optimum route plans for each one.
- Simulation Manager, an external module that enables the system to manage multiple SUMO (Open Source 'Simulation of Urban MObility') simulations, with a high level API (Application Programming Interface) to the CI module.
- Mobile Application, an external module that interacts with the transporter, providing them with an Interface to access the STIMULO services (ETA, route plans).
- PCS (Valenciaportpcs.net), is a module that does not belong to STIMULO, although it is an external module that interacts with the system for arrival scheduling to facilitate Transfer Orders.

The detailed definition of each module is followed by a formal description that clearly defines the functionality of each one as well as how they interface with other modules, which has facilitated the development and the subsequent integration into the STIMULO system.

All the modules developed have been independently tested giving positive results.

The final part of the project after development of each of the aforementioned modules is the subsequent integration as part of the STIMULO system.

To evaluate the system, a real demo was performed which enabled us to test each of the individual components integrated into the system.

The demo script comprised the following steps:

- The STIMULO system carried out a daily import of the transfer orders available from ValenciaportPCS.net
- The transporter logs into the STIMULO system using a mobile app, indicating all necessary information to identify the transfer order they are to be associated with.
- The mobile application requests a route to follow based on its initial GPS location and the data contained on the transfer order.
- The mobile app sends periodic GPS updates to the server.
- Where necessary, the mobile app sends any events (traffic jams, accidents etc.) to the server
- The CI module monitors the active lorry routes and assesses if the ETA can be guaranteed within a certain margin.
- The CI module can calculate a better route, if possible, and sends it to the mobile app.
- There is also a congestion detection service for roads associated with the traffic analysis results by the cameras monitored by the system.

SMILE - SMART GREEN INNOVATIVE URBAN LOGISTICS FOR ENERGY EFFICIENT MEDITERRANEAN CITIES

PROJECT PARTNERS:

Piraeus City Hall, CERTH-HIT, InnDEA, ITL, Barcelona City Hall, CENIT, AFT, Montpellier City Hall, Regional Energy Agency - Kravner, Rijeka City Hall

TIME FRAME: November 2012 - April 2015

FUNDING BODY: Project co-financed by the European Commission through the MED programme



MOTIVATION AND PROJECT OUTCOMES:

Currently, 53% of the world's population is located in or near urban areas and this figure is expected to reach 66% by 2050. The concentration of economic and commercial activities in cities together with the new tendencies such as the growth of e-commerce, have led to a growing need for transport in urban areas. If we consider that the transport sector is responsible for 20% of European CO₂ emissions, it is obvious that cities must look for innovative solutions to their urban freight distribution needs, developing and deploying new, more efficient and sustainable transport models that reduce energy consumption, emissions as well as noise and traffic congestion.

Consequently, the SMILE project aims to improve the energy efficiency of Mediterranean cities by developing and implementing innovative strategies, plans and measures together with intelligent and sustainable solutions that help to facilitate mobility.

SMILE is a project co-funded by the European Commission's MED Programme that includes six Mediterranean cities: Pireo, Bologna, Montpellier, Rijeka, Barcelona and Valencia.

OBJECTIVES:

The overall objective of the SMILE Project is to assist with the development of intelligent and energy efficient Mediterranean cities by testing intelligent, urban-logistic solutions. The main goals of the project are as follows:

- Provide support to public institutions in the creation of strategic policies and energy efficient city logistic plans.

PROJECTS

- Raise awareness about the impact that urban logistics can have on a city's energy efficiency.
- Raise level of knowledge of energy efficient urban logistic solutions.
- Reduce energy consumption of the logistics and transport sector.
- Reduce the emissions of green-house gases produced by transport.
- Minimize congestion and other disruptions caused by urban freight distribution.

RESULTS:

The SMILE Project outcomes can be divided into three categories:

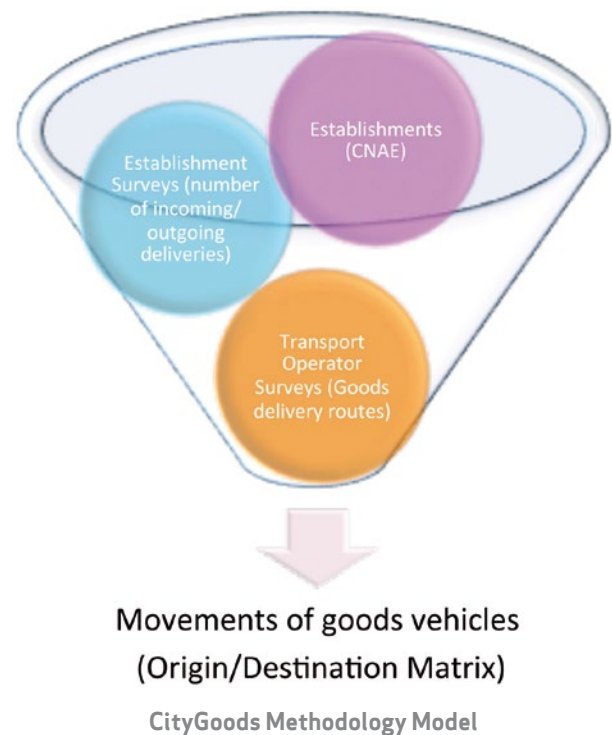
1. Analysis of the current situation of urban freight logistics:

A simulation tool will be used to carry out a transport needs analysis of each of the cities taking part in the project. The tool chosen for the analysis is the City Goods Model, a transport model developed by the Emilia within the framework of the CityPorts project to provide support to public administrations in the design and assessment of urban logistic activities, such as infrastructure planning, policy-making and drafting regulations. This tool enables an analysis of the different transport chains and their impact on the city.

The methodology this tool adheres to is as follows:

1. Firstly, characterize the demand using the CNAE classification. The model is then calibrated using real data collected from interviews about the needs of commercial businesses and the transport routes for each of the transport chains being studied.
2. Depending on the economic activities within the area being studied, the model quantifies the movement of freight vehicles, classifying them according to the transport chain and estimating the origin-destination matrix.
3. The model simulates the interaction between the freight distribution and the transport systems in terms of:

- a. Interaction with other mobility elements.
- b. Congestion.
- c. Impact.
- d. Indicators (cost and time).



The results enable both a qualitative and quantitative evaluation of city logistic policies in terms of access control, traffic flow as well as freight load and unload zones. The model then enables:

- Describe the performance of logistic activities for a specific area of the city.
- Define both qualitative and quantitative indicators used to evaluate urban logistics.
- Evaluate and plan urban logistic policies.

2. Policies and Best Practices

Moreover, the project led to the compilation of best urban freight distribution practices to have been implemented in European cities

A study was also carried out on the existing plans, measures and policies in each of the cities participating in the project in order to detect potential improvements to urban logistics.

Based on this information, an urban freight distribution strategy was formulated for cities within the scope of the SMILE Project, highlighting any actions that need to be carried out to be able to successfully implement new policies to improve the energy efficiency in any freight distribution operations.

3. Pilot Activities

Finally, the aforementioned research activities and initiatives are supported by the implementation of eleven demo pilots from four different fields:

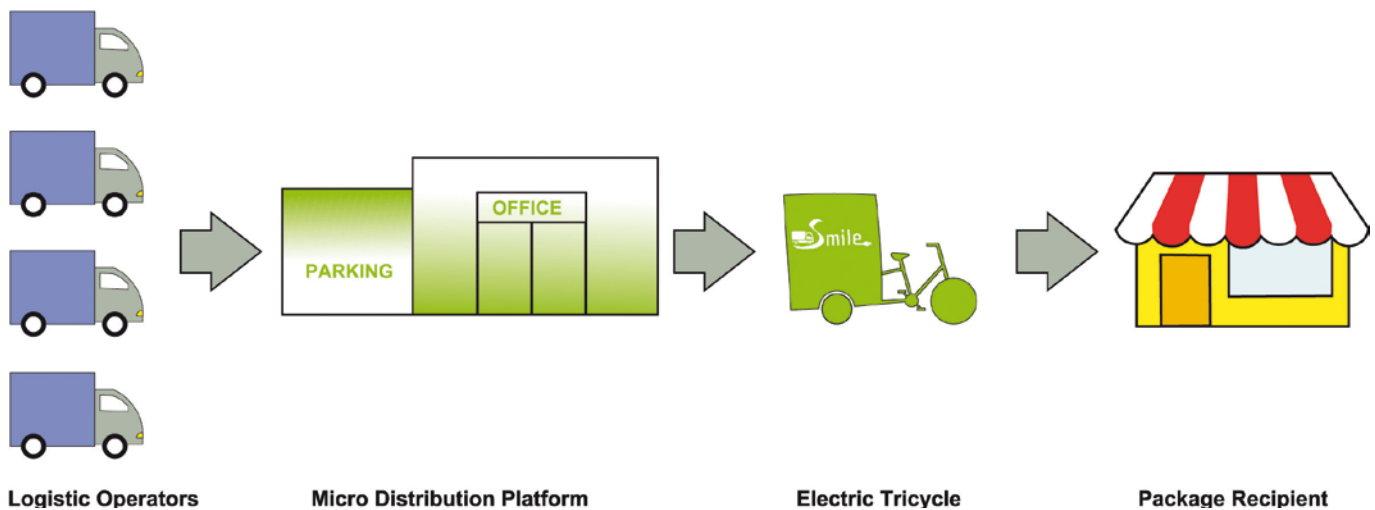
- Innovative technologies: electrical mobility.
- Information tools: ICT solution for urban logistics.
- Operational tools: optimization of urban refuse collection.

- Marketing tools: recognition systems for operators who are environmentally responsible.

With these pilots, the cities taking part in SMILE will be able to assess the soundness of these initiatives as well as share experiences and knowledge gained.

In Valencia in particular, in October 2014, an electric mobility initiative was launched on last-mile package delivery, using electrically assisted tricycles and with the support of a micro distribution platform. This pilot will be operational until January 2015.

The primary objective of this pilot demo is to promote the use of solutions that improve energy efficiency in the distribution of goods in the city centre.



Electric mobility Pilot Scheme in Valencia

This new last-mile distribution model has been tested in the historic centre of Valencia, given that in this zone, urban freight distribution is the most complicated link of the transport chain due to the complexity of delivery of the streets, restrictions along pedestrian streets and the saturation of loading and unloading zones. Given this situation, the tricycles provide a quick and flexible alternative compared to traditional delivery vans, and it

also complies with the environmental norms, by lowering pollutant emission levels and noise pollution.

The pilot has therefore focused on the 46001, 46002 and 46003 postcodes. Furthermore, the pilot has the support of a micro distribution platform where the goods are exchanged. The logistic operators deliver the packets first thing in the morning, at the drop-off point, at

PROJECTS

Vanapedal, the last-mile management company in charge of the transfer to the tricycle, used for the delivery to the final destination. The logistics operators taking part in the pilot project, ASM, DHL, Seur and TNT, are testing this service using shared tricycles.

The micro-platform is located in the parking area of the Norte train station thanks to the collaboration of ADIF and SABA (the concessionary of the parking lot). Located at the edge of the access ring to the historic centre of the city of Valencia, the micro-platform manages to reduce the entry of goods delivery vehicles to the centre of the city, reducing traffic in said area as well as lessening the adverse environmental affects.



Electric mobility in Valence pilot diagram

The two tricycles used for the pilot scheme have the following characteristics:

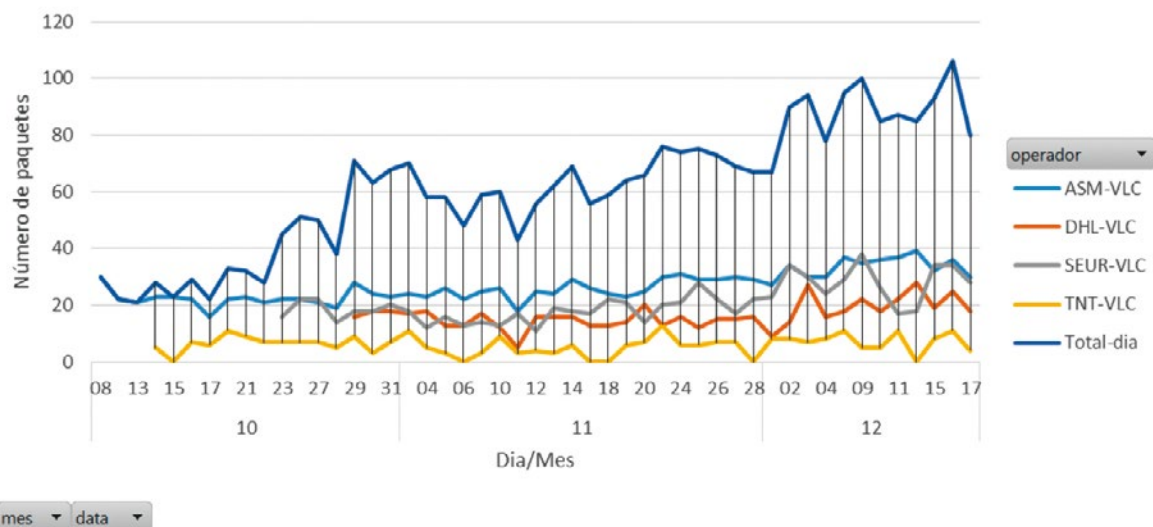
- Dimensions: 2.78m long, 1.95m high and 1.03m wide
- Total weight (unladen): 110kg and a maximum load of 280kg although the average load is 180 kg comprising some 40 packets
- Goods are transported in a closed rear box measuring 1,5m³
- Estimated CO₂ savings: up to 2 tonnes a year.



During the first three months of the pilot, 2,976 packets were delivered using this new delivery model, with an increase in the volume of packets as the pilot continued:

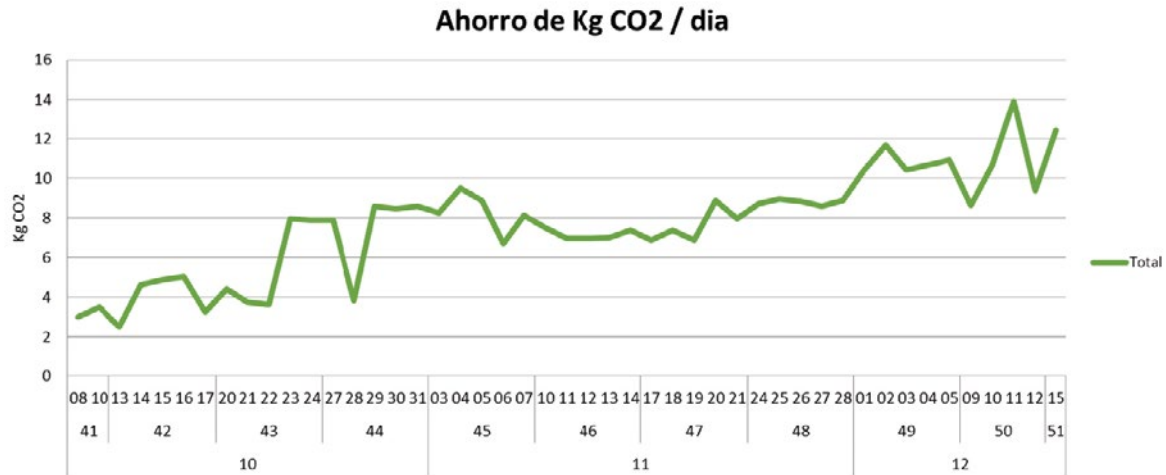
Suma de expediciones

Evolución número de entregas



The use of these two electric tricycles managed to decrease the emission of greenhouse gases into the

atmosphere, saving approximately 8 Kg de CO₂ a day equivalent to 2 tonnes a year:



The pilot is expected to encourage a new approach to the organization of last-mile freight distribution in urban areas, providing the following benefits:

- Reduce logistics-related energy consumption and freight transport in urban areas.
- Minimize congestion and traffic in the centre of the city.
- Reduce traffic in the centre of the city of Valencia.
- Reduce greenhouse gas (GHG) emissions as well as CO₂ emissions.
- Reduce the noise associated with traffic from delivery vehicles.

- Improve the quality of life of the citizens of the city of Valencia.
- Promote the use of new more sustainable solutions for the transport of urban freight.

The “SMILE” project was selected to represent Spain for its best practices entitled “Sustainable Life in the Cities” as part of the European Business Campaign 2013-2015 - Enterprise 2020 of the CSR Europe Network, a prestigious, internationally experienced leadership platform in responsible business management.

WEB: www.smile-urbanlogistics.eu



BOOST INTERMODALITY IN THE PORT OF VALENCIA: DEVELOPING RAILWAYS, SSS AND LOGISTICS PLATFORMS

OBJECTIVE: The main objective of the project is to provide support to the Valenciaport cluster, to increase specialized know-how and the development of inter-modal transport and improve maritime-railway integration, primarily by taking an active role in different research projects. The configuration of efficient inter-modal connections between the ports and the hinterland is one of the keys to achieving competitive door-to-door services that are able to attract cargo and strengthen the positioning of the cluster. This interest in developing inter-modal transport in connections between ports and the hinterland has been bolstered at a national level by policies such as the Plan to Promote Railways, and by European transport policies, both of which insist on improvements to the integration between modes of transport and the strengthening of the railways, inland waterways and short sea shipping as one of the ways to achieve a more sustainable transport system and significantly reduce the emission of contaminating gases as well as greenhouse emissions.

TIME FRAME: January 2010 - December 2015

FUNDING BODY: Port Authority of Valencia

CAPACITY4RAIL - INCREASING CAPACITY FOR RAIL NETWORKS THROUGH ENHANCED INFRASTRUCTURE AND OPTIMIZED OPERATIONS

PROJECT PARTNERS:

Union Internationale des Chemins de Fer (coordinator); Arttic; Trafikverket; Systra SA; Deutsche Bahn AG; Network Rail Infrastructure LTD; Administrador de Infraestructuras



Ferrovias; Spanish Railways Foundation; Instytut Kolejnictwa IK; VAE GMBH; Acciona Infraestructuras S.A.; Instituto Superior Técnico; Università Degli Studi Di Roma La Sapienza; Ansaldo Sts S.P.A.; Union Des Industries Ferroviaires Europeennes; University of Newcastle Upon Tyne; Ingeniería y Economía del Transporte S.A.; Centro de Estudios Materiales y Control de Obras S.A.; Newopera AISBL; Oltis Group AS; Kungliga Tekniska Högskolan; Chalmers Tekniska Högskola AB; The University of Birmingham; TRL Limited; Vossloh Fastening Systems GMBH; The University of Huddersfield; Technische Universität Dresden; Uppsala Universitet; Türkiye Cumhuriyeti Devlet

Demir Yolları İletmesi Genel Müdürlüğü; Rede Ferroviaria Nacional; Universidade do Porto; Kockums Industrier AB; Van Dieren Sweden AB; Centro de Estudios y Experimentación de Obras Públicas; Société Nationale des Chemins de Fer Français; Adevice Solutions; Linköpings Universitet; European Federation of Railway Trackwork Contractors; Vossloh Cogifer SA; Cargosped Spółka z Ograniczoną Odpowiedzialnością; University of Sheffield; Comsa SAU; Société de Transports de Véhicules Automobiles SA; Knorr-Bremse Systeme für Schienenfahrzeuge GmbH; Réseau Ferré de France; Institut Français des Sciences et Technologies des Transports, de l'Aménagement et des Réseaux

OBJECTIVE: The basic objective of the project is to define a vision for the European railways sector in 2050, identifying the primary changes expected in the design, construction, maintenance and management of shunting operations and the transfer of cargo at the terminals. Capacity4Rail wants to help to increase the capacity, availability and performance of the railways system by identifying the necessary changes in: the design of the infrastructure, the construction and maintenance, operational management, incident management with real-time information, freight operations with a particular focus on freight transfer.

TIME FRAME: October 2013 - September 2017

FUNDING BODY: Project co-funded by the European Commission through the 7th Framework Programme

WEB: www.capacity4rail.eu

PLECTRA – ECO-EFFICIENT REAL-TIME INLAND PORT TRAFFIC PLANNING SYSTEM

PROJECT PARTNERS:

Infoport



OBJECTIVE: Valenciaport Foundation signed a collaboration agreement with Infoport to develop an Eco-Efficient Real-Time Inland Port Traffic Planning System within the framework of the PLECTRA project. The system is expected to serve a two-fold purpose. On one hand, to reduce the operational costs of the inland freight transport companies stemming from the provision of services associated with shipping, and on the other hand, to minimize the environmental impact of said activities.

TIME FRAME: January – December 2013

FUNDING BODY: IMPIVA (Valenciaport Foundation contracted by Infoport)

FREIGHT AND PASSENGER SUPPORTING INFOMOBILITY SYSTEMS FOR A SUSTAINABLE IMPROVEMENT OF THE COMPETITIVENESS OF PORT-HINTERLAND SYSTEMS OF THE MED AREA

PROJECT PARTNERS:

Lazio Region; Port Authority of Civitavecchia; Autonomous Region of Friuli Venezia Giulia - Central Directorate for Infrastructure, Mobility, Spatial Planning and Public Works; Institute for Transport and Logistics Foundation; Port Authority of North Sardinia; Hellenic Ministry of Infrastructure, Transport and Networks; Centre for Research and Technology Hellas – CERTH; Thessaloniki Port Authority S.A.; TRAINOSE S.A.; Plaza S.A.; Zaragoza Logistics Center Foundation; AFT; University of Maribor; BSC, Business Support Centre, Ltd., Kranj - Regional Development Agency of Gorenjska; Cyprus Center for European and International Affairs (CCEIA); Cyprus Ports Authority.



OBJECTIVE: The overall objective of the Project is to improve the competitiveness of port systems in the MED area by improving accessibility and connections with their hinterlands through technology and procedural innovations that guarantee the sustainability of transport. The specific objectives are:

- The removal of access barriers to the ports, both on the foreland and on the hinterland side.
- Improve the integration of ports with the hinterland.
- The development of inter-modal rail transport to connect ports with their areas of influence.
- The development of interoperable information systems and solutions aimed at improving the efficiency of the port and logistic systems.

TIME FRAME: June 2012- May 2015

FUNDING BODY: Project co-funded by the European Commission through the MED Programme

WEB: www.futuremedproject.eu

TECHNICAL ANALYSIS OF THE IMPACT OF THE DEPLOYMENT OF A CONTAINER APPOINTMENT SYSTEM AND OTHER GROUND TRANSPORT FEATURES

OBJECTIVE: The overall goal of the analysis is to examine the feasibility, the main implications and the advantages and disadvantages stemming from the possible deployment of an “appointment” system for the reception and delivery of containers by lorry at the Port of Valencia’s container terminals.

Specifically, an analysis was carried out as to how the deployment of such an appointment system might affect the different stakeholders (ground transport companies, freight forwarders and shipping agents), and putting forward alternative recommendations to overcome the difficulties identified during analysis.

The analytical results are based on the field work carried out to gauge the opinions, assessments and impressions of the stakeholders.

The results of the study can also be used as a basis for defining the specification requirements of the new service that needs to be developed by the Port Community System (valenciaportpcs.net) to be able to provide support for the system.

TIME FRAME: October - December 2014

FUNDING BODY: Port Authority of Valencia



2.2.2. Intelligent Port Logistics

The Port of Valencia has been a pioneer in the development and use of information technology in its logistics chain with the deployment and overseeing of the valenciaportpcs.net Community Information System and encouraging collaboration with the Customs Department, in all matters referring to improvements to control systems in the port.

As a result of the economic globalization, information is currently at the very heart of the production and transport systems. All organizations feel the constant need to obtain, analyze and exchange data. In fact, the sheer volume and the complexity of information continue to grow in a world where trade tends to be global and new industries and new distribution networks continually appear. The new production and storage methods multiply the number of deliveries, and this requires reliability and consistency. Furthermore, with the advent of outsourcing and subcontracting, the transmission of information between all collaborating horizontal entities (suppliers, manufacturers, transporters) and vertical ones (subcontractors) has to be quick and efficient.

Nowadays, information systems are management and production tools that ensure flexibility, reduce costs and encourage swift communication; they are also useful tools for making strategic decisions. The rapid and reliable acquisition and exchange of data between the actors from the transport chain are key factors in the coordination of services, both in time and in place, ensuring better results and supplying the necessary information.

The European Commission has brought to light the importance of an intelligent port logistics, applying and combining e-Freight, e-Maritime and e-Customs initiatives. It aims to provide an opportunity to capture a new market of traffic that is currently transported using ground transport in Europe, and attracting them towards Motorways of the Sea.

Currently, the challenge is to finding new, efficient, cost-effective, safe and accessible solutions taking advantage of the growing connectivity between objects and people, and the availability of geo-positioning systems, cloud computing or big data and the spread of the Internet as a tool to resolve the inherent problems faced by transport. Over the past years, there have been a number of different

initiatives tending to create an intelligent port logistics where the Valenciaport Foundation has been actively involved and enjoys international renown.

So what is required is the development of new architectures and open systems to be able to share information, connect key actors, with these systems operating on the basis of trustworthy business agreements and with the pertinent authorities linked to transport and trade such as port and transport authorities, customs, health authorities, security corps, etc. These architectures require the information to have good quality, reliable and suitable content, and that it be shared and be made available in real time by the different actors involved.

Within the Spanish port system, the "Intelligent Port" is also one of the focuses of the Interport R&D&I Commission, which, in keeping with the detection and prioritizing of the R&D&I needs of the Port System, created three Work Groups for the 2014-2015 period, the first of which is of course, the "Intelligent Port", whose mission is to encourage technological progress, in order to ensure that ports are provided solutions, applying and using systems that facilitate improved security and competitiveness, of their users and clients, through the use of technology for acquiring, using and distributing information and to improve efficiency and the automation of different procedures related to port logistic operations.

During 2013 and 2014, progress was made in different lines of research that have greatly helped with the goals outlined in the earlier paragraphs. Among these are the following: single window facilities, port community systems, the electronic transmission of data, terminal operating systems, automatic identification systems, global positioning systems, fleet management systems and transit management systems.

With project such as INTE-TRANSIT, a great deal of work was carried out into the study and deployment of new tracking and geo-location systems that help to fulfil the demands for tracking of logistic operators or of transport-related companies. These new, experimental and innovative technologies provide detailed and high quality information for the port terminals at the Port of Valencia and encourage sustainable transport policies, such as inter-modal transport and short sea shipping.



Similarly, progress has been made with improvements to procedures and the automation of the electronic exchange of data between agents of the port logistics chain through initiatives such as E-MAR, FREIGHT4ALL and B2MOS, aimed at boosting the efficiency of the door-to-door supply chain through Motorways of the Sea, facilitating maritime commerce between regions of the European Community, and increasing territorial cohesion in Europe.

And last but not least, initiatives such as MEDNET have helped to simplify logistic procedures, facilitating exchanges between operators and customs administrations in different European port communities.

In addition to the development of R&D&I projects to make businesses within the cluster more efficient, the collaboration with other ports outside Europe has been intense, as can be seen in the internationalization section. For the past two years, the intelligent port model developed in Valenciaport has been a benchmark reference for port communities in Australia, Brazil and Uruguay, helping to promote the Port Authority and the companies that are part of the Valenciaport logistics community at an international level.

EMAR - E-MARITIME STRATEGIC FRAMEWORK AND SIMULATION BASED VALIDATION

PROJECT PARTNERS:

BMT Group Ltd (coordinator); Danaos Shipping Company; Ebos Technologies Ltd; Econsult Betriebsberatungsgesellschaft MBH; Det Norske Veritas As; European Community Shipowners Associations; Conseil Europeen de L'equipment Naval; ICAP Shipping Ltd; Inchcape Shipping Services Holdings Limited; Inlecom Systems Ltd; Interporto Bologna Spa; European Association for Forwarding, Transport; Logistics and Customs Service; Maritime Administration of Latvia Marlo AS; Market & Opinion Research International Limited; MJC2 Ltd; Nautical Enterprise Centre Ltd; Planung Transport Verkehr Ag; Portbase Bv; Shipperserv Ltd; Societe de Gestion de Terminaux Informatiques; Syddansk Universitet; University of Piraeus Research Centre; Vilniaus Gedimino Technikos Universitetas; Wartsila Oyj Abp; CLMS (UK) Limited; The Royal Ministry of Fisheries and Coastal Affairs – Fiskeri - Og Kystdepartementet



TIME FRAME: January 2012 – December 2014

FUNDING BODY: Project co-financed by the European Commission through the 7th Framework Programme

PROJECT JUSTIFICATION AND RESULTS:

The Internet and information technologies have revolutionized the way we work and interact in the past two decades. Maritime transport is no different and has undergone some major changes itself:

- Shipping companies have developed shared technological platforms to both sell and monitor their services over the Internet.
- Port clusters have developed port community systems with a variety of different services that provide support to both public and private actors in the efficient management of information exchange related to transport and international commerce.
- Customs authorities have developed their own platforms to electronically manage a large part of their control activities and the collection of taxes, etc.

These are just some of the examples of changes to have taken place, but nevertheless, we can still find very different situations and realities in different European maritime port clusters.

The European Commission is working to decrease these differences and to develop and deploy new information technologies in the maritime port sector. Consequently, some years ago it introduced the **e-maritime** concept which refers, in general terms, to the application of the latest information and communication technologies to develop a more efficient maritime transport system. The European Commission's e-maritime initiative therefore relates to the support for the development of skills, strategies and policies that facilitate the adoption of e-maritime solutions aimed at the development of an efficient maritime transport system that is fully integrated into the European transport system.

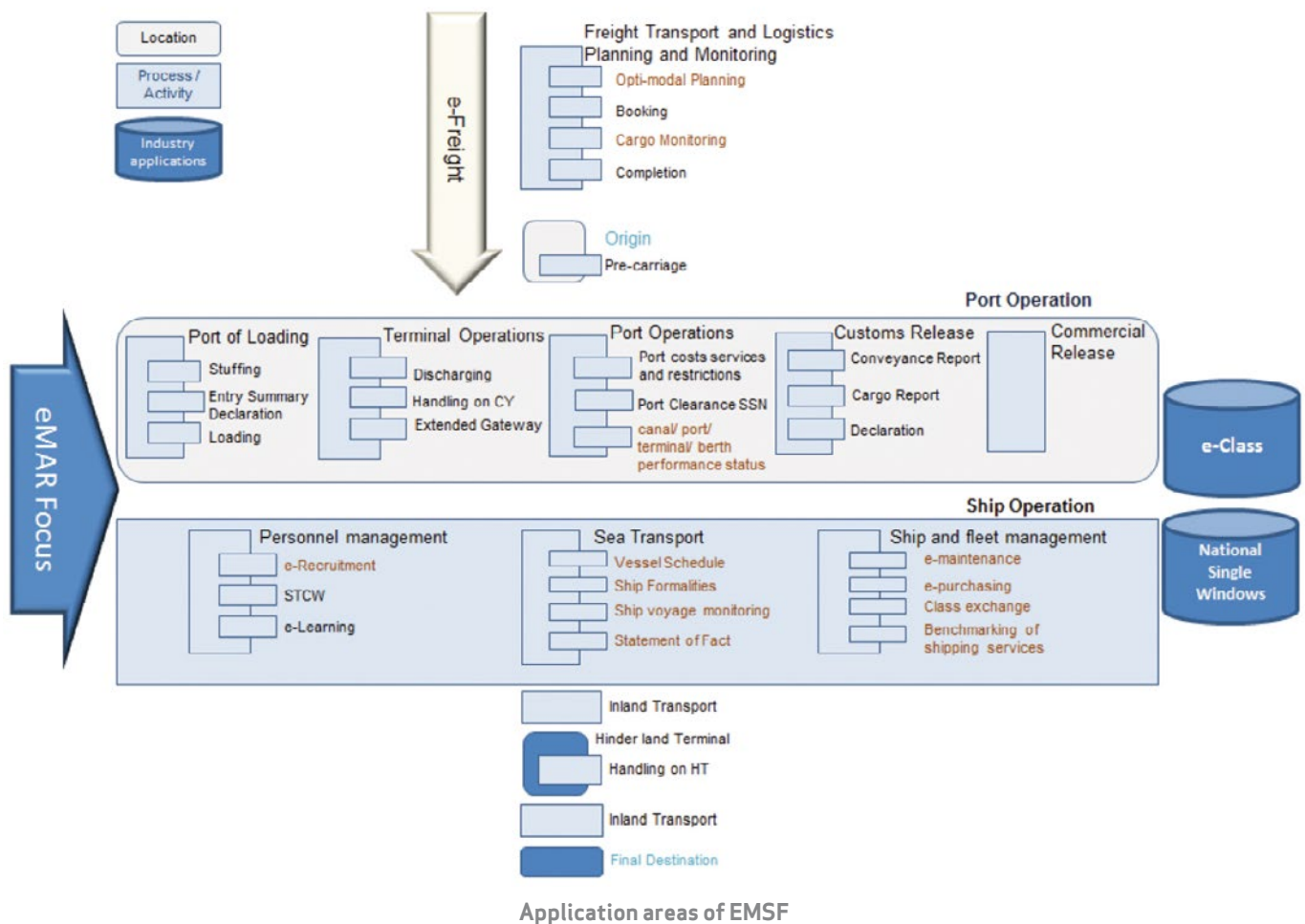
The eMAR project is one of the projects financed by the Commission for the deployment and development of the e-maritime initiative, with activities aimed at making headway in defining and establishing a benchmark European Strategic Framework that includes concepts, procedures, standards and technologies that foster cooperation between the different actors involved.

Of the many activities and outputs stemming from the eMAR project, of particular note is the development of the E-Maritime Strategic Framework (EMSF), the development of a technological infrastructure (e-MAR ecosystem) which facilitates the implementation of EMSF, or the definition and description of an index or taxonomy of e-maritime services as a tool to analyse and improve the conditions of the port cluster.

PROJECTS

The E-Maritime Strategic Framework (EMSF) is a vision of the future (2020 Horizon) of the electronic interactions between actors from maritime transport by defining and developing a detailed reference model which combines business processes with the exchange

of necessary information between the different actors involved and the proposed data model and standard messages to provide support to ship operations, including interaction with the ports and the logistics chains.



The EMSF models have been created through collaborative effort, integrating existing models in the maritime and logistics sectors, and attending to the general criteria of simplicity, stability, technology independence, usability, etc...

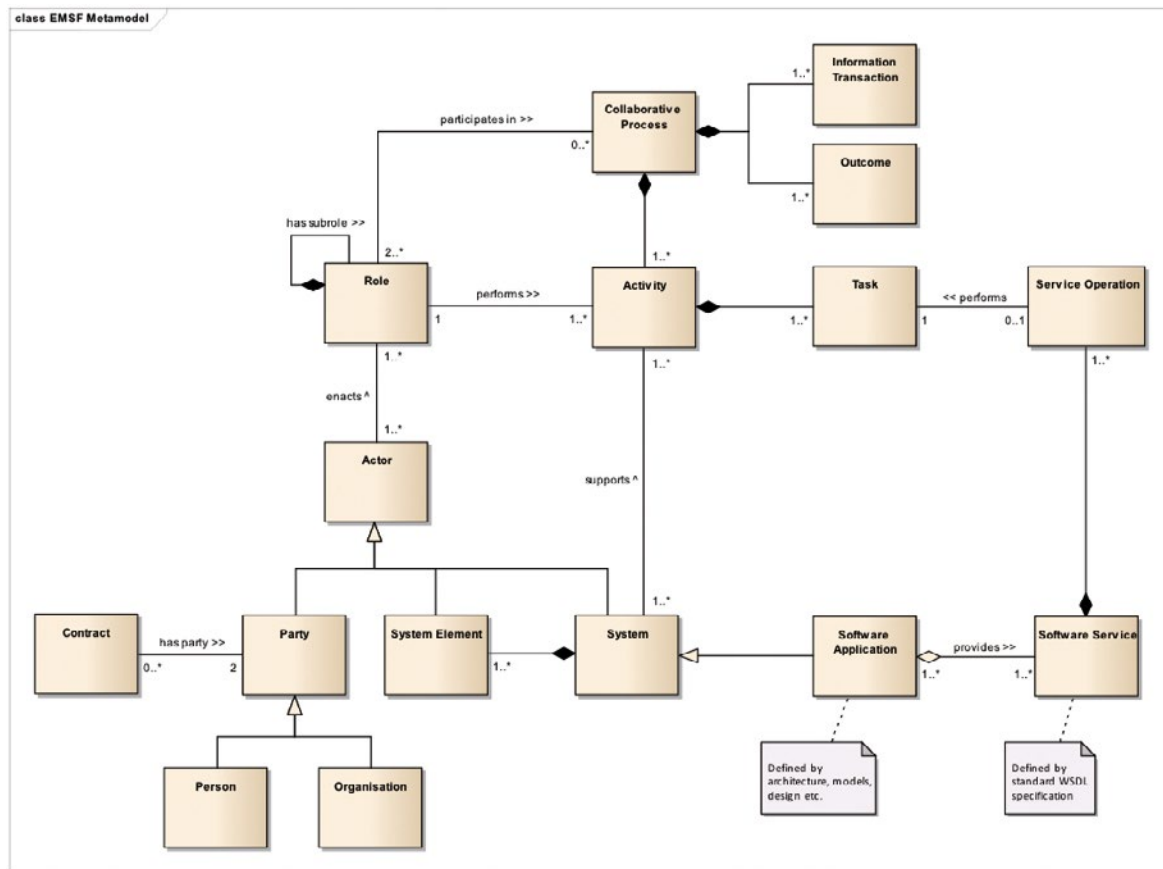
The EMSF Key Features

Designed to meet the following global requirements:

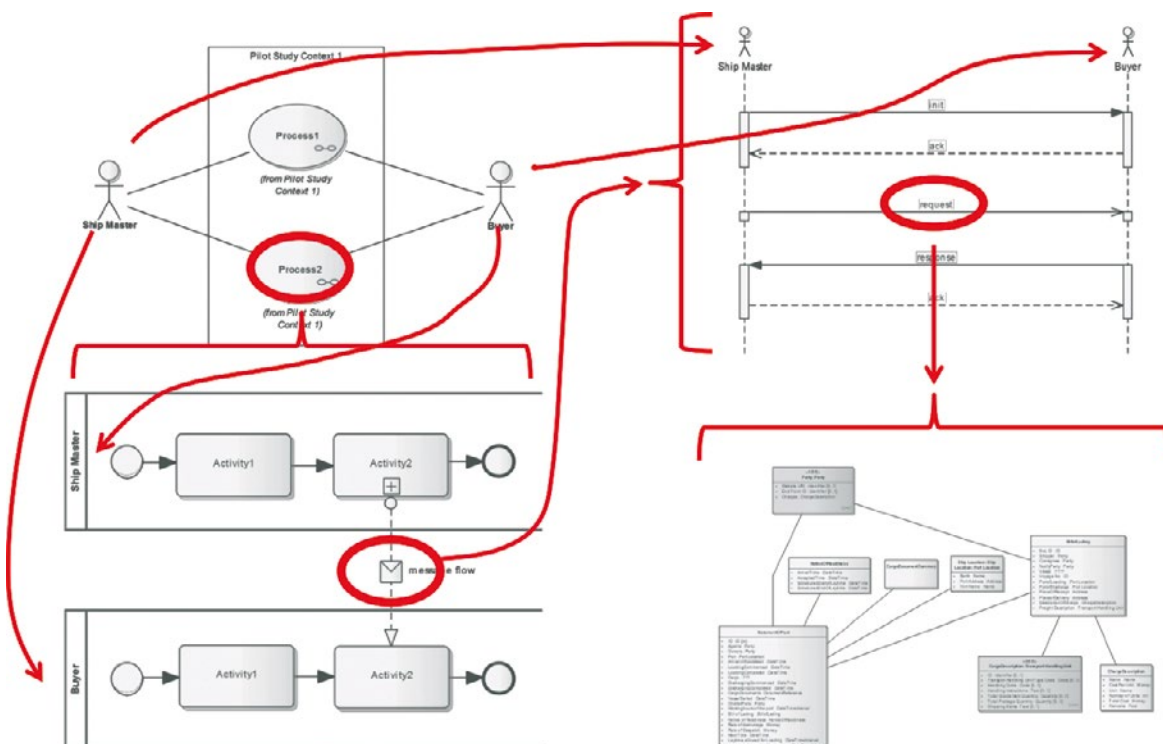
Commonality	Contributes to the establishment of a common conceptual model of the transport domain of which shipping is an integral element.
Simplicity	Simple and easy to be interpreted, it provides a common context for key processes and related solutions.
Stability	The EMSF governance guarantees the framework stability, covering all changes in user needs, user requirements, organisational structures and technology.
Technology Independence	Independent of organisational issues and the technical implementation of the solutions.
Usability	Facilitates mapping activities, projects, systems, stakeholders and challenges into the model, and thus finding those parts of the architecture that are of relevance.

Key characteristics of the EMSF

For the modelling, the following standards were used: BPMN, UML and IDEF.



EMSF Meta-model



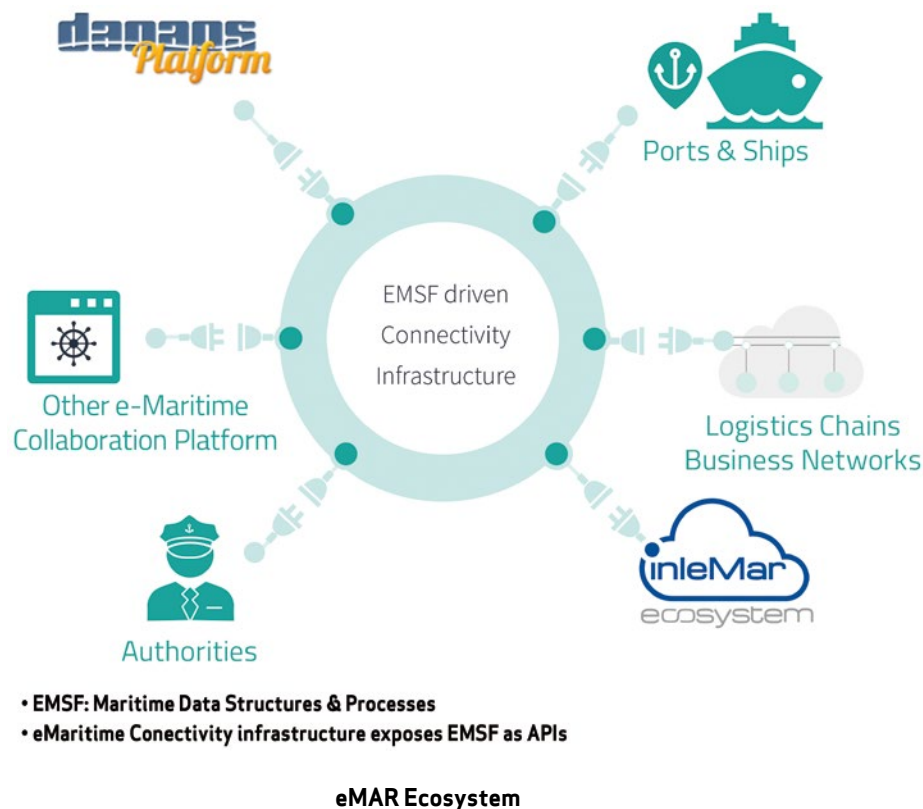
Relations between process models, information exchanges and messaging in the EMSF

PROJECTS

The EMSF complies with all related European and international legislation and regulations (such as EU Directive 2010/65/ on reporting formalities demanded of shipping upon their arrival to or departure from port), as well as other initiatives and projects currently operational such as SafeSeaNet (SSN), e-Customs or the IMO initiatives such as e-Navigation.

The **e-MAR ecosystem** is a technology infrastructure that facilitates the implementation of EMSF and generally speaking, interoperability and cooperation between the different related systems, software services, intelligent objects and collaborative platforms. The collaboration platform for DANAOS, Inlemar Ecosystem and i-Ship are just some of the solutions developed and tested as part of the project and as an example of the development of this ecosystem.

- The DANAOS collaborative platforms is already being used by a number of shipping companies and it provides users with new electronic services, such as the use of services published by other users (e-procurement, e-invoicing, e-drawings, etc., are just some of the services that are being used across this platform).
- Inlemar Ecosystem is a platform that makes it possible for maritime companies to create their own system environment and interoperable applications that are compatible with the processes and messages defined in the EMSF.



- I-Ship (Intelligent Ship Reporting) is a new software application that is compatible with the EMSF and enables ship representatives to automatically comply with their duties associated with an inbound ship to European ports and custom authorities (pre-arrival

notice passenger and crew lists, notification of dangerous or polluting goods carried on board, notification of waste and residues, information on ship security level, ENS, cargo manifest, FAL forms, berth request).

i-Ship Reporting

Notifications

Notice Type	Voyage Number	Port Of Call	IMO Number	MMSI Number	Ship Name	Ship Message Id	Journal Number	ETA / ATA To Port of Call	ETD / ATD From Port of Call	Clearance Status	Actions
Arrival	IMO8616336_239575000_BLUE-HORIZON128983	GRPIR PIRAEUS	IMO8616336	239575000	BLUE-HORIZON	008E22086C61467		11/5/2014 12:00 AM	11/5/2014 11:00 AM		Update View Cancel Call
Arrival	IMO8616336_239575000_BLUE-HORIZON129102	GRHER IRKLIKON	IMO8616336	239575000	BLUE-HORIZON	773F14B8NVTY487	271181	11/10/2014 12:00 AM	11/10/2014 9:00 PM		Update View Cancel Call
Arrival	IMO8616336_239575000_BLUE-HORIZON129107	GRMIT MYTHENE	IMO8616336	239575000	BLUE-HORIZON	85EEDAAACE274BA		11/12/2014 12:00 AM	11/12/2014 8:00 PM		Update View Cancel Call

Total Records: 2 Records: 1 to 3

Voyages

Voyage Number	Port Of Call	IMO Number	MMSI Number	Ship Name	ETA / ATA To Port of Call	ETD / ATD From Port of Call	Actions
IMO8616336_239575000_BLUE-HORIZON128983	GRPIR PIRAEUS	IMO8616336	239575000	BLUE-HORIZON	11/5/2014 12:00 AM	11/5/2014 11:00 AM	+ Message View Profile
IMO8616336_239575000_BLUE-HORIZON129102	GRHER IRKLIKON	IMO8616336	239575000	BLUE-HORIZON	11/10/2014 12:00 AM	11/10/2014 9:00 PM	+ Message View Profile
IMO8616336_239575000_BLUE-HORIZON129120	GRMIT MYTHENE	IMO8616336	239575000	BLUE-HORIZON	11/12/2014 12:00 AM	11/12/2014 8:00 PM	+ Message View Profile
IMO8616336_239575000_BLUE-HORIZON129148	GRPIR PIRAEUS	IMO8616336	239575000	BLUE-HORIZON	11/14/2014 12:00 AM	11/14/2014 9:00 PM	+ Message View Profile
IMO8616336_239575000_BLUE-HORIZON129167	GRMIT MYTHENE	IMO8616336	239575000	BLUE-HORIZON	11/12/2014 12:00 AM	11/12/2014 8:00 PM	+ Message View Profile

Ships

Ship Name	IMO Number	MMSI Number	Flag	Security Level	Actions
BLUE-HORIZON	IMO8616336	239575000		SL1	+ Voyage View Profile
AGUA-VARYARA	IMO20968894	237338833		SL1	+ Voyage View Profile
JIN-MENU	412725002			SL3	+ Voyage View Profile
CAP-THEODORA	IMO9380740	240840000		SL2	+ Voyage View Profile
BLUESTARPATMOS	IMO9555941	241152000		SL0	+ Voyage View Profile
SEASTAR	IMO9373858	256702000			+ Voyage View Profile

Dashboard overview

Screen-shot of the i-Ship application

The **e-Maritime Library of Services (eMLS)** for port services is a taxonomy or classification and description of electronic services that acts as a support for port maritime operations. In the majority of cases, these services are Port Community Systems - PCS), Single Window facilities or other systems or platforms similar to those of the port logistics cluster.

This e-Maritime Library of Services (eMLS) has been classified and arranged according to a hierarchical structure as per the type of services and the role of the PCS or system providing the same.

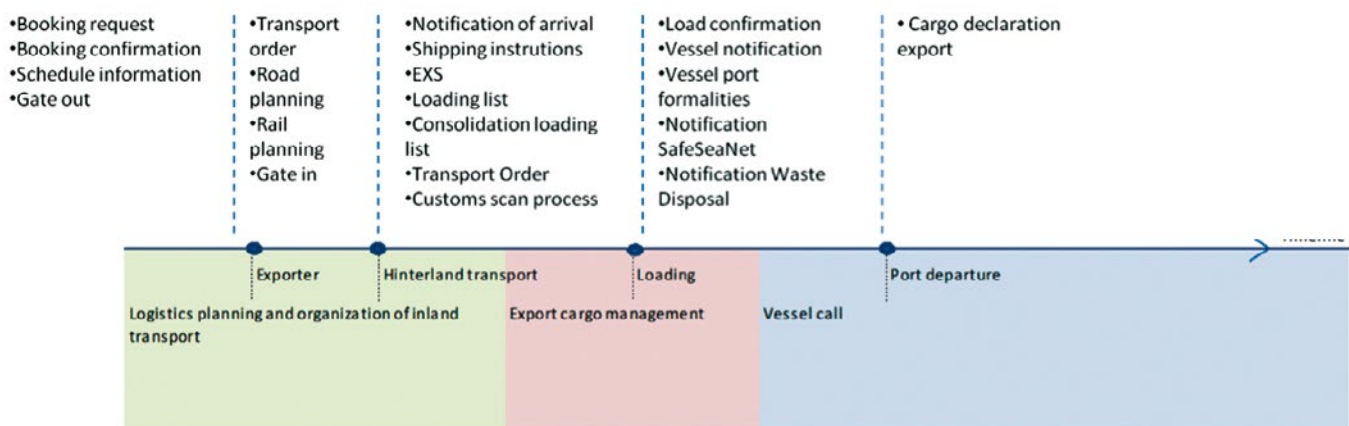
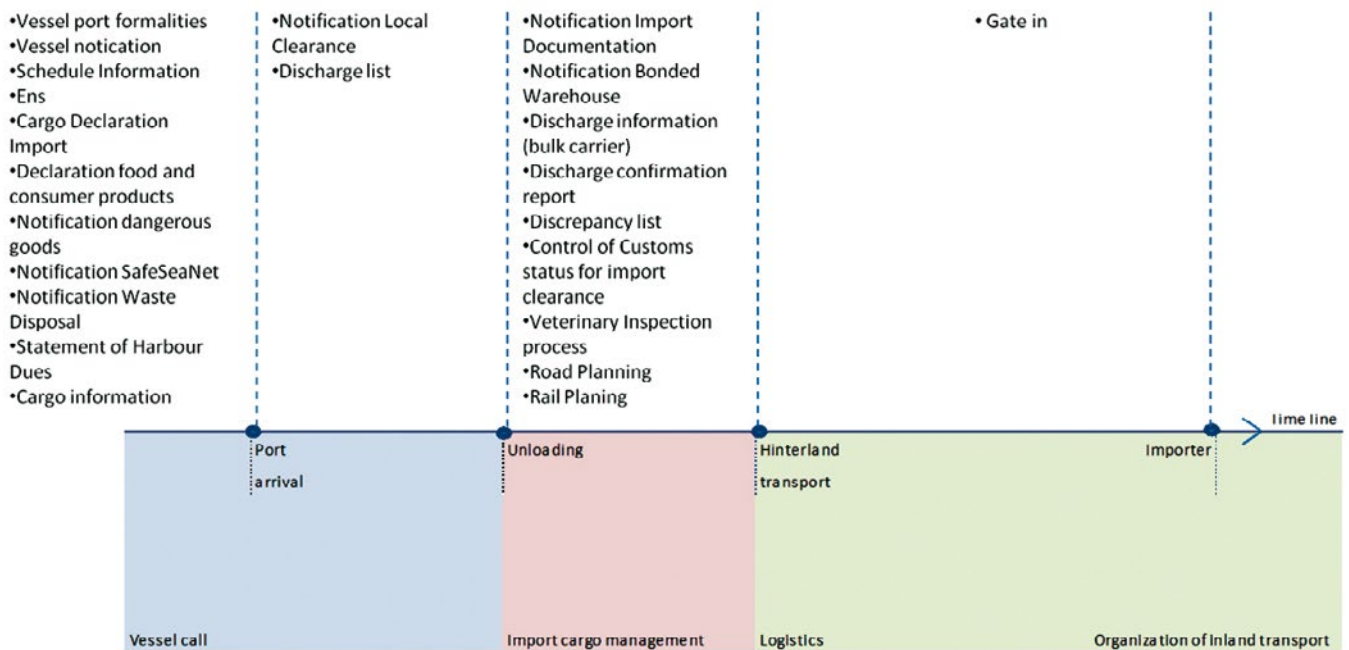
LEVEL	TOTAL OF SERVICES (*)
Level 1: The PCS exchanges information with Port and Maritime Authorities, and other Safety Agencies.	8
Level 2: The PCS exchanges information with Customs	16
Level 3: The PCS exchanges information with Inspection and other regulatory/ governmental agencies	3
Level 4: The PCS exchanges information with private companies/actors.	24
Level 5: The PCS act as the key node for information exchange between all parties and stakeholders involved (public and private) along the supply chain.	7

Number of services according to their level in the eMLS

PROJECTS

For each one of the levels, the eMLS includes a list of electronic services available:

- General description of the service
- Position within the supply chain (port arrival, transfer, inland transport, etc.)
- Type of cargo (container, bulk, Ro-Ro, etc.)
- Actors, systems involved (public and private) and their roles (RACI analysis, user/ supplier, etc.)
- Standard messages available
- Other related services
- Related initiatives and European legislation



eMLS – List of electronic services for import / export and location operations in the CdS

e-service/Stakeholders	Consignor/ Shipper	Freight Forwarder	Shipping Company	Shipping Agent	Terminal Operator	Road haulier	Port Authority	...
Booking request	S	S	R	R				
Booking confirmation	R	R	S	S				
Shipping instructions	S	S	R	R				
Loading list			S	S	R			
Consolidation of loading list			S; R	S; R				
...								

S: Sender; R: Receiver.

eMLS – Description of services (actor sending and receiving information)

e-service/Stakeholders	Consignor/ Shipper	Freight Forwarder	Shipping Company	Shipping Agent	Terminal Operator	Road haulier	Port Authority	...
Booking request	R	R	C; I	C; I				
Booking confirmation	I	I	R; A	R				
Shipping instructions	R	R	A; I	A; I				
Loading list			R	R; A	I			
Consolidation of loading list			R; I	R; A; I				
...								

R: Responsible; A: Accountable; C: Consulted; I: Informed

eMLS – Description of services (RACI analysis)

The eMLS is a valuable tool for:

- The analysis of the e-maritime situation of a port cluster, mapping the available electronic systems and services.
- The identification of deficiencies and duplications, etc., in the e-maritime services of a port cluster.
- The definition of a roadmap or action plan to follow to develop a port cluster, identifying and prioritizing the electronic services and solutions to develop / improve.
- The development / improvement and / or implementation of new electronic services and solutions that help to increase the efficiency and quality of operations.

WEB: www.emarproject.eu

MEDNET - MEDITERRANEAN NETWORK FOR CUSTOMS PROCEDURES AND SIMPLIFICATION OF CLEARANCE IN PORTS

PROJECT PARTNERS:

Rete Autostrade Mediterranee Spa (coordinator, Italy); Ancona Port Authority (Italy); Taranto Port Authority (Italy); Centre for Innovation in Transport (Spain); Chamber of Commerce and Industry Marseille Provence (France); Malta Transport Centre (Malta); Prometni institut Ljubljana (Slovenia); Rijeka Port Authority (Croatia); Zadar Port Authority (Croatia); Intermodal Transport Cluster (Croatia); Albanian Institute of Transport (Albania); National Technical University of Athens (Greece); Igoumenitsa Port Authority (Greece); Patras Port Authority (Greece); Cyprus University of Technology (Cyprus); Maritime Institute of Eastern Mediterranean (Cyprus); TIS.PT, consultores em transportes, inovação e sistemas, S.A. (Portugal)



TIME FRAME: June 2012- May 2015

FUNDING BODY: Project co-financed by the European Commission through the MED Programme

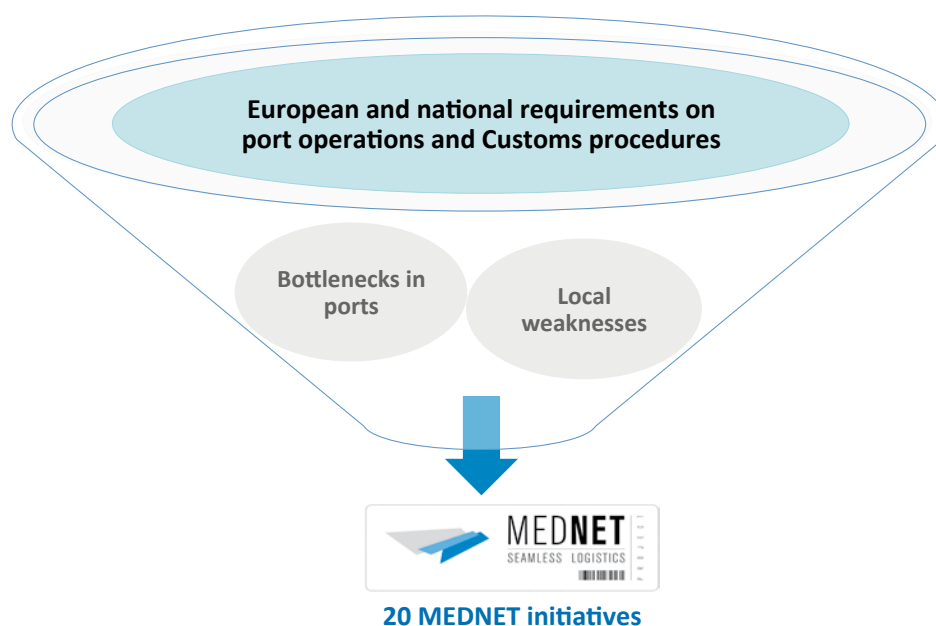
PROJECT JUSTIFICATION AND RESULTS:

Each year, millions of tonnes of freight pass through Mediterranean ports. Although the huge volume of freight contributes to the economic and social development of the regions, it also creates barriers that affect the trade being transported.

The objective of the MEDNET project has been to improve interoperability, facilitating supply chains and developing a common framework of understanding of customs procedures and ship custom clearance, promoting the implementation of information systems in ports.

MEDNET has identified the requirements at both a national and European level with regard to the information used for port operations and customs administration, as well as the bottle-necks that hamper the efficient flow of information in Mediterranean ports.

With the mission of improving the current situation, MEDNET has proposed collaboration actions with both administration and customs institutions and private agents from the countries concerned, in order to find harmonization between all of the Mediterranean ports to create a more open market that facilitates the use and deployment of information technologies, and as such simplifying procedures.



The work team comprising 18 project partners carried out 20 actions focused on the following areas: simplifying customs documentation procedures; introduction of electronic T2L which certifies the community status of merchandise; tools to supervise goods checking at borders; improvements in the management of parking in the

ports and customs procedures for road traffic; simplifying procedures for the supply and assignment of quays; implementing single window facilities and port community systems and the creation of a port operations observatory in the Mediterranean to enable the exchange of information, solutions and best practices.



FACILITATION OF CUSTOMS PROCEDURES

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

1. Notification to Customs of full container entries and their subsequent departures from Valenciaport container terminals
2. Introduction of a monitoring system of container movements at port of Melilla

PROMOTION OF THE SINGLE MARKET: SUPPORT TO THE ELECTRONIC PROOF OF UNION STATUS SYSTEM TO JUSTIFY THE COMMUNITY STATUS OF GOODS

3. Introduction of the Spanish electronic T2L for ro-ro traffic at Valenciaport

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

4. Introduction of electronic monitoring mechanisms for sanitary, phytosanitary and veterinary controls for transhipped containers at Valenciaport



SIMPLIFICATION OF PORT PROCEDURES

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

5. Automatic exit of trucks from port areas at port of Koper
6. Parking management and Customs procedures improvements for ro-ro traffic at port of Patras
7. Parking management and Customs procedures improvements for ro-ro traffic at port of Vlore
8. Parking management and Customs procedures improvements for ro-ro traffic at port of Igoumenitsa
9. Improvement of ro-ro traffic, parking management and Customs procedures at port of Zadar
10. Improvement of ro-ro traffic, parking management and Customs procedures at port of Rijeka

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

11. Simplification and enhancement of procedures related to ship supplies at Valenciaport
12. Berth allocation system for ro-ro and cruise traffic at port of Patras
13. Berth allocation system for ro-ro and cruise traffic at port of Igoumenitsa

FACILITATING THE IMPLEMENTATION OF SINGLE WINDOWS AND PORT COMMUNITY SYSTEMS

14. Electronic procedures related to container consolidated cargoes at Valenciaport
15. Setting up of an integrated, user-friendly and computerised procedure to improve accessibility at port of Taranto
16. Introduction of National Customs Single Window at port of Ancona
17. Analysis of the Italian Customs systems and adoption of Directive 65/2010
18. Master Plan of Malta to set up a national maritime Single Window



SHARING INFORMATION

PORT OPERATIONS OBSERVATORY IN THE MEDITERRANEAN

19. Port Operations Observatory in the Mediterranean

20. MEDNET Analytics Platform

PROJECTS

Among the actions carried out, of particular note is the creation of a “port operations observatory in the Mediterranean” that enables the exchange of solutions

and best practices, further disseminating the acquired know-how between European countries and the port communities.

MEDNET PORT OPERATIONS OBSERVATORY

- Home
- Reference Library
- Meta Analysis
- GIS - MEDnetwork
- Pilot Actions
- Forum
- News & Events



Participating Ports



PORT OPERATIONS OBSERVATORY

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

It 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 discussion group.

And finally, below is an overview of initiatives developed by the Valenciaport Foundation and deployed in the port of Valencia.

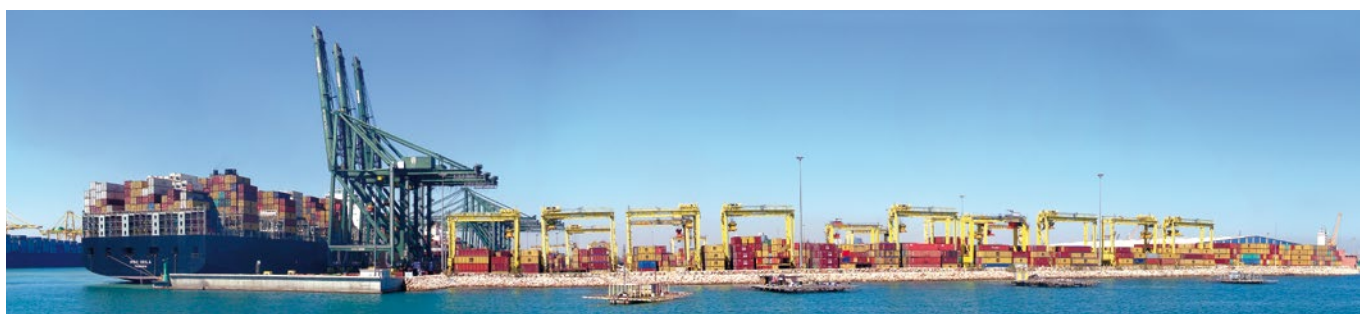
Pilot 1: Notifying Customs of the arrival of full containers for export and their corresponding departure, both over land (by rail or by road) and by sea.

31st December 2014 saw the publication of order HAP/2485/2014 that modified the entry procedures and the presentation of merchandise arriving to the community customs area and temporary deposit statements, as well as presentation and freight departure procedures leaving the community customs territory.

The order included a new obligation for Spanish maritime container terminals to notify of arrival by land (both by road and by rail) of full containers as well as the delivery of the same containers ready for departure by land and by sea.

Up to now, the port terminals collected operational information about the arrival and departure of goods through its gates, but this information was not forwarded to Customs, it was simply shared between the operators involved.

Within the framework of the MEDNET project, Valenciaport Foundation has worked together with the Customs Department, the Port Authority of Valencia and the maritime container terminals to develop a new procedure that will enable the terminals to notify Customs and therefore comply with their obligation as per the current regulations.



Pilot 2: Promotion and deployment of electronic T2L for ro-ro.

The objective of the electronic T2L is to facilitate and simplify the compliance of customs regulations to prove the community status of the goods being transported by sea using electronic procedures.

Electronic T2L for container goods was a prototype as part of the MOS4MOS project and consisted of the creation of an electronic system to request e-T2L prior to the departure of goods and to register and digitize the original T2L document at the destination customs.

The MEDNET project has encouraged the use of electronic T2L in Mediterranean ports by proposing technical solutions that are already available. In the case of the port of Valencia, progress has been made in the application of e-T2L, extending its use to include RO-RO traffic.



PROJECTS

Pilot 3: Tools for transshipment goods control

EU Directive 2011/215/ establishes that the minimum period after which checks should be carried out on consignments transhipped from one boat to another in the same port and that are destined for import or transit to third party countries is 7 days. This minimum period can be prolonged to as long as 14 days when the transshipment of a consignment coming from a third party country to another third party country does not call at the port of another community country.

Similarly, Decision 2007/275/EC provides a list of animals and products that have to be checked at border control points when being imported into the Union.

To enable the inspecting organizations to comply with the regulations in place, a tracking system has been developed to check transshipment containers in the Port of Valencia.

The information is sourced from existing records contained in the valenciaportpcs.net port community system, about summary statements of temporary storage and cargo manifests, operations of ship calls, inventories and confirmation of loading and unloading of port terminals and custom tracking information (which includes departure confirmation of containers from the customs area), in order to register the dates and any relevant information about the introduction and/or return of supervised freight consignments.

valenciaport pcs.net
Port Community System

Home Vessel call search Track&Trace Inland transport Transshipments control

GOODS CONTROL

MEDNET
SEAMLESS LOGISTICS

med

L'Europe au Méditerranée
Europe in the Mediterranean

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

Español Close session

VALENCIAPORT - EXPLOTACION - millop

Control Date
2/13/2014

Vessel / Berth / Summary
Summary

Goods Item #
Goods Item #

Compliance dates
☒ Less than 7 days ☐ 7 — 14 days ☐ 15 — 20 days ☐ More than 20 days

B/L
B/L Number

Compliance dates calculation criteria (Start date and end date)
Vessel Arrival Date Vessel Departure Date

Declaring Agent
Cif Name

Rows per page
10

Container
Container

Operation (Declared Destination)
Transshipment

Destination
EU countries

Product Type

Search Export Reset

Search on 13/02/2014 16:28:23. Input date: Vessel Arrival Date. Control Date: 13/02/2014.
The search criteria is: Less than 7 days. Operation (Declared Destination) = Transshipment. Destination = EU countries.

23 records found.

Stay	Container	Summary	Goods Item #	NC	Controlled	Origin	Destination	Declaring Agent	Declaring Agent CIF	B/L
3	MEDU2XXXX	46114500753	00083	2005	✗	Morocco	Denmark	M.S.C. ESPAÑA, SLU	B98261944	MSCUC
3	TCKU2XXXX	46114500753	00095	1604	✗	Morocco	United Kingdom	M.S.C. ESPAÑA, SLU	B98261944	MSCUC
3	MSCU4XXXX	46114500753	00123	2005	✗	Morocco	Sweden	M.S.C. ESPAÑA, SLU	B98261944	MSCUC
3	MSCU6XXXX	46114500753	00124	1212	✗	Morocco	Italy	M.S.C. ESPAÑA, SLU	B98261944	MSCUC
3	MEDU2XXXX	46114500753	00125	1212	✗	Morocco	Italy	M.S.C. ESPAÑA, SLU	B98261944	MSCUC
2	MRKU2XXXX	46114500270	02991	3001	✗	Taiwan, Province of China	Spain	MAERSK SPAIN, S.L.U.	B85173821	5620967
2	CRLU1XXXX	46114500517	00056	0304	✗	Argentina	Spain	M.S.C. ESPAÑA, SLU	B98261944	MSCUD
2	MEDU9XXXX	46114500517	00057	0307	✗	Argentina	Spain	M.S.C. ESPAÑA, SLU	B98261944	MSCUD
1	MRKU9XXXX	46114500637	00092	1702	✗	Israel	Germany	MAERSK SPAIN, S.L.U.	B85173821	3000633
0	TCLU1XXXX	46114500428	08033	0307	✗	India	Spain	M.S.C. ESPAÑA, SLU	B98261944	MSCUI0

Less than 7 days 7 — 14 days 15 — 20 days More than 20 days

Pilot 4: Simplification of procedures and custom formalities for loading equipment and goods for ship supplies.

The Valenciaport Foundation has carried out an analysis on procedures and customs formalities for ship supplies and puts forward measures to simplify notification procedures and the control of supplies and provisions to ships in the Port of Valencia, especially cruise-line traffic.

A number of meetings have been held with the Maritime Association of Valencia, Customs and the Informatics Revenue Department to determine measures that could be applied in 2015.

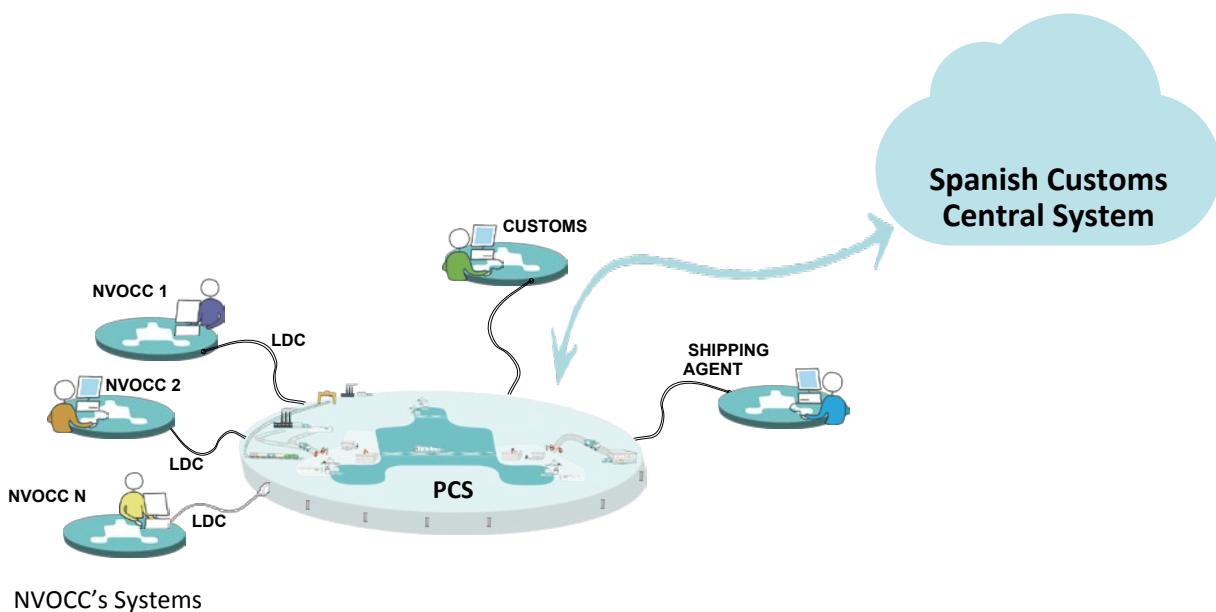


Pilot 5: Procedures to manage maritime departures for consolidated cargo containers that require a number of different customs forms.

The aim of the action is to simplify the reporting mechanisms and the control of consolidated cargo containers by consolidation companies that operate in Valencia vis-a-vis the maritime agents and the shipping documents to facilitate the control of container loading using electronic systems.

This pilot action means that progress can still be made with freight departure procedures heading East without export papers as the container is contained in the tacking messages between customs and the ports.

WEB: www.mednetproject.eu



ELECTRONIC SINGLE WINDOW FACILITIES AS TOOLS TO FACILITATE TRADE (ON-LINE COURSE)

OBJECTIVE: The main objective of the course is to help public servants from agencies involved in foreign trade (customs, agriculture...) as well as those from the private sector to better understand the function of the Single Window, implementation procedures, characteristics, benefits and requirements.

TIME FRAME: 2013 - 2015

FUNDING BODY: Inter-American Development Bank / CEDDET Foundation

DESIGN AN SQA SYSTEM AT VALENCIAPORTPCS.NET

OBJECTIVE: The objective of the project is to identify and propose the general specifications of an SQA system, to act as a guideline for development companies regarding methodology, practices and standards required within the framework of the valenciaportpcs.net system.



Some of the functions and aims of the project are as follows:

- Set up specific procedures that must be followed for any development project within the framework of the PCS.
- Identify documents that must be generated during each of the development phases of a project in PCS, such as templates that can be used.
- Identify the actors involved, both as part of the development team and as part of the PCS team associated with this process.
- Define any restrictions that exist when moving from one phase to the next during project development.

TIME FRAME: January - March 2014

FUNDING BODY: Port Authority of Valencia

AUSTRALIAN PORT COMMUNITY SYSTEM STUDY

PROJECT PARTNERS:

NICTA (coordinator)



OBJECTIVE: The general objective of the project was to identify critical groups for the successful development and deployment of a NPCS (National Port Community System) in Australia, describe the essential characteristics of the system, explore any potential benefits and understand what type of elements would need to be developed to ensure the involvement and participation of the project partners.

Some of the key objectives were: identify, and wherever possible, quantify any inefficiencies in the supply chain of containers to Australian ports and any resulting costs from inadequate, incomplete and untimely communication or data exchange; research media to tackle the aforementioned inefficiencies and costs including the potential benefits and the role that the PCS would bring; and lastly, if PCS is not a profitable solution, determine the quickest and least expensive way to develop one.

TIME FRAME: October - December 2013

FUNDING BODY: CCIWA - Chamber of Commerce and Industry of Western Australia

B2MOS - BUSINESS TO MOTORWAYS OF THE SEA

PROJECT PARTNERS:

Port Authority of Valencia; Port Authority of Barcelona; Escola Europea de Short Sea Shipping, A.E.I.E; Continental Rail, S.A.U.; Port Authority of Bilbao;

Contenosa S.A.; Grupo Romeu Multiservices S.L.; International Forwarding, S.L.; Piraeus Port Authority S.A.; Maritime Cargo Processing Plc; Hafen Hamburg Marketing E.V.; Dbh Logistics It Ag; Luka Koper, Port And Logistic System, D.D.; Intereuropa, Global Logistics Service, Ltd. Co.; Boluda Lines S.A.; Neptune Lines Shipping And Managing Enterprises S.A.; Global Maritime Agency S.A.; Dakosy Datenkommunikationssystem Ag; Portic Barcelona S.A.; Tiba Internacional S.A.; Italian Ministry of Infrastructure and Transport.

Executive Bodies of the Italian Ministry of Infrastructure and Transport: Rina Services; Gruppo Ib; D'appolonia; Port Authority of Livorno; Port Authority of Civitavecchia.



OBJECTIVE: B2MoS is an innovative study in the form of pilot actions aimed primarily at preparing and adapting business communities and port authority systems to the requisites of European Directive 2010/65/EU, providing interoperable electronic documents and messages (for example electronic waybills) intended to increase the efficiency of the Motorways of the Sea door-to-door distribution chain, facilitating intra-Community trade and increasing European territorial cohesion.

TIME FRAME: July 2013 - December 2015

FUNDING BODY: Project co-financed by the European Commission through the TEN-T Programme

WEB: www.b2mos.eu

FREIGHT4ALL - A DISTRIBUTED AND OPEN FREIGHT TRANSPORT ICT SOLUTION 4 ALL STAKEHOLDERS IN THE MEDITERRANEAN AREA

PROJECT PARTNERS:

Region of Crete (coordinator), Institute for Transport and Logistics Foundation, Association for the Development of Vocational Training in Transport, Bologna Interport SpA, Port Authority of Valencia, Valencia Polytechnic University, Region of Campania, Luka Koper, LOGICA



OBJECTIVE: The objective of the Freight4All Project is to resolve the fragmentation issue of trans-national multimodal freight transport chains by providing a distributed, interoperable ICT solution.

Said solution will facilitate distance collaboration between the parties involved and the joint use of the available e-logistic systems, resulting in a strengthening of territorial cohesion and the provision of profitable and sustainable services.

TIME FRAME: Junio 2010 - Mayo 2013

FUNDING BODY: Proyecto cofinanciado por la Comisión Europea a través del Programa MED

WEB: www.med-freight4all.eu

PORT INTEGRATION - MULTI-MODAL INNOVATION FOR SUSTAINABLE MARITIME AND HINTERLAND TRANSPORT STRUCTURES

PROJECT PARTNERS:

Free and Hanseatic City of Hamburg. Ministry for Economic and Labor Affairs (Germany) - (coordinator); Hamburg Port Authority (Germany); Essex County Council (United Kingdom); Port Authority of Valencia

(Spain); Antwerp Port Authority (Belgium); Marseille Fos (France); Port of Hamina (Finland); Chamber of Commerce of Genoa (Italy); Municipality of Ancona (Italy); Port of Tallin (Estonia); Freeport of Riga (Latvia); Klaipeda State Seaport Authority (Lithuania), Rosmorport Kalliningrad Branch (Russia)



OBJECTIVE: Port Integration was designed to identify, exchange, and transfer best practices in the transport sector in order to identify a joint vision for European policies resulting in more sustainable and more efficient transport practices. The project focuses on transport chains as a whole, combining the best practices in maritime transport with the challenges facing inland transport. The combination of both components of the transport chain in a single strategy could give rise to new innovative logistic solutions where ports play a central role as the connecting link between both modes of transport.

TIME FRAME: January 2010 - March 2013

FUNDING BODY: Project co-financed by the European Commission through the Interreg IVC Programme.

WEB: www.portintegration.eu

INTE-TRANSIT - INTEGRATED AND INTEROPERABLE MARITIME TRANSIT MANAGEMENT SYSTEM

PROJECT PARTNERS:

Institute of Communication and Computer Systems (Greece) – (coordinator); Luka Koper (Slovenia); Piraeus Container Terminal S.A. (Greece); Co.Na.Te.Co. Spa (Italy); Seability Ltd. (Greece); Andalusian Institute of Technology; Andalusian Public Ports Authority



OBJECTIVE: The general objective of INTE-TRANSIT is to improve the information management systems that are currently being used by ports and their logistic areas by defining an integrated management model that includes both public and private-sector companies. The model is to be based on a process map and common and harmonized indicators in the MED.

INTE-TRANSIT will also promote an ICT solution for monitoring and locating containers in the port, improving the tracking, visibility and transparency of freight transport.

TIME FRAME: January 2013 - June 2015

FUNDING BODY: Project co-financed by the European Commission through the MED Programme

WEB: www.inte-transit.eu



2.2.3. Port-Logistics Sustainability

The port and logistics sustainability programme aims to carry out R&D&I actions and projects that allow progress to be made with the sustainable development models applied to ports and their associated logistic chains. According to the original definition, sustainable development consists of “satisfying the needs of the current generation without compromising those of the future generation,” and this is one of the fundamental principles of the Rio Declaration on Environment and Development.

Concerns of the environment have grown noticeably in recent years, stemming from the greater awareness of society and public and private-sector agents. A catalyst of this growing commitment has been the perception of global warming as a planet-wide challenge that requires the joint and coordinated effort of all countries to reduce the emissions that cause the greenhouse effect, resulting in a rise of the average temperature of the planet.

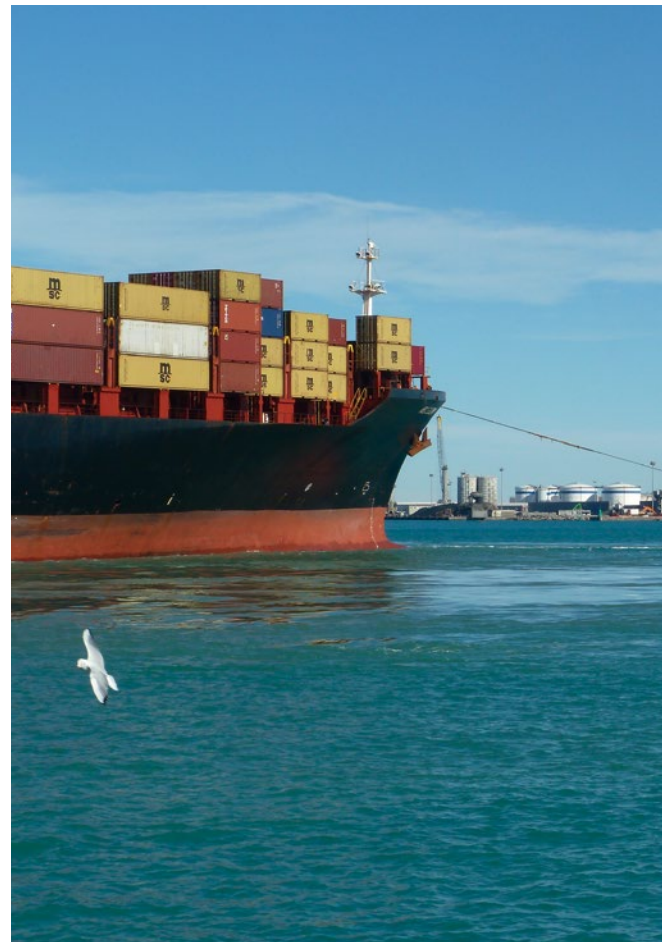
In the maritime transport sector and the port and logistics industry, the measures and actions aimed at protecting the environment have been bolstered by a number of different international organizations including the IMO (International Maritime Organization) through the different international conventions and agreements such as the MARPOL Convention. Similarly, ports have made some notable progress in recent years in sustainability with the deployment of international environmental management systems and certifications such as the ISO 14001 standard and the EMAS eco-management and audit scheme, and the Port of Valencia and the Valenciaport cluster are an international benchmark reference for environmental management.

Within the framework of port sustainability, there are currently new lines of development emerging such as energy efficiency and the use of alternative fuels is an essential element when it comes to maintaining and even increasing the competitiveness of ports and their logistic chains. The gradual rise in energy prices, especially those of fossil fuels, position energy efficiency as an opportunity for improvement for companies that are part of the Valenciaport cluster. In the period 2013-2014, the Valencia Port Authority and the Valenciaport Foundation have worked together in a number of different R&D&I actions and projects that focus on improving energy efficiency and reducing greenhouse emissions in the port and logistics environment, in keeping with the current strategy of the European Commission with regard to reducing emissions and the so-called 20-20-20 targets.

In this regard, the European Commission, as part of its goal to develop sustainable modes of transport, is giving its backing a number of different initiatives that encourage the use of alternative fuels that are more efficient and generate less pollution. The fact that the Mediterranean is classified as an ECA (Emission Control Area) in keeping with the European Commission regulation that comes into force in 2015 in the north of Europe, encourages the search for and development of solutions that enable us to reduce the emissions from maritime traffic and ports.

The use of LNG (Liquefied Natural Gas) is one of the most efficient viable alternatives from an economic, environmental and technical perspective.

The work carried out within the framework of these and other initiatives has shown that there is a need to continue making progress in this field which has a great future, and roll-out the outcomes and lessons learned to the rest of the Valenciaport cluster, in order to maintain its commitment to continued improvement as it appears in the Port of Valencia's environmental policy.




COSTA - CO₂ & SHIP TRANSPORT EMISSIONS ABATEMENT BY LNG

PROJECT PARTNERS:

Ministry of Infrastructure and Transport (coordinator); Liguria Region; Instituto Portuário e dos Transportes Marítimos; Almazán Ingenieros; Ocean Finance; Grimaldi Group; Grandi Navi Veloci; Portos dos Açores; Portos da Madeira; RINA



 Co-financed by the European Union
Trans-European Transport Network (TEN-T)

TIME FRAME: February 2012 - April 2014

FUNDING BODY: Project co-financed by the European Commission through the TEN-T Programme

PROJECT JUSTIFICATION AND RESULTS:

COSTA aims to develop a strategic plan that encompasses the main aspects (technical, regulatory, environmental, operational etc.) that affect the future supply of LNG for merchant ships in the Mediterranean, Black Sea and along the Atlantic coast (Portugal, including the Azores and Madeira and France). The strategic plan outlines, in addition to the current situation, two possible scenarios using 2020 and 2030 as reference years, and dealing with a number of different technical, economic and social feasibility criteria for the supply of LNG. Furthermore, the strategic plan focuses on promoting Short Sea Shipping (SSS) in the aforementioned areas and helps to reduce the emission of pollutants as well as greenhouse emissions (CO₂, NO_x and SO_x) that stem from the use of fuels that are currently available and in keeping with directives contained in Annex 6 of the MARPOL Convention, spearheaded by the OMI (International Maritime Organization).

The Strategic Plan attempts to clearly identify the actions required to further develop the supply of LNG to ships, implementation time frames, decision makers and associated costs. The scenarios taken into consideration are the 2020 and 2030 time frames, the main characteristics of which are outlined below:

- 2020, medium term: considers a 0.5% cap on emissions that contain sulphur compounds with a sensitivity analysis of 0.1%.

- 2030, long term: considers a 0.1% cap on emissions containing compounds of sulphur.

OBJECTIVES:

The specific objectives of COSTA are as follows:

- Identify, for both medium-term (2020) and long-term (2030), the obstacles (technical, logistic, environmental, etc.) that might limit or hamper the use of LNG as a fuel for merchant shipping in the aforementioned areas.
- Define solutions and recommendations that might help to exceed the caps identified for both time frames.
- Develop a strategic plan for each of the two time frames under consideration.

In this regard, and within the framework of the COSTA1 project, co-financed by the European Union, the Valenciaport Foundation has developed the Med SSS-Lines2 database that define all the SSS services in any of the core ports in the Mediterranean, Black Sea and Portugal as well as the ships involved. Creating this tool has allowed us to quantify the annual fuel consumption for each of the services contained in the database, determine and investment requirements according to the type of ship and estimate the potential savings stemming from their use of LNG in three different forecast scenarios for each kind of ship and service, and the financially more attractive alternative while being in

¹ COSTA – CO₂ & Ship Transport Emissions Abatement by LNG, co-financed by the European Union within the framework of the TransEuropean Transport Networks, RFP2011.

² The methodology used and a detailed analysis of the data can be consulted in Feasibility of LNG as a fuel for the Mediterranean Fleet: Profitability, Facts and Figures – soon to be published.

PROJECTS

full compliance of the rules regarding emissions for the 2020 horizon.

Our aim has been to analyse what technology would provide the best shipping solution, from a financial perspective, while complying with environmental regulations concerning emissions. It was carried out for ships that are particularly affected by this regulation, namely each and every one of the 658 ships that sail on Short Sea Shipping routes and that

dock in the “Core” ports of the European Union in the Mediterranean and the Black Sea and in Portuguese waters. A cost-benefit analysis was also carried out including externalities.

The Med SSS-Lines database is an instrument that compiles and homogenizes information relating to maritime services (routes, ports of call, frequency, distance, shipping lines involved) as well as the ships taking part (capacity, technical characteristics, fuel consumption and emissions).



Ports included in the MED Short-Sea Lines database

Source: Fundación Valenciaport, 2014



Areas defined in the MED Short-Sea Lines database

Source: Fundación Valenciaport, 2014

Global indicators have been obtained and these refer to information concerning ports, shipping lines and companies during 2013. 395 regular SSS services were operating in the ports under study (62 ports analysed in total, 38 of which are "Core" ports). These particular ports connect to a total of 289 different ports. As far as the shipping lines are concerned, clearly there is a

predominance of container traffic (162 lines) and Ro-pax (137 lines) followed by Ro-Ro (45), and then passengers excluding cruise lines (30) and Car Carriers (21). Also analysed were aspects such as frequency, seasonality and shipping companies (139 businesses) that provide services, some of which they sometimes share (72 out of a total of 395 lines are shared).



PORTS

• No. of ports	62
• No. of Core ports	38
• No. of total ports of destinations	289



SHIPPING LINES

• No. of lines	395	• Weekly frequency	4.9
• Container	162	• Container	0.9
• Ro-pax	137	• Ro-pax	7.8
• Ro-ro	45	• Ro-ro	2
• Pax	30	• Pax	20.9
• Car carrier	21	• Car carrier	0.7
• No. of shared lines	72		
• No. of seasonal lines	67		
• No. of ports by line	4		



SEA CARRIERS

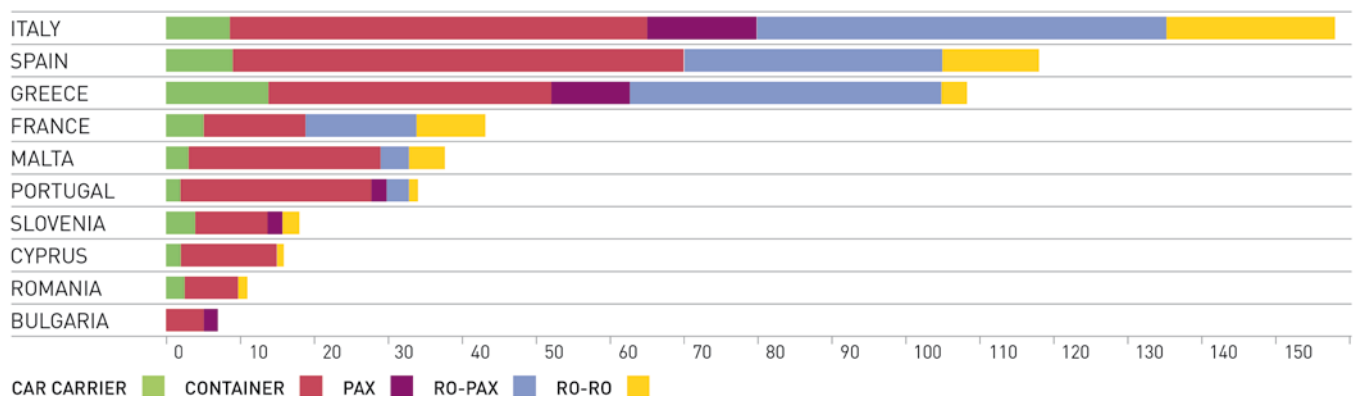
• No. of sea carriers	139
• No. of sea carriers by line	1.3

Global indicators of SSS services in the countries under study

Source: Fundación Valenciaport (2014) based on the MED Short-Sea Lines database

A number of different ranking tables have been made that show information about services available the fleet etc. As can be seen, Italy is the country with the most number of services (158), followed by Spain (118) and then Greece (108). The graphic below contain the same information but

take into account the port of call; in this case, Piraeus and Valencia are the main ports of the Mediterranean for the type of lines under consideration, in the first case, of particular importance was passenger traffic, whereas container traffic is the focus in the second.



Ranking of countries according to the number of SSS services by type of freight

Source: Fundación Valenciaport (2014) based on the MED Short-Sea Lines database

PROJECTS

The aforementioned services are provided by 658 ships. Of the ships contained in the database, those classified as HSC (high speed craft) underwent a more rigorous analysis, taking into account their consumption of fuel and their service conditions

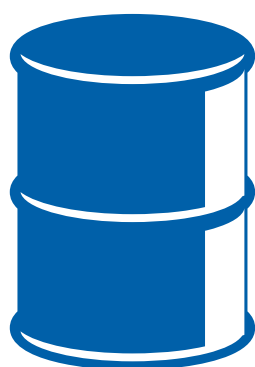
Once the structure of the lines and services operating in the Mediterranean was defined, the subsequent technical analysis enabled us to characterize the fleet consumption patterns and then calculating their bunkering demand.



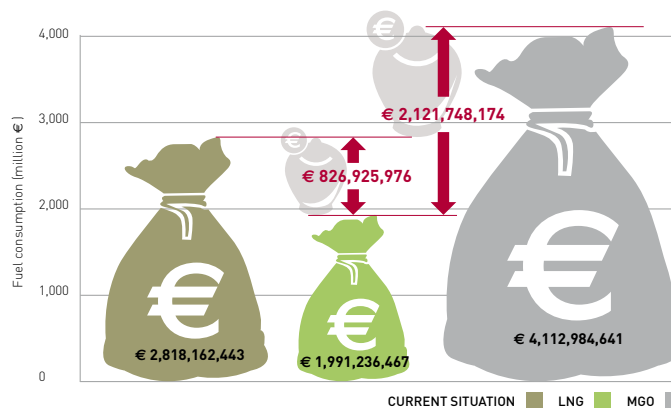
ANNUAL LNG MAXIMUM BUNKERING POTENTIAL DEMAND FOR SSS SERVICES (m³/year):
10,959,135

Once the lines and the fleet were characterized, the fuel consumption of the 658 ships was calculated as well as the corresponding monetary value for the current fuel requirements and these were then compared with the

hypothetical values that would be achieved if they used LNG or MGO fuel sources. The comparison study provides useful information with regards to the operational costs if the fleet underwent renovation or retrofitting.



TOTAL ANNUAL FUEL CONSUMPTION
5,965,576 (Tonnes)

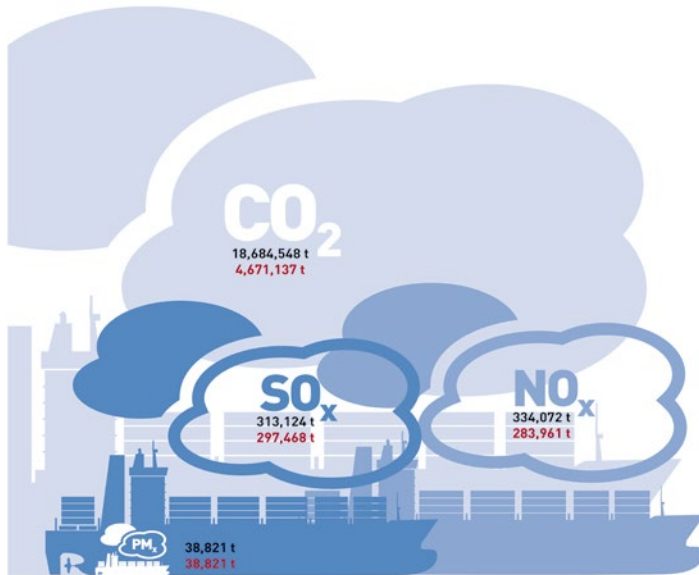


Total annual fuel consumption and savings in SSS services in the Mediterranean

Source: Fundación Valenciaport (2014) based on the MED Short-Sea Lines database

The environmental perspective was also dealt with in the study, with the quantification of CO₂, SO_x, NO_x and PM consumption levels for the services and ships included as well as an economic estimate of the for now and for the 2020 horizon. By comparing current emissions stemming

from the combustion of traditional fuel compared to those from the use of LNG (assuming the hypothesis that the entire SSS fleet under study use this type of fuel), savings would be made and these appear in the diagram below.



TOTAL ANNUAL EMISSIONS (Tonnes) ■
AVERAGE ANNUAL REDUCTIONS USING LNG (Tonnes) ■

**Total annual emissions and potential reductions
in SSS services in the Mediterranean**

Source: Fundación Valenciaport (2014) based on the MED Short-Sea Lines database

Upon conclusion of the analysis of all the factors with implications the feasibility analysis of the use of LNG as a fuel source for shipping in the Mediterranean for 2013, the following stage of the study comprised the extrapolation of the results for a long term forecast (2020-2030). To achieve this, it was decided to define forecast scenarios that were able to reflect the current uncertainty with regard to this market and the risk impact on business decisions. The scenarios defined are based on estimates of key aspects, such as the economic climate, and developments in trade and technology and the position of authorities with regard to energy,

business strategies, the internalization of the environmental concerns of consumers and shipping lines and fuel prices. The sceneries are translated by allocating a different basic variable score enabling us to perform a feasibility analysis of the use of LNG (with regard to alternative fuel sources to comply with emission requisites) for each ship operating in the Mediterranean under the three scenarios defined. Analysis was defined in a sequential format, in other words, an initial updating of the current ship so that it complies with the requisites and the subsequent renovation when it comes to the end of its service life.



Definition of scenarios

Source: Fundación Valenciaport, 2014

GREENCRANES - GREEN TECHNOLOGIES AND ECO-EFFICIENT ALTERNATIVES FOR CRANES AND OPERATIONS AT PORT CONTAINER TERMINALS

PROJECT PARTNERS:

Asea Brown Boveri (Spain); Valencia Port Authority; Global Service Srl (Italy); Konecranes Ausió (Spain); Luka Koper,

Port and Logistics System d.d (Slovenia); Livorno Port Authority (Italy); Ministero delle Infrastrutture e dei Trasporti - MIT (Italy); Noatum Ports (Spain); RINA Services (Italy); Scuola Superiore Sant'Anna (Italy); Global Service (Italy)



TIME FRAME: August 2012 - May 2014

FUNDING BODY: Project co-financed by the European Commission through the TEN-T Programme

PROJECT JUSTIFICATION AND RESULTS:

Freight transport and its associated logistic infrastructures are essential for keeping the European Union (UE) in its leading position in the world in the areas developed. The impact of this strategic sector in the quality of life of European citizens and EU competitiveness is a key factor, being an important agent for job creation and economic growth. In the case of container terminals, it is not only the infrastructures but also the services and the facilities that have seen significant changes in both the capacity and complexity of their operations.

These developments have resulted in major improvements to the general performance of container logistics and in the associated transport chain. Nevertheless, there have been negative effects that must be taken into consideration, such as for example, organizational inefficiencies, bottlenecks and overlapping that still persist, leading to a rise in energy consumption, greenhouse emissions, pollution concentration and other externalities. This is due to the extensive use of traditional fossil fuels as the primary source of energy in port industry logistics and especially in container port terminals.

In this regard, for several years, different European organizations have attempted to find solutions so that European ports can respond to the current issues related to their efficiency, connectivity and sustainability of their operations. One of the main issues to be identified by the European Commission is the high degree of dependency of the European petroleum (and its derivatives) transport sector, so it intends to encourage the use of clean energy sources and

alternative fuels such as LNG (liquefied natural gas), in its search for a low-emission operational model for European port terminals.

The GREENCRANES project is therefore part of an action that has enabled us to define the pathway to applying eco-efficient alternatives in European port terminals. The project, with a high level of technological development, has carried out some innovative testing and prototypes based on alternative fuels, eco-efficient technologies and intelligent energy management, positioning the Port of Valencia and the Valencia Region at the forefront of port and logistics innovation, a highly competitive sector.

OBJECTIVES:

The GREENCRANES project is conceived as an innovative action that helps to improve the energy efficiency at European port cargo terminals.

The primary objective of this project is to provide solutions to container port terminals that increase the energy efficiency of the facilities and its machinery, reducing fuel consumption and greenhouse emissions. The specific objectives of the GREENCRANES project are as follows:

- Define the energy profiles of container port terminals, quantifying energy consumption amounts and their location.
- Carry out a feasibility study of the eco-efficient alternatives capable of significantly reducing the environmental impact of the port facilities without affecting performance.

- Carry out pilot testing with the most feasible alternatives for implementation and able to bring about a significant fall in greenhouse emissions, and showing its adaptability to real market conditions.
- Provide recommendations and guidelines for the port industry, container port operators, public authorities, etc. based on the project outcomes.

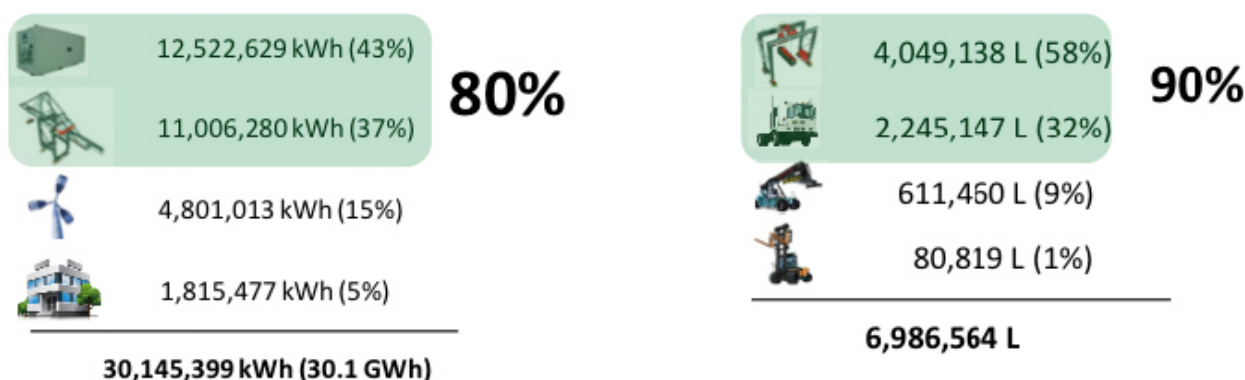
PROJECT RESULTS:

The project results can be classified into three types of activity.

- Activity 1: Definition of the energy profiles of the container port terminals

Using these energy profiles, we have been able to respond to the following questions, how much energy do the port facilities consume? and, where is this energy consumed? The following table shows the overall figures for the three terminal ports taking part.

Distribución del consumo eléctrico y de combustible, agregado de Valencia NCTV, Livorno TDT y la terminal de contenedores de Koper (2012)



Carbon Footprint (Electricity): 4.15 Kg CO₂eq / TEU

Carbon Footprint (Fuel): 7.57 Kg CO₂eq / TEU

Source: Valenciaport Foundation, 2014

- Activity 2: Assessment of eco-efficient alternatives

A methodology was drawn up to assess and select eco-efficient alternatives based on three criteria: technical; financial and environmental. The alternatives assessed were the following: substituting the diesel terminal tractors for vehicles fuelled by LNG (Noatum Valencia); modifying the fuel systems of diesel RTGs to allow them to run on LNG, or on both diesel and LNG (Noatum Valencia); installing new engines to the RTGs to reduce excessive output without affecting performance (Noatum Valencia); modifying the diesel Reach Stackers to be able to use hydrogen fuel cells, LNG or CNG and hybrid technologies (Livorno TDT); deployment of energy storage systems (flywheels) on RTGs (Koper); running RTGs using electrical motors (Noatum Valencia).

- Activity 3: Demos and prototypes

Four prototypes were developed and these were deployed in different real operational sites, the ports of Valencia (Spain), Livorno (Italy) and Koper (Slovenia).

1. The first European terminal tractor (TT) prototype was fuelled by NLG. The LNG-fuelled TT was developed in conjunction with machine manufacturer TERBERG and the results were compared against those of the latest generation diesel fuelled tractor (Stage IIIB), and earlier generations still operating at the Noatum terminal, the results of which can be seen in the following table. They conclude that even though a feasible alternative under the three aforementioned criteria, recommendations have been made to the manufacturers so that they include optimized LNG motors in their catalogues to make this a more suitable solution.

Prototype LNG terminal tractor at the Valencia container port operated by Noatum



Source: Noatum, 2014

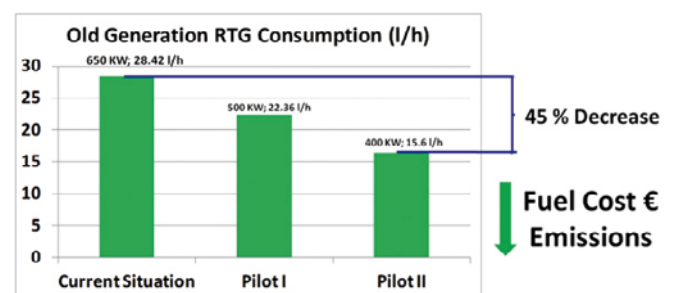
Results of energy performance, fuel consumption and emission testing

		Fuel (l/h; kg/h)	Energy (kwh/h)	Autonomy (h)	Particulate (g/h)	NOx (g/h)
1st G	VOLVO 720 TAD (Stage II)	8.2	88	18-20	9.6	481
2nd G	VOLVO 750 TAD (Stage IIIA)	7.5	81	20-22	8.8	292
3rd G	CUMMINS QSB 6.7 (Stage IIIA)	6.3	68	+24	11.6	229
4th G	CUMMINS ISB6.7E5-225 (Stage IIIB)	5.7	61	+24	1,0	33
Gas 2nd	CUMMINS ISL9 G 250 (Stage IV)	6.9	101	17-18	0,0	39

Source: Noatum, 2014

- Modification to the RTGs – smaller motor. This pilot scheme showed that the RTGs in Europe with a remaining service life of 10-15 years are normally equipped with oversized diesel motors. By changing the existing motors (650 kW) for smaller 500 and 400 kW ones, there is a significant reduction in fuel consumption, and by extension, emissions, both without taking anything away from the performance (please see the following diagram).

Results of medications to the Eco-RTG prototype



Source: Noatum, 2014

3. Hybrid Reach Stacker prototype (NLG/Diesel). The pilot scheme deployed at the Port of Livorno showed an average saving of €4 per hour worked (around 25%) using a hybrid motor compared to

a diesel one, as well as a reduction in associated CO₂ emissions. This prototype also allows for both hybrid and diesel operating, which provides for a greater versatility.

Hybrid LNG-diesel Reach Stacker prototype at the Port of Livorno (Italy)



Source: Global Service, 2014

4. Energy management and monitoring pilot scheme. The pilot carried out by the Port of Koper was based on the integration of efficient energy management in all operational areas of business of the container port terminal, with the aim of producing significant improvements in the control and monitoring methodology for energy management, as anomalies were identified in the operating modes and consequently act upon them.

WEB: www.greencranes.eu

IMPLEMENTATION OF THE MONITORING TOOL FOR STANDARD ENVIRONMENTAL MANAGEMENT SYSTEMS AND COMPLIANCE WITH THE ENVIRONMENTAL BEST PRACTICE CONVENTIONS OF THE PORT AUTHORITY OF VALENCIA (PAV)

OBJECTIVE: The objectives of the implementation of the monitoring tool for standard environmental management systems and compliance with the environmental best practice conventions of the Valencia Port Authority are as follows:

- Importing and storing as historical data the information used thus far by the Environmental Management System (the initials "SGA" in Spanish).
- Evaluation and monitoring of the work to develop the Environmental Management System Tool.
- Verify the functioning of the SGA tool to ensure it is proficient for SGA certification by the PAV.
- Review of documentation presented by the port operators requesting the signing of the PAV's Environmental Best Practices Convention or who are renewing their subscription.
- Issuing of reports to other PAV departments regarding compliance of the conditions stipulated for signatories of the aforementioned conventions.
- Drafting of the specific text to be applied in each case to signatories of the conventions.
- Monitoring of compliance of the conditions contained in the convention by operators and detecting cases of potential non-compliance, should they arise.
- Review of documentation provided by operators who have requested an extension to the convention in order to verify their level of compliance vis-à-vis the audit reports presented by the operators.

TIME FRAME: June 2014 - June 2015

FUNDING BODY: Port Authority of Valencia

GREENBERTH

PROJECT PARTNERS:

Port Authority of Valencia; Port Authority of Marseille; Port Authority of Livorno; Port Authority of Venice; Luka Koper; FEPORTS; Centre for Research and Technology Hellas / Hellenic Institute of Transport (CERTH/HIT); Cadiz University; Port Authority of Rijeka

GREEN  BERTH



OBJECTIVE: The primary objective of the GREENBERTH project is to facilitate the access of PYMES to the opportunities offered by the port sector, and its implementation of solutions to improve energy management as well as renewable energy sources. Ports are major consumers of energy, and in this regard, the project encourages cooperation between businesses specialising in renewable energy and port businesses that are making great strides, both financially and with human resources, to implement innovative solutions. This joint cooperation will facilitate the improved competitiveness of the ports in addition to a greater efficiency of their operations, such as consumable resource management (electricity, fuel, water, etc.).

TIME FRAME: January 2013 - June 2015

FUNDING BODY: Port Authority of Valencia (subcontracted to the Valenciaport Foundation).

WEB: www.greenberth.eu

SUSPORTS - DELIVERING SUSTAINABLE ENERGY SOLUTIONS TO PORTS

PROJECT PARTNERS:

CRESS (coordinator, United Kingdom); University of Reading (United Kingdom), RHDHV (Holland)



OBJECTIVE: The project aims to measure and model the energy flows of two ports, Felixstowe and Valencia and quantify the transient energy flows associated with the movement of containers. The project then examines different local energy storage systems in the port and identifies and tests different energy management solutions in an attempt to minimize the demand for electricity and diesel consumption of the freight handling equipment.

The primary objective is to identify eco-efficient solutions that allow ports to manage transient energy flows, maintain the quality of the supply so that they can reduce both energy demand and greenhouse gas emissions.

TIME FRAME: October 2013 - December 2016

FUNDING BODY: Climate-KIC. European Institute of Innovation and Technology

BUNKER LOGIX - FLEXIBLE LNG BUNKERING VALUE CHAIN ON THE SPANISH MEDITERRANEAN COAST

PROJECT PARTNERS:

Repsol Exploración, S.A.; Repsol LNG Holding, S.A.; Port of Cartagena; Ros Roca Indox Cryo Energy, S.L.



BunkerLogix



OBJECTIVE: The main objective of this project is to carry out an evaluation study and design an optimized LNG (liquefied natural gas) supply chain in the key ports along the Spanish Mediterranean coast, based on existing infrastructures. The project also includes the design of a LNG supply ship in order to provide a flexible supply solution in different locations that are in close proximity to the Mediterranean.

One of the specific objectives of the project is to determine the optimum medium-term aggregate demand for LNG so that any investment made in the setting up of the LNG supply chain is economically justifiable.

TIME FRAME: September 2013 - December 2014

FUNDING BODY: Project co-financed by the European Commission through the TEN-T Programme

WEB: www.bunkerlogix.com

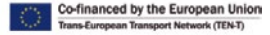
SEA TERMINALS - SMART, ENERGY EFFICIENT AND ADAPTIVE PORT TERMINALS

PROJECT PARTNERS:

Noatum Ports SLU; Amplía Soluciones S.L.; Enginyeria d'aplicacions Energètiques SL; Technological Energy Institute - ITE; Valencia

Port Authority - VPA; Nacco Materials Handling BV; Terberg

Benschop B.V.; Italian Republic (Italian Ministry of Transport) - MIT; Baltic Ports Organization; Implementing Bodies (Port Authority of Livorno; Global Service; OLT Offshore; Scuola Superiore Sant'anna



OBJECTIVE: The primary objective of the SEA TERMINALS project is to fast-track the transition of the port industry towards efficient operational models by integrating the energy variable as a key factor to improving CPTs. The project is based up the lessons learned from the GREENCRANES project, the results of which show that the efficient management of energy consumption and the use of alternative fuels is not only feasible but also generates major benefits at all levels of the CPTs.

The specific objectives of the SEA TERMINALS are:

- Develop a comprehensive set of feasible eco-efficient alternatives from a technical, environmental and financial perspective. In this regard, SEA TERMINALS proposes the implementation of fully electrical machinery (100% electric terminal tractor) as well as hybrid versions (hybrid RTGs), as well as the development of prototypes based on the use of LNG (liquefied natural gas) as a fuel source.
- Develop a real-time operating system that minimizes the number of current bottle-necks in the terminal operations, with different operating modes (eco, turbo, waiting, etc.) for the machinery. This platform, called SEAMSP platform, will be capable of receiving real-time information from machinery and from the terminal operating system (TOS), calculating the best operating mode for each type of machinery at any given moment.
- Develop machinery prototypes fuelled by electricity or by LNG, including terminal tractors, reach stackers, forklifts and RTGs. The project will evaluate the performance of these prototypes as a whole together with the SEAMSP platform.
- Carry out real life trials in container terminals of the project prototypes. The real life testing will take place at the Noatum Container Terminal Valencia (NCTV) in the Port of Valencia and at the container terminal in the port of Livorno.

TIME FRAME: March 2014 - December 2015

FUNDING BODY: Project co-financed by the European Commission through the TEN-T Programme

WEB: www.seaterminals.eu

2.2.4. Security & Protection

The maritime shipping industry (of both passengers and goods) is characterized by its highly complex nature due to the large number of agents involved, service providers of transport, loading and unloading, handling, inspection, storage, etc. The growth of international trade, marked by the appearance of the container as the standard unit of transport, has led to the creation of huge port infrastructures at the same time as technological progress has resulted in larger and larger ships and equipment, with a greater capacity and a greater range of operation.

These factors, together with special characteristics of certain merchandise that is transported by boat and handled in the ports, have led to a wide range of different risks, the potential consequences of which could do great harm. For these reasons, security, in the broadest sense of the term, is an important action point that deals with accident prevention, emergencies, environmental disasters and other events that could be detrimental to normal port activities and the transport of goods.

In the ports sector, the modern concept of security covers three aspects. Firstly, as it provides the basis for initial preventative actions, we speak of technical port safety or industrial port safety with regard to risk management associated with operations that take place in the port.

The second perspective deals with so-called environmental safety, i.e. preventing environmental risks. This particular field of action has undergone a huge amount of development in recent years due to the serious concerns about the environment and the effects that accidents

involving hazardous goods, which could potentially pollute delicate ecosystems, might have on it.

Lastly, the most recent perspective of port safety relates to protection, in charge of providing the port compound with suitable procedures and systems capable of neutralizing threats from illicit acts such as theft, sabotage, incursions and even terrorist attacks.

The important geopolitical role of Europe, in addition to the strategic position of Spain as the point of connection between the main maritime transport lines between Asia, America and Africa, makes safety and protection essential factors that must be integrated into port and logistics chains that are associated with the activities of the Valenciaport cluster. The main challenge is achieving integration without the performance and the competitiveness of the cluster, while minimizing any risks stemming from unlawful activities.

Similarly, the growth and the interdependency of infrastructures and the so-called info-structures (information exchange systems, industrial control platforms, etc.) make cyber-security a new area of work, increasing the overall scope of protection that now also includes networks, exchange facilities and information management.

Improvement to R&D&I expertise, and the bolstering of the reputation of both the Valenciaport cluster and the Valencia Port Authority through their participation in national and international research projects makes innovation the cornerstone of any efforts to position the Port of Valencia at the very forefront of logistics and port safety.



MONALISA 2.0 - SECURING THE CHAIN BY INTELLIGENCE AT SEA

PROJECT PARTNERS:

Swedish Maritime Administration; Fraunhofer-Gesellschaft Zur Förderung der Angewandten Forschung E.V.; Bundesministerium Für Verkehr, Bau Und Stadtentwicklung; Luftfartsverket (Lfv); Chalmers Tekniska Högskola Ab; Sspa Sweden Ab; Deutsches Zentrum Für Luft- Und Raumfahrt E.V.; Spanish Maritime Safety and Rescue Service - SASEMAR; National Technical University of Athens; Viktoria Swedish Ict Ab; Corporacion Maritima Lobeto Lobo S.L.; Port Authority of Valencia; Centre International de Mètodes Numèrics en Enginyeria – Cimne; Ministero delle Infrastrutture e dei Trasporti – Direzione Generale per il Trasporto Marittimo e Le Vie D'acqua Interne; Madrid Polytechnic University; Carnival Plc; Transas Marine International Ab; Industrias Ferri, S.A.; The Swedish Meteorological and Hydrological Institute; Polytechnic University of Catalonia; Carmenta Ab; Danish Meteorological Institute; Gatehouse A/S; World Maritime University; Navicon A/S; Danish Maritime Authority; Jeppesen GmbH; Rheinmetall Defence Electronics GmbH; Marsec-XI International Ltd; Yrkeshögskolan Novia



TIME FRAME: January 2013 - December 2015

FUNDING BODY: Project co-financed by the European Commission through the TEN-T Programme

PROJECT JUSTIFICATION AND RESULTS:

This Project marks the continuation of work carried out in the original MONALISA project and is envisaged as a global action across the whole of Europe that aims to respond to the current major challenges faced by the maritime transport sector, such as:

- Reducing the environmental impact of maritime transport.
- Simplifying administrative procedures of maritime transport operations.
- Developing and integrating innovative information and communication technology (ICT) systems in the maritime and port sector.
- Improving response to and management of accidents and emergencies.
- Improving overall integration of the whole logistics chain.
- Training professionals from the maritime and port sector.

MONALISA 2.0 enables progress to be made in developing the concept of Motorways of the Sea, widely being promoted within the European maritime transport sector, through a number of studies and pilot schemes that aim to encourage the

development of new services and procedures within the industry.

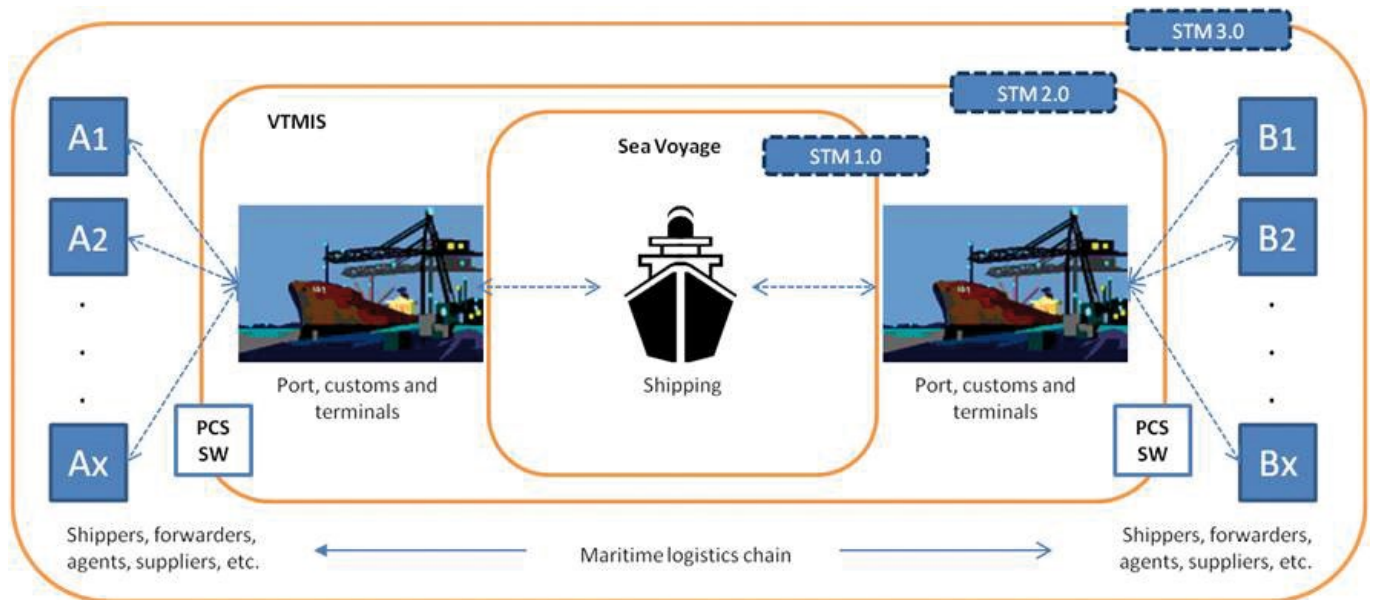
OBJECTIVES:

The primary objective of the project is to help to promote the concept of Motorways of the Sea in Europe by implementing a number of different activities according to the requirements and recommendations of the European Commission with regards to maritime security. MONALISA 2.0 aims to be instrumental in the continued improvement to the security, efficiency and sustainability of maritime transport in the European Union, these being the cornerstones of the project.

The specific objectives of the project are as follows:

- Develop a European-wide Traffic Management System, STM - Sea Traffic Management, homologue of the SESAR air traffic control system.
- Provide support to specific aspects of navigation being contemplated as part of the STM, with the development of operational procedures and standard technical protocols.
- Provide robust support tools for decision making, including a formal safety assessment.

- Show the feasibility of specialised ICT solutions and how they can help to improve the Managing of Resources on the Bridge and the management of search and rescue operations.
- Ensure the security of the transport chain of ports and coastal areas.



PROJECT RESULTS

MONALISA 2.0 is a far-reaching project aimed at developing strategic actions in a number of different areas: management of maritime navigation, improve the onboard security and of ports, integration of information technologies, etc.

Despite the fact that work is still being carried out on the different project activities, some major intermediate results have been achieved and these are described below.

Activity 1: Sea Traffic Management Operations and tools

A technology platform, the European Maritime Simulator Network (EMSN) has been developed to enable the transfer of information between simulators of different

entities. The EMSN is able to simulate complex traffic situations and conditions and evaluate the response of search and rescue operations dealing with oil spills.



PROJECTS

Within the framework of this activity, a land-based support and maritime spatial planning service is also being created, based on the exchange of information that aims to include traditional pilotage services to problematic navigation areas such as, for example, entry into the Baltic Sea, and create navigation restrictions based on specific conditions or the time of the year.

Activity 2: Definition of the Sea Traffic Management (STM) System

This activity began with a comprehensive study that analysed and characterised the current situation (AS-IS) of the systems used to manage maritime traffic. Following that, key indicators were allocated to measure the performance of the new system, defining its strategic areas and objectives.

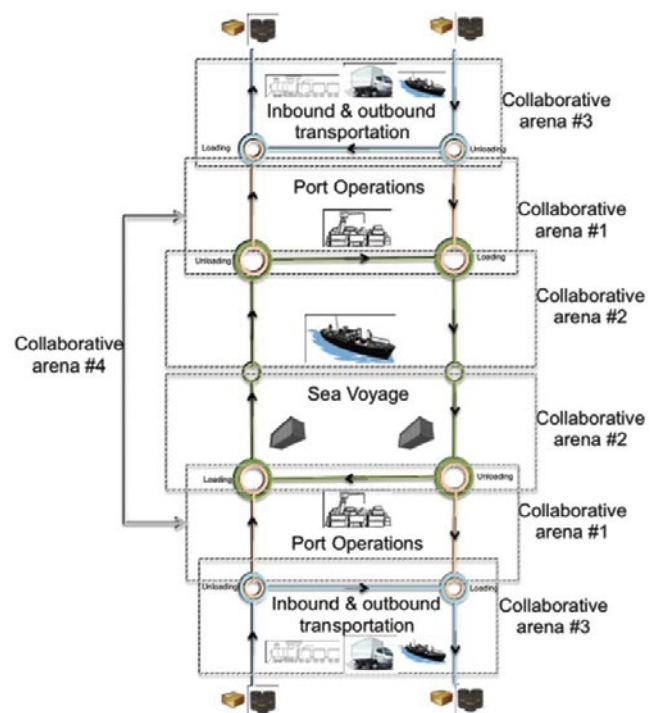
Five key concepts were identified and the STM relies on these to achieve its predefined strategic objectives:

Strategic Voyage Management becomes more in depth in the stages leading up to the sea voyage itself when it is fine-tuned. One of the solutions put forward is the use of a Voyage ID, the same concept as the flight numbers that are used for air transport.



The second key concept is **Dynamic Voyage Management** that deals with fine-tuning of the exchange of information to improve the journey of each individual boat. The aim is that boats can choose the best route and that they can optimize their sailing speed.

Furthermore, a Route Exchange Protocol, IEC-61174 version 4, has been developed that will soon be a new international standard and will enable the exchange of information between different navigation systems.



The next concept, **Port Collaborative Decision Making** (Port CDM) deals with optimizing port operations, creating the necessary conditions for the voyage is as efficient as possible during its stay at port, ensuring the smoothest procedures during the arrival and departure of boats. On one hand, the ports will be provided with very accurate information about the arrival of boats to their destination and have all the necessary services prepared earlier (pilotage, tug boat services, etc.). On the other hand, the ships would be able to be more precise as to their estimated time of arrival (ETA). The advantages of this system will be tested in two pilot projects that will take place in the ports of Valencia and Gothenburg.

The concept of **Flow Management** is more general in nature and aims to optimize sea traffic flow by monitoring them and then sharing this information. Its primary focus is providing support when navigating in restricted waterways, channels and congested areas using a warning system so that they can avoid collisions, crashes and running aground.

Lastly, the concept of System Wide Information Management (Sea SWIM) provides support services to the services mentioned above, and consists of creating standards and an infrastructure to manage the exchange of information between the different agents involved using very specific services that represent a change in the operational paradigm in this regard.

If we take these five concepts as the foundation stones, they will be used to define and develop a Master Plan that will stipulate the following steps to take.

Activity 3: Safer Ships

The aim of this activity is to increase the safety of large passenger liners by implementing services that are based on existing technologies and without any changes to current regulations. To do this, a behaviour-based safety system has been implemented that allows one to analyse the standard behaviour of the passenger liner and the crew on the day to day activities on board the ship. Furthermore, work is being carried out on a system that allows us to know the location of crew members aboard and will be extended in the future to include passengers too.

Work is also being carried out on other fronts and this includes the following: the development of a graphic interface that provides the maritime rescue coordinator with an integrated information system that includes details of all the search and rescue systems, regardless of the company that manufactures it; and the definition of an evacuation system should the ships pitch.



Activity 4: Operational Safety of Ports and Coastal Areas

Work is being carried out to improve port risk assessment tools by developing a software to coordinate and speed up SAR (search and rescue) activities, and building a prototype to retrieve lifeboats, to name but a few.

At the end of 2015, the Port of Valencia will be the venue for a search and rescue exercise where the main results of these activities will be able to be seen for themselves.

WEB: www.monalisaproject.eu



SIDRA - SMART IDENTIFICATION AND DETECTION OF RADIOACTIVE ANOMALIES"

PROJECT PARTNERS:

INDRA (coordinator); the Agustín de Betancourt Foundation – Polytechnic University of Madrid; University of Leon; Customs Department of the Spanish Inland Revenue Agency; the Department of Energy – Polytechnic University of Milan




With the financial support of the Prevention of and Fight against Crime Programme
European Commission - Directorate-General Home Affairs

TIME FRAME: December 2012 - November 2014

FUNDING BODY: Project co-financed by the European Commission through the Directorate General of Home Affairs

MOTIVATION & PROJECT RESULTS:

The threat of a terrorist attack using radioactive materials is increasing around the world, and that goes for EU countries too. It is feared that there might be a terrorist attack that uses so-called "dirty bombs", in other words, the use of explosives to release potentially lethal radioactive elements into the air, the effect of which would be devastating. Reducing such a risk implies the effective control of merchandise coming into Europe across borders with third-party countries.

Generally speaking, the control of radioactivity levels of goods is carried out by radiation detection portals, commonly known as **Radioactive Portal Monitoring (RPM)**. The number of these devices has grown dramatically in recent years. Originally, RPMs were developed to inspect people and vehicles in security facilities such as in arms factories. Later on, they were deployed in scrap metal yards to detect any potential sources of radiation that had become mixed in with the scrap metal and might contaminate the while facility. At the same time, as part of the efforts to stop the smuggling of nuclear arms following the breakdown of the former Soviet Union, the RPMs were deployed around the bordering areas, and later still in many other countries in both Europe and Asia.

Following the attacks of 9-11, the Government of the United States decided to strengthen the control of goods arriving in the US by sea, faced with the potential of hidden nuclear inventions or other type of arms of mass destruction. This is why the **Container Security Initiative (CSI)** programme was developed, with the deployment of large scanners in the major ports of the world.

Furthermore, it should be taken into account that more than 90% of world trade is by sea according to

information provided by the United Nations, and ports play a key role in guaranteeing the security of merchandise given that they are compulsory crossing points for them.

One of the first countries to deploy these devices was Spain. In 2010, through a bilateral agreement with the US within the framework of the Megaports project, detection systems were installed to prevent the smuggling of nuclear material in the three main Spanish ports: Valencia, Algeciras and Barcelona.

Nevertheless, even today there is still a long way to go to improve the systems given the low specifications of this technology and the current technical barriers that lead to long detection times as well as false alarms. For these reasons, the deployment of these updated systems usually results in interruptions and delays in normal operations of the transport chains, reducing their speed and competitiveness. What are required therefore are improvements to the efficiency of the systems, increasing their detection capabilities and reducing therefore the number of both false positives (produced by materials with naturally produced radioactivity that have been declared to customs), and false alarms that are produced by failures in the detection systems.

OBJECTIVES:

The main objective of the project is to provide a greater intelligence to the existing radioactivity detection systems. The idea is to reduce the number of false positives, which would allow us dedicate more time to cases where the alarm goes off for more worrying reasons. The idea behind it is to facilitate the decision making process of operators from the port's central alarm system (CAS).

The specific objectives of the project are as follows:

- Develop an integrated tool to detect and inspect radioactive substances at border crossings, particularly in ports.
- Research and development of new algorithms that improve the spectrometry of gamma radiation detection.
- Develop a fuzzy neural network that incorporates self-teaching and can differentiate between isotope groups.
- Develop a help tool to assist with decision making that provides system operators with swifter and more accurate detection procedures.

Furthermore, the project is imminently practical and the aforementioned developments were integrated into a single tool that was tested in the Port of Valencia.

With the positive testing of the prototype, the Port of Valencia was trying to achieve three things: position itself at the forefront of technology in Spain, increase security levels and improve the efficiency of its operational procedures.

RESULTS:

Currently, the South Access is the only entry and exit point for the Port of Valencia and has 10 portals which enable the detection of gamma ray and neutron emissions of all goods, for both import and export that travel through the port facilities. Every day some 2,400 lorries drive through it. Of those, according to the data registered by Megaports in 2013, around 10% of those set off false positives either upon entry to or exit from the port. It is therefore a key strategic point where it is incredibly important to find the best balance between security and efficiency of port operations so that the transport chain as a whole can be optimized.

The system developed within the framework of the SIDRA project, including the new algorithms to improve spectrometry and the neural network was successfully tested and validated in a maritime port setting, showing its capacity to reduce the number of false positives processed during the pilot project stage and facilitate decision making.

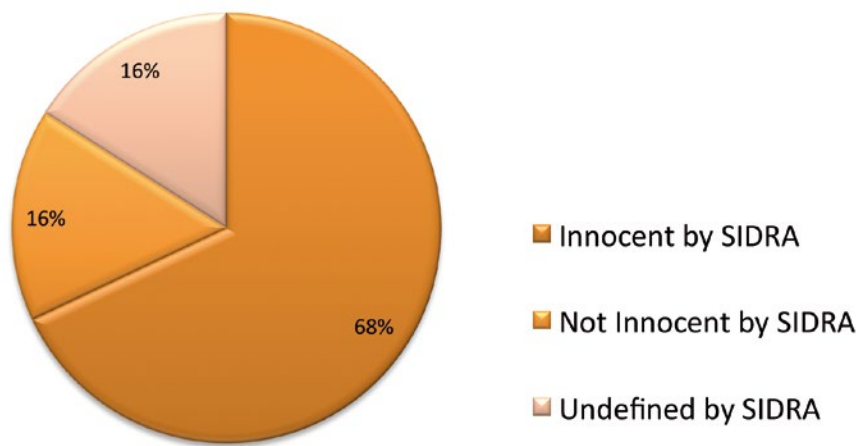
To validate the development of the project, a portal type gamma radiation monitor was installed in lane S-7 and a computer system running the SIDRA software in the CAS for data processing.



PROJECTS

The project prototype testing began by calibrating the system using a van containing real radioactive sources. Afterwards, the system was tested using a lorry with a container, where the location of the radioactive source was changed (centre of gravity, greater or lesser distance from the detector, etc.) for the different tests carried out. Finally, the system was used on lorries that operate on a daily basis on this lane with the software fully developed in order to gauge the effectiveness and utility of the proposed solution.

The tested showed that it is possible to reach a balance, given that the system can be used not only to improve the efficiency of the radioactive checkpoints when arriving to and departing from the port facilities, but also to increase the flow of traffic in ports, with the number of false positives, that would normally have to be investigated by CAS operators falling by 68%.



CYSM - COLLABORATIVE CYBER / PHYSICAL SECURITY MANAGEMENT SYSTEM

PROJECT PARTNERS:

Feports (coordinator); Singular Logic; Università Degli Studi di Genova; University of Piraeus; Port of Piraeus



"Co-funded by the Prevention, Preparedness and Consequence Management of Terrorism and other Security-related Risks Programme of the European Union"

OBJECTIVE: CYSM primarily aims to substantially improve the protection of critical port infrastructures (CIIs) taking into account both their cybernetic and physical nature. The project analyzes the whole spectrum of port CII threats, both direct and indirect, identifying their interrelations, correlations, diffusion and impact levels. Furthermore, a dynamic CII management methodology will be developed, taking into account both their cybernetic and physical nature, assessing risk against the specific requisites of the International Ship and Port Facility Security Code (ISPS, physical security) and of ISO 27001 Information Security Standard (cybernetic security).

TIME FRAME: April 2013 - April 2015

FUNDING BODY: Project co-financed by the European Commission through the "Prevention, preparedness and consequence management of terrorism and other security-related risks" programme.

WEB: www.cysm.eu

SUPPORT - SECURITY UPGRADE FOR PORTS

PROJECT PARTNERS:

BMT Group; Swedish Defence Research Agency; Securitas; Technical Research Centre of Finland; MARLO; INLECOM Systems; MARINTEK; Nautical Enterprise; STENA; eBOS Technologies; University of Innsbruck; Karlmar; Maritime Administration of Latvia; INRIA; MARAC Electronics; Port of Piraeus; EUROPHAR EEIG; EcoPort



OBJECTIVE: The primary aim of the project is to facilitate the deployment of new protection systems based on the coordination and cooperation of stakeholders from the ports sector and logistic chains, enabling evolution to take place from a centralized model controlled by either by a single stakeholder or by a collaborative effort by a number of them.

TIME FRAME: July 2010 - June 2014

FUNDING BODY: Project co-financed by the European Commission through the 7th Framework Programme

WEB: www.supportproject.info

CONTAIN – CONTAINER SECURITY ADVANCED INFORMATION NETWORKING

PROJECT PARTNERS:

FOI - Swedish Defence Research Agency; BMT Group; COTECNA Inspection Limited; INLECOM Systems; Interporto Bologna; Joint Research Centre; ELSAGDATAMAT; Thales; Telespazio; MARLO; Savi; Lithuania Customs; VTT; MJC2; eBos Technologies; Nautical Enterprise; European Organization for Security, ItalContainer, Italian Customs



OBJECTIVE: The primary aim of CONTAIN is to specify and demonstrate a European Shipping Container Surveillance System. The system will encompass standardization and protection policy recommendations, new business models and advanced management systems.

TIME FRAME: October 2011 - March 2015

FUNDING BODY: Project co-financed by the European Commission through the 7th Framework Programme.

WEB: www.containproject.com

MEDUSA - MULTI-ORDER DEPENDENCY APPROACHES FOR MANAGING CASCADING EFFECTS IN PORTS' GLOBAL SUPPLY CHAIN AND THEIR INTEGRATION IN RISK ASSESSMENT FRAMEWORKS

PROJECT PARTNERS:

Piraeus University (coordinator); Europhar-European Protection Harbour Area; Singular Logic (Greece); Austrian Technology Institute; Cyprus University



*With the financial support of the Prevention of and Fight against Crime Programme
European Commission - Directorate-General Home Affairs*

OBJECTIVE: The MEDUSA project is primarily aimed at designing a risk analysis methodology of Critical Infrastructures associated with the identification and evaluation of the “cascading effects” in the port supply chain around the world. The project will evaluate how they affect the vulnerability and the threat of other sectors and infrastructures in port security. In this regard, the main role of EUROPHAR is to identify the specifications, needs and requirements of the different stakeholders that interact with ports, such as port authorities, operators, shipping companies, customs, ship owners, etc. in order to prevent any kind of risk and / or threat to ports as result of the interdependence of critical infrastructures and the interaction of different entities during the supply chain.

TIME FRAME: July 2014 - June 2016

FUNDING BODY: Project co-financed by the European Commission through the Directorate -General of Home Affairs

WEB: www.athina.cs.unipi.gr/medusa/index.php

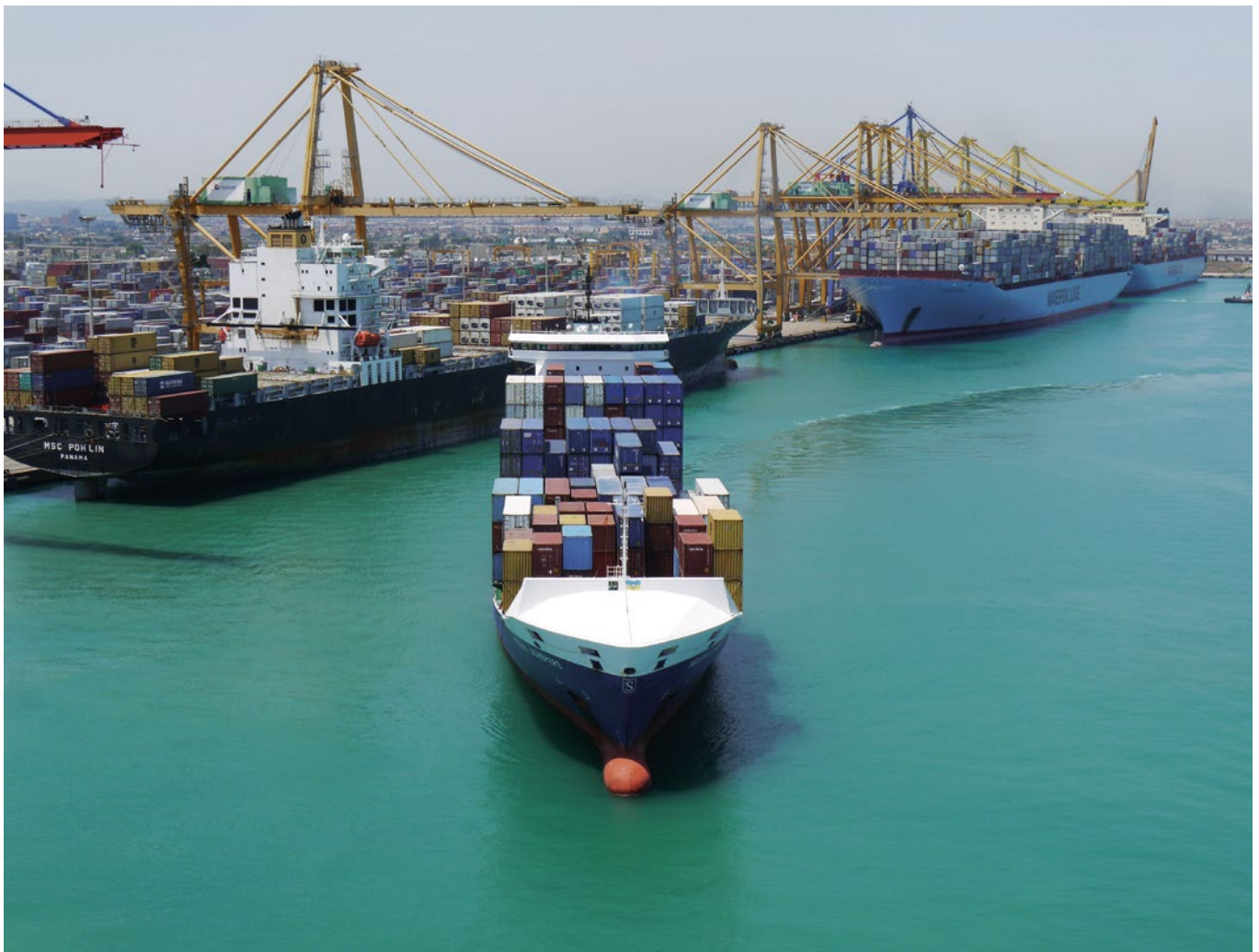
2.2.5. Others

In addition to the research programmes described in the earlier sections that include a number of different actions concerning topics that are undoubtedly of great interest to ports and their associated chains, over the course of the past two years, Valenciaport Foundation has also developed a whole series of initiatives that have helped to achieve a two-fold objective: on the one hand, support the creation of a 2020 strategic plan for Valenciaport, providing innovative solutions to the challenges being faced; and on the other hand, satisfy the specific needs of the key actors in the Valenciaport cluster and its surroundings, providing support to businesses and organizations that are more or less directly involved in promoting foreign trade and transport policies.

This will all be described in greater detail in the following pages, but briefly, the first group comprises projects focusing on the creation of a Port of Valencia Guarantee of Quality, improve funding of infrastructure and

innovation projects, the provision of value-added information about European transport policy, the development of a cruise-line policy or the innovation in the planning and management of container terminals. In addition to these initiatives, other projects have also been carried out that focus on improving available information required for decision making about port and maritime issues.

The second group is of particular note because of the collaboration with State Ports of Spain Organization in the development of R&D&I policies for the state-run port system. Valenciaport Foundation has therefore helped to define, the implementation and the management of the Interport R&D&I Commission, bringing with it its know-how and experience in designing the R&D&I framework programme for the Spanish port system. Similarly, and through the MESA (Maritime Europe Strategy Action) Programme, it has helped to develop a European maritime policy in collaboration with R&D&I centres and provides consulting services across Europe.



CO-EFFICIENT - COLLABORATIVE FRAMEWORK FOR ENERGY EFFICIENT SME SYSTEMS

PROJECT PARTNERS:

CIERVAL; Maribor University (Slovenia); Mura Regional Development Agency (Slovenia); Transport and Logistics Institute (Italy); Asociación de la Confederación Nacional de Artesanos y de pymes de la provincia de Módena (Italy); SATA Advanced Technology Applications (Italy); AFT Regional Delegation for the Rhone Alps (France); Eslavonia and Baranja Regional Development Agency (Croatia); Osijek Entrepreneur Centre (Croatia)



CO-EFFICIENT
COLLABORATIVE FRAMEWORK FOR
ENERGY EFFICIENT SME SYSTEMS



TIME FRAME: January 2013 - June 2015

FUNDING BODY: Project co-financed by the European Commission through the MED Programme

PROJECT JUSTIFICATION AND RESULTS:

OBJECTIVES:

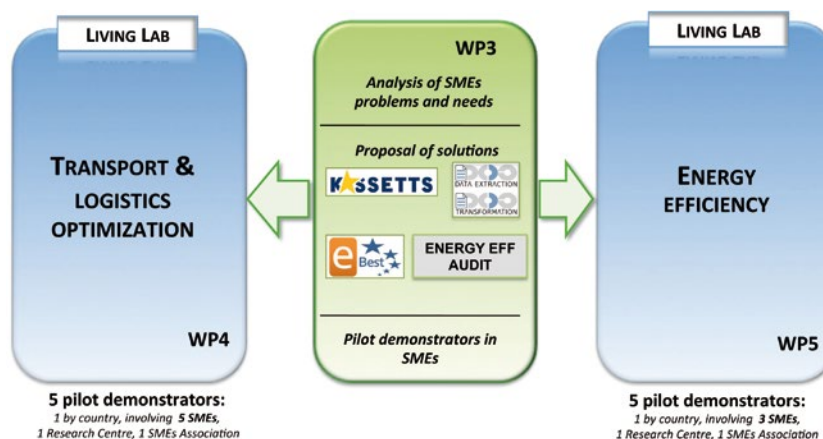
The overall objective of the Project is to bring about technological and behavioural changes among PYMES from the logistics and manufacturing sectors, generating positive results for the economy and the regional environment, in keeping with the principle of sustainable growth. The project will enable PYMES to communicate with business associations and R&D&I organisations about their particular needs and any issues related to energy efficiency, transport optimization and logistics. This flow of information will facilitate the detection of opportunities and will encourage the development of solutions adapted to their needs. The project nucleus is innovation in and for PYMES, including knowledge management and the customization of available technologies.

The CO-EFFICIENT project is financed by the European Commission through its MED Programme and includes organizations from five Mediterranean countries: Slovenia, Italy, France, Croatia and Spain.

METHODOLOGY:

Over the past decade, there has been a growing tendency in Europe in the field of innovation comprising the creation of so-called living labs. Living labs are used to build collaboration framework agreements between entities from different backgrounds to encourage the exchange of information between the different members in turn facilitating the detection of the best solutions to the detected requirements. This allows end users (for example, PYMES) to collaborate in the elopement of innovative ideas that will ensure their competitive advantage.

As part of the CO-EFFICIENT project, two living labs have been created in each of the five (5) countries participating in the project. Within the ten (10) living labs, specific pilot projects are to be carried out, the common objective of which is to improve the energy efficiency of the PYMES taking part. Furthermore, the results of the pilot project will provide sufficient information to be able to assess the feasibility of the chosen framework as a suitable environment to foster innovation. More specifically, each of the living labs will include between 3 and 5 PYMES (end users), a research centre and a business owner association to channel the transmission of information to the rest of the members of the living lab.



The first of the living labs focuses on the use of different tools to optimize the transport and logistics of PYMES. The suitability of the specialized tools available depends on the PYMES that go to form the living lab. Specifically, in the case of Spain, the following tools have been assessed:

- Assisting with the planning for container transport companies
- Document digitization software
- Recording and minimizing CO₂ emissions in companies with their own fleet of boats.

The second living lab focuses on the energy management of PYMES and aims to create support tools to help to improve the energy efficiency of the production processes.

Lastly, a methodology will be developed and tested to award energy efficiency certification to PYMES. This task, although it is not directly tied to any of the living labs, is cross-sectional and provides a value-added aspect to the project as far as promoting and encouraging energy efficiency in industry. The CO-EFFICIENT project provides two different types of certificates:

- Basic certificates to indicate that the company has basic knowledge of energy efficiency.



- Advanced certificates, awarded to members of the living labs and who have undergone an energy audit.



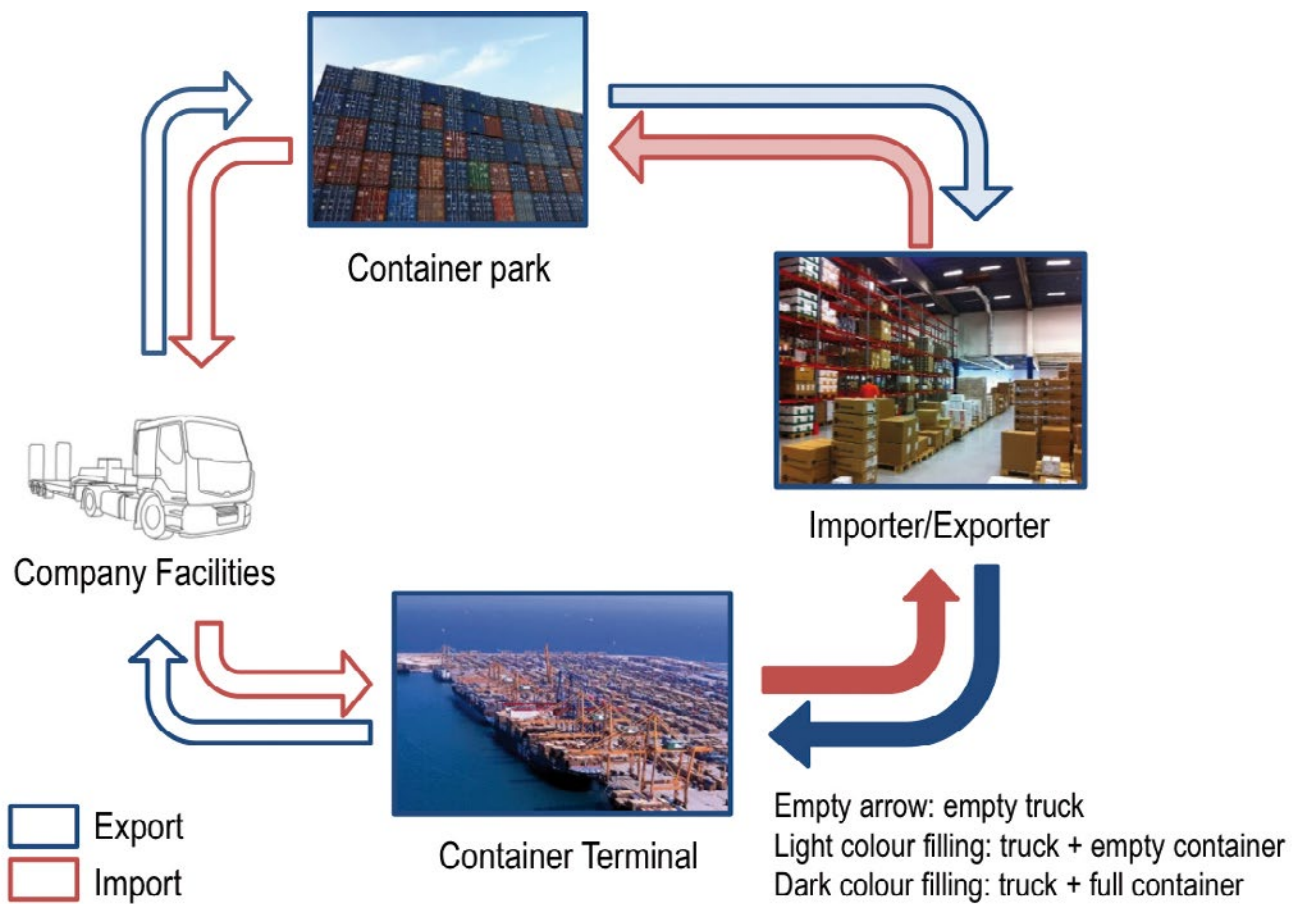
RESULTS:

Regarding the objective of the pilot schemes that were part of the living labs, the following results were achieved:

1. Assisting with the planning of container transport companies

Most of the volume of container traffic is transported between the port and importers/exporters by lorry. Many times, the businesses that carry this out receive notification of transport shortly before the time that the lorry needs to be at the client site, which makes daily planning a difficult job. Consequently, the assignment of drivers and the allocation of lorries to each transfer order may not be the best, so any assistance that improves the situation will have knock on effects on the costs incurred and energy consumption (primarily fuel) of these companies.

The aim of this pilot scheme is to develop a planning wizard that proposes the best assignation at any given moment. This requires taking into account the specific characteristics of container transport, with special consideration of the fact that each import or export transport operation requires a series of journeys between three locations (container park, client site and container terminal).



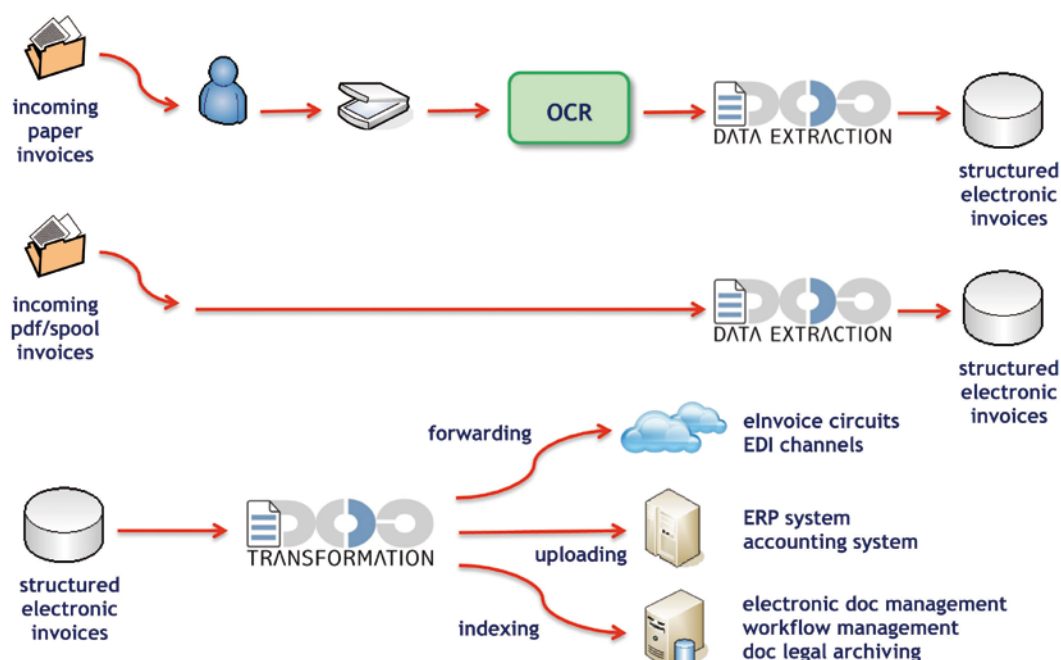
The development of the tool used real data from earlier transfer assignments for container transport companies taking part in the pilot scheme. This facilitated the detection of optimum assignment criteria (highly valuable in such a dynamic setting as assignment scheduling) and was essential for the development and fine tuning of the “wizard”. The tool uses time slots for each vehicle which are then blocked when it is assigned a transfer. Furthermore, it enables you to adjust a number of data entry parameters (e.g. The number of available vehicles, average driving speed, waiting time at terminal, etc.), facilitating the carrying out of studies that analyse the influence of said parameters on the overall cost of transport, which could be useful when making decisions (e.g. Optimum size of the fleet, company driving speed policy etc.).

2. Digitizing transport documents.

The day-to-day work of transport companies requires managing and handling an enormous quantity of documents and inputting their content into the respective business management systems. Currently, a large quantity of this management is carried out manually, a costly process and which gives rise to

human error. The use of tools to transform paper documents into an electronic format allows PYMES to operate in a paperless society, which is more efficient, requires fewer resources and is more environmentally friendly.

Within the living lab that focuses on the Optimization of Transport and Logistics, a pilot scheme was carried out that featured the development of a document digitizing tool that stemmed from an earlier European project (eBest) which certain members of the CO-EFFICIENT project partners had also taken part in. The identifies the values (both text and numbers) contained in the document that is to be digitized and classifies it according to some pre-established criteria. The results are stored in a structured output file that can be used by a wide variety of systems. For example, the programme can read an invoice in PDF format, identify the data fields (invoice number, client name, Tax ID, invoiced items, etc.) which are then stored in an XML file. This file can then be read by the company's management system and then later stored as fields in the company's database, meaning that the full management of the invoice does not require any manual process.



The aim of the pilot carried out as part of the CO-EFFICIENT project is the paperless management of transfer orders. Specifically in container transport companies, as it enables the automatic storing of details of the client transfer order which can be sent via email. It speeds up management and minimizes the number of incidents stemming from mistakes made when manually processing the orders.

3. Recording and minimizing CO₂ emissions of companies with their own fleet

The third pilot, included as part of the Transport and Logistics Optimization living lab aims to encourage transport companies to adopt actions that reduce fuel consumption. In this regard, they have profited from

two initiatives spearheaded by the Spanish and French governments respectively: recording the carbon fingerprint and the Objectif CO₂ Programme. The pilot project takes advantage of the shared and complementary aspects of both initiatives resulting in a structured methodology that enables companies with their own fleet to calculate their CO₂ emissions and set up a reduction plan based on specific actions that must be undertaken for a period of three years following enrolment in the plan. In addition to the direct benefits stemming from the implementation of the reduction plan, during the pilot scheme, assistance was provided to companies enrolling in the carbon footprint registry, created by the Spanish Ministry of the Environment, and receiving their corresponding stamp.



The pilot scheme was implemented in 4 different transport companies (2 transporting containers, 1 transporting liquid gas and 1 transporting general freight), who had already enrolled in the scheme and had received the list of activities they must undertake. The monitoring of the plan over the coming years will give a new lease of life to the living lab created within the framework of the CO-EFFICIENT project, and may potentially lead to other new initiatives.

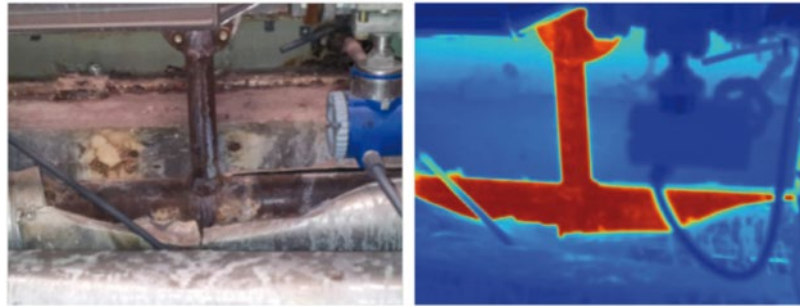
4. Self-diagnostic tool to check energy efficiency.

The primary objective of the pilot carried out in the living lab focusing on innovation of Energy Efficiency is the development of a self-diagnostic tool and the improvements that would enable PYMES to use it to detect aspects of their production process and their facilities that are susceptible to improvements, namely to achieve a more efficient use of the

PROJECTS

energy consumed. The tool has benefited from the invaluable information provided by a series of energy audits carried out on the facilities of the PYMES taking part in the living lab. Specifically, in the case of Spain, 3 energy audits were carried out on PYMES of different sizes and with different specialisations:

a textile business, a manufacturer of plastic packaging and a logistics operator specializing in container transport. The pilot provided the participating companies with a direct value added, given that the results of the energy audit enabled the PYMES to measure and characterise their energy consumption and rectify any inefficiencies in their energy use and management.



Badly insulated pipelines. Source: Technology Institute of Energy (ITE)

The self-diagnostic and improvement tool is available to the general public on the web portal created as part of the project (<http://www.coefficient-project.eu/>). The portal is one of the project outputs that will enable companies to benefit from its results far beyond the life-cycle of the project and acts as a rendez-vous point for PYMES and R&D&I centres where they can share and disseminate innovative solutions to energy efficiency issues. Among the services available from the web

portal, and in addition to the ones already mentioned above, is a document download area with documentation from the project and a knowledge database that includes information about innovation projects, sources of financing, solutions and best practices, and is a source of information about energy efficiency that is of great use to PYMES.

WEB: www.coefficient-project.eu

KNOWLEDGE DATABASE

Would you like to be more energy efficient but don't know how? Are you looking for funding sources in order to implement energy saving interventions. Please check what others have done, use their experiences and gain insight into best practices, find funding sources or just browse through news - we are sure you will find many interesting information.

Offer your services/products or search for what you need
Are you looking for services or products? Would you like to offer your services or products to others? Would you like to establish new business contacts or gain new opportunities in different countries? Register your company to "Brokerage tool" and offer your services/products to others or look for companies/organisations to help you achieve your vision.

Analyse your Energy Efficiency
First step to saving energy and saving money is assessing your business' energy use. Analyse energy use in your business in order to identify and prioritize ways to improve your energy efficiency.

Apply for Certificate
If you believe you are already operating your business in energy efficient way, why not apply for CO-EFFICIENT certificate and publicize your success.

Contribute best practice
You are invited to contribute your case of Best Practice to our Knowledge Database. Best practice is considered an existing and implemented approach or solution providing solution for a relevant problem or challenge with regard to improvement of energy efficiency.

BROKERAGE TOOL

FUNDING SOURCES

- 08.11.2014 → Renovation Plan of Industrial Components Using Natural Gas
- 04.07.2014 → SPAIN: funding opportunity JESSICA F.I.D.A.E.
- 04.07.2014 → SLOVENIA: Development incentive program SID Bank to finance investments in energy efficiency of small and medium-sized enterprises 2014-2015
- 04.07.2014 → FRANCE: Funding opportunities through the ADEME
- 08.07.2014 → SLOVENIA: Grants to citizens for purchase of electric vehicles

BEST PRACTICE

- 08.11.2014 → Renovation of Protected Building into an Energy Efficient Business - Comenete Sljane
- 04.07.2014 → SPAIN: Carbon Footprint Registration
- 04.07.2014 → Energy self-sufficient office building
- 04.07.2014 → Objective CO2 - eco-driving training
- 04.07.2014 → Recovery of the heat of the sewage network in a hotel in Bordeaux
- 15.07.2014 → Steps to help manufacturers go green and save green

PROJECTS

SOLUTIONS

ACTIVE PARTICIPATION IN THE INTERPORT R&D&I COMMISSION OF THE STATE-OPERATED PORT SYSTEM

OBJECTIVE: The aim is to boost three initiatives being adopted in the heart of the Interport R&D&I Commission:

- Implementing an initial Work Group (GT0). Under the heading "Customer service (Port and Logistics Chain and Port Services), tools to improve and develop ICTs" with the aim and intent to: on the one hand, ensure continuity of the work of the Commission, and on the other, instigate the formation of future special interest groups on a need by need basis.
- Drafting of a proposed methodology for Consolidated Knowledge Guides for specialized areas, an essential element for the structuring and planning of the System and therefore the leitmotif of the R&D&I activities.
- Building of a web portal, in keeping with the need to create swift communication procedures to standardize the mechanisms for dialogue between the members of the different bodies that go to form the Coordinating Structure of the R&D&I activities of the Spanish Port System.



TIME FRAME: October 2012 - September 2013

FUNDING BODY:

MESA - MARITIME EUROPE STRATEGY ACTION - FOSTER WATERBORNE

PROJECT PARTNERS:

European Community Ship-owners Associations - CESA (Belgium) - (coordinator); Center of Maritime Technologies EV (Germany); Hamburgische Schiffbau-Versuchsanstalt GMBH (Germany); Fincantieri - Cantieri Navali Italiani Spa (Italy); Centre d'études Techniques Maritimes et Fluviales (France); Norsk Marinteknisk Forskningsinstitutt AS (Norway); Corporacion Maritima Lobeto Lobo S.L. (Spain); Inlecom Systems Ltd (United Kingdom); D'appolonia Spa (Italy); Brookes Bell Llp (United Kingdom); Safinah Limited (United Kingdom); European Council for Maritime Applied R&D Association (Belgium); Stichting Centrum Voor Maritieme Technologie en Innovatie (Holland); Meyer Werft GmbH (Germany); Germanischer Lloyd Se (Germany); Bmt Group Limited (United Kingdom); Scheepswerf Damen Gorinchem BV (Holland); Rheinisch-Westfaelische Technische Hochschule Aachen (Germany); Danaos Shipping Company Ltd (Cyprus); Rolls-Royce Power Engineering Plc (United Kingdom); University of Strathclyde (United Kingdom); Dcns Sa (France); Bureau Veritas-Registre International de Classification de Navires Et D Aeronefs Sa (France); International Council of Marine Industry Associations (Belgium); Foundation Wegem - a European Association of Universities in Marine Technology And Related Sciences (Holland) Flensburger Schiffbau- Gesellschaft Mbh & Co Kg (Germany)

Maritime Europe Strategy Action

OBJECTIVE: The primary objective of the MESA project is to bolster the effectiveness of R&D&I measures and plans by the European maritime industry through the following:

- Optimization of the R&D&I strategies of the European maritime industry.
- Improve the dissemination, visibility and application of the results from R&D&I projects of the different agents that comprise the logistics chain of maritime transport.
- Boost the defining of R&D&I policies applied to maritime transport.

TIME FRAME: September 2013 - August 2016

FUNDING BODY: Project co-financed by the European Commission through the 7th Framework Programme

WEB: http://155.253.11.58/science_kms/

MONITORING OF EUROPEAN TRANSPORT POLICY: FINANCING PROJECTS AND ANALYZING TRANSPORT POLICIES

OBJECTIVE: The objective is two-fold, on the one hand, to improve information that the VPA and businesses from the Valenciaport cluster handle regarding European transport policy, providing in depth knowledge of the rules and regulations that affect our activities; and on the other, the regular and systematic provision of information concerning the different financing programmes that might affect the activities of the Port of Valencia.

TIME FRAME: January 2012 - December 2014

FUNDING BODY: Valencia Port Authority

QUALITY IN THE PORT COMMUNITIES OF VALENCIA AND SAGUNTO: BRANDING A QUALITY GUARANTEE

OBJECTIVE: The overall objective of the project is to provide technical support to the Quality Boards of Valencia and Sagunto, and to their different work groups, analyzing the specific issues that affect the correct functioning of the Port Community, helping to find a set of potential solutions.

THE VPA is currently the head of the aforementioned Quality System. Its role is closely linked to that of the Valenciaport Foundation, namely at the service of the port and logistics community to strengthen its integration and to boost its competitiveness.

TIME FRAME: January 2014 - December 2015

FUNDING BODY: Port Authority of Valencia

STRENGTHENING THE PORT-CITY RELATIONSHIP BY BUILDING UP CRUISE SHIP TRAFFIC AND IMPROVING URBAN LOGISTICS

OBJECTIVE: The objective of the project is to improve the expertise of agents from the Valenciaport cluster in a number of fields with close ties to them: cruise tourism, mobility and innovation in urban freight logistics.

TIME FRAME: January 2014 - December 2015

FUNDING BODY: Port Authority of Valencia

INTEGRATION AND COMPETITIVENESS OF THE VALENCIAPORT CLUSTER

OBJECTIVE: The main objective is to provide technical support to the different work groups that analyse the specific issues that affect the operations of the Port Community and assist with the search for possible solutions; furthermore, it collaborates with the definition of indicators to monitor the five guarantees currently in place: container flow, BL, mooring, procurement and security.

TIME FRAME: January - December 2013

FUNDING BODY: Port Authority of Valencia

ASSISTANCE WITH THE R&D&I COORDINATING STRUCTURE OF THE SPANISH STATE MANAGED PORT SYSTEM THROUGH THE TECHNICAL SECRETARIAT OF THE INTERPORT R&D&I COMMISSION

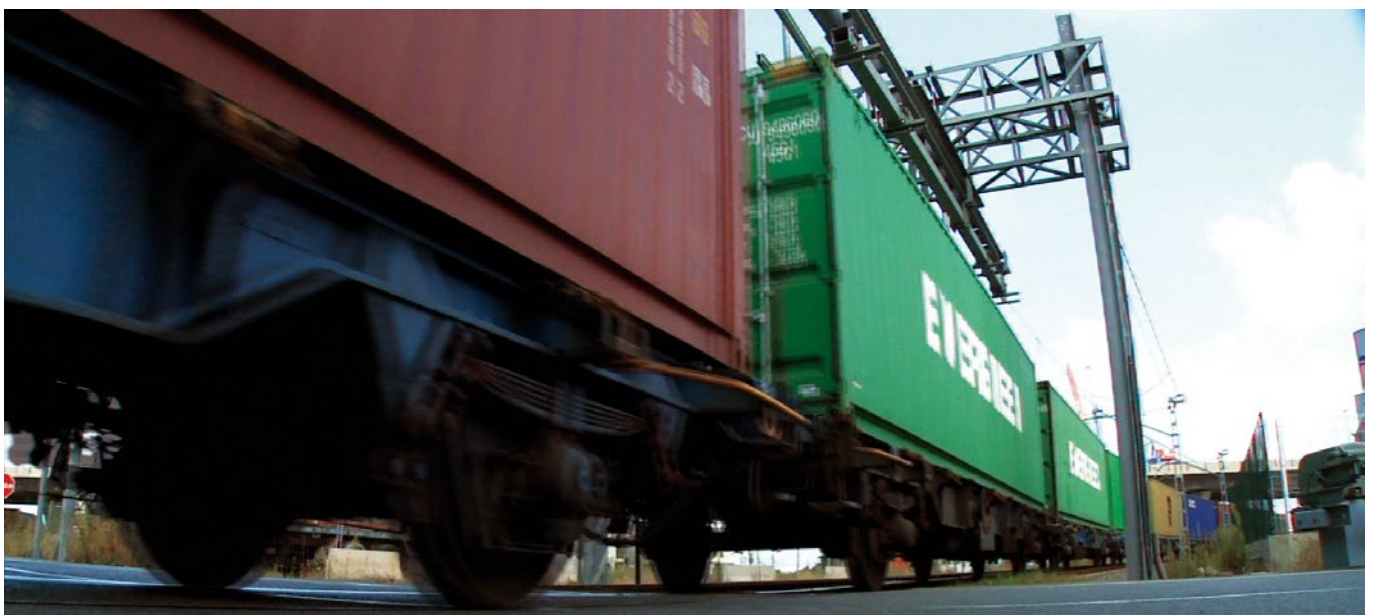
OBJECTIVE: The contractual services of Assistance to the Technical Secretariat of the Interport R&D&I Commission, headed by the Spanish State Port Authority, focus on providing organizational support and technical assistance. Technical assistance is provided for the following: support for dialogue of the SPE within the framework of national and European R&D&I subventions for consortium projects, technical assistance and organisational support for the activities of the Work Groups (WG1; Intelligent Port, WG2, Sustainability and WG3, Infrastructures; and the development of tasks such as organising specialised port R&D&I seminars, presenting statistics from studies about SPE activities or adding new content to the SPE R&D&I web page (WIDISPE at www.puertos.es).

STI+D+i



TIME FRAME: July 2014 - July 2015

FUNDING BODY: Spanish State Port Authority



R&D&I AND QUALITY SERVICE OF CONTAINER PORT TERMINALS

OBJECTIVE: Container traffic is the primary source of traffic in terms of volume and money for the Valencia Port Authority and consequently is a leading strategic element. Currently the Port of Valencia provides three terminals specialising in the handling of this type of freight and there are medium term plans to expand the port to be able to deal with this particular kind of traffic.

In recent years, port policy has been highlighting the need to encourage R&D&I in terminals as they have a central role in the supply chain. Within a European framework, Communication by the Commission (COM (2007) 616 final) about a European port policy, aware of the strategic importance of port infrastructures for economic development and growth, clearly explains that “new technological innovations concerning port facilities, such as automated stacking crane, gantry cranes on rails, automated container terminals using twin or tandem lift spreaders are also an important factor and will help to increase the efficiency of European ports”. In the case of Spain, at the meeting of the Public Works Commission in February 2012, the Minister in charge explained “a requisite of concession tenders will be the use of technology to increase productivity and lead to automation of the terminals”.

The ultimate goal of this project is to provide in-depth knowledge about applied automation technology (teams and systems) of CPTs and in the use of simulation tools to facilitate the analysis of strategic, tactical and operational decisions that will lead to the increased competitiveness of the facilities.

TIME FRAME: January 2012 - December 2013

FUNDING BODY: Port Authority of Valencia

TECHNICAL ASSISTANCE WITH THE RETURN-ON-EQUITY ANALYSIS OF A CRUISE LINE TERMINAL FROM THE PERSPECTIVE OF THE COMPANY AWARDED THE CONTRACT AND THE VALENCIA PORT AUTHORITY

OBJECTIVE: The study is spearheaded by the Port Authority of Valencia, which is interested in carrying out a feasibility analysis of a project to build and open a maritime station, and to then operate a cruise ship terminal in the Port of Valencia, from the perspective of the company awarded the contract (terminal operator) and that of the Port Authority of Valencia (PAV).

The ultimate goal of this work is to estimate the return on equity for both the terminal operator and the PAV with the concession and operating of a cruise ship terminal in the Port of Valencia.

The specific objectives of this study are as follows:

- Return-on-equity analysis for the concession and operating of a cruise ship terminal for a private company awarded the infrastructure concession.
- Return-on-equity analysis of the construction, awarding of concession and control of compliance of the terms of the concessionary contract awarded by the PAV.
- Dissemination of the results to the Board of the PAV.

TIME FRAME: November 2012 - January 2013

FUNDING BODY: Port Authority of Valencia

COST - PUBLIC PRIVATE PARTNERSHIPS IN TRANSPORT: TRENDS AND THEORY

OBJECTIVE: The objective of the project is to develop a theoretical benchmark framework for Public Private Partnerships (PPPs) in the transport sector based on the multidisciplinary analysis of an extensive set of empirical trans-national and inter-sectoral data.

This implies a move from a descriptive to a regulatory focus, which will allow for predictions and variation, impact and outcome forecasting. The ultimate objective of this project is to collect and consolidate dispersed know-how from different disciplines and countries, and to subsequently use this know-how to develop innovative and sustainable strategies to purchase, hire and provide public services, in addition to disseminating this know-how and facilitating progress in education and training in PPPs.



TIME FRAME: August 2010 - August 2014

FUNDING BODY: Project financed by the European Commission

ANALYSIS OF THE PORT MARITIME MARKET

OBJECTIVE: The primary objective of this project is to provide the VPA and the Valenciaport cluster with relevant, up-to-date quantitative and qualitative information from around the world about the maritime port business, allowing it to have elements of debate and to develop criteria to employ in its strategic, operational and tactical decision-making.

If we then divide the primary objective into its more specific ones, we see the following:

- Scenario. Primarily quantitative and to a lesser extent qualitative analysis: Drafting of a series of periodic reports on a variety of different agents and characteristics from the scenery where "the business" is operating at a worldwide level but also "regionally": maritime traffic, container port shipping companies, port operators, port fitting companies, etc. All of which is achieved by identifying reliable sources, its acquisition, and the analysis and drafting of the information. It's a search for historical continuity that will enable us to compare them and to study trends and tendencies.
- Actors. Qualitative analysis: gradual development of "networking" among the multiple agents involved around the world in the maritime port business.
- Script: Systematic capture, analysis and elaboration of information, primarily qualitative, either about news, trends, reports, sourced from a range of different written and electronic media (systematically), or documents from different participating agents, such as shipping companies, operators, associations, etc. (discretionally).

Complementary to this, and taking into consideration the strategic interest for Valenciaport of acquiring knowledge about the commercial policies of other Spanish ports, the approach was to draft a revision report of the correction coefficients that the 28 port authorities belonging to the Spanish state-operated port system need to apply to their rates for ships and goods.

TIME FRAME: January 2012 - December 2013

FUNDING BODY: Port Authority of Valencia

TRADE AND MARITIME TRANSPORT OBSERVATORY

OBJECTIVE: The ultimate goal of this project is to provide the Port Authority of Valencia and the port community with a dynamic, integrated system containing exhaustive and quality information that enables them to make well-grounded decisions in an increasingly complicated global market.

The general objective appears in a number of different applications or sub-projects that cover a wide range of information within the field of handling statistical information, namely: maintaining and updating its own databases (LinePort and LineRail); the development of tools to handle and simulate the data (its own or pre-existing) to carry out market analysis (TradeTrans, SimTrans and Hinterland Simulator); the selection, systematisation and updating of information in new areas of interest (Trade and Maritime Transport Observatory); the creation of an estimation and forecasting model for traffic studies (sectoral traffic forecasting) and lastly, the dissemination of information for potential users (Newsletters and customised enquiries).

TIME FRAME: January 2012 - December 2013

FUNDING BODY: Port Authority of Valencia



2.2.6. Internationalization

Internationalization, which is the more concise term for international collaboration projects, has been one of Valenciaport Foundation's greatest assets from the outset.

On this subject, however, it is important to clarify one aspect: while the main scope of the Valenciaport Foundation's work was initially limited to serving the Valenciaport cluster, over time the Valenciaport Foundation has become ever more closely linked to the international arena through its R&D&I activities. Most such activities lie within the framework of various European projects, but when we refer here to internationalization, we are not actually referring to this area of work.

The Valenciaport Foundation's concept of internationalization refers the next step, that is, the transfer of knowledge and results from research projects to other ports or port communities that are undergoing a process of development and growth, and currently facing challenges that Valenciaport faced in the past. Obviously, this work is undertaken without neglecting the important objective of serving the internationalization of the Valenciaport cluster.

For obvious reasons regarding the benefits of sharing a language, and as well because it is an area where the process of development is typically in full flow, Latin America has been a logical focus for the principal actions in the field of international cooperation.

The most noteworthy projects developed in the 2013-2014 period include:

- Development of the Master Plan for the Port of Lambayeque, Peru.
- Implementation plan for automating the positioning of container equipment. Port of Lázaro Cárdenas, Mexico.
- Design and implementation of the Port Single Window in Brazilian seaports and support for the implementation of an intelligent loading system (Sub-directorate General of financial support for internationalization and Ports Secretariat), Brazil.
- Implementation of automatic control procedures for the operation of the Directorate General of Customs at entry to the Port of Montevideo, Uruguay.
- Participation in the National Transport Plan Development, Colombia.
- Preparation of the new strategic plan for Uruguay's National Institute of Logistics (INALOG) and laying the foundations for five collaborative projects with the Andean Development Corporation (CAF), Uruguay.

This is not to say that other continents or countries have been ruled out of Valenciaport Foundation's growing internationalization agenda; on the contrary, the Foundation has already begun specific training actions in African countries such as Equatorial Guinea, as a first step towards generating future international projects. Furthermore, it is important to note that the significant growth in traffic between the Port of Valencia and North African countries, and Valenciaport's consequent heightened profile there, will surely prove an important factor with respect to collaboration in that entire area.

The role of internationalization for the Valenciaport Foundation is clearly vital, then, and this role is also reflected in the Foundation's management's new focus on this business area. As a result of its new approach to further expanding in this area, the relevant team has been restructured and additional countries and ports have been targeted for new collaboration strategies. All this is obviously in addition to maintaining and strengthening existing collaborative relationships.

Part of this new strategy also involves raising Valenciaport Foundation's profile and accordingly various representatives from the Foundation have recently participated as speakers in a number of seminars and forums:

- Senior Port Management Seminar, organized by the American Association of Port Authorities (AAPA) and the General Secretariat of Communications and Transportation of the Mexican Government (SCT) in Merida.
- Annual Congress of the Port of Valparaíso Logistics Forum (FOLOVAP), Chile.
- Annual Congress of the Mexican Association of Port Operators (ATOP). Veracruz, Mexico.
- Port Communities Seminar, organized by the Port of San Antonio Logistics Community (COLSA), Chile.

PROJECTS

Lastly, it is worth noting the open collaborative relationship with SGS Argentina, the primary aim of which is to develop new projects and courses related to new port technologies, improving energy efficiency and

port safety management, as well as port management and planning. Also worth mentioning is the increasingly close cooperation with INECO as a collaborative partner for projects in Latin America.

MASTER PLAN FOR THE LAMBAYEQUE REGION PORT TERMINAL

PROJECT PARTNERS:

Acciona Ingeniería, OIST, S.A.

TIME FRAME: September 2013 - December 2014

FUNDING BODY: Lambayeque Regional Government



PROJECT JUSTIFICATION AND RESULTS:

As part of the current legal framework for port planning in Peru, the **National Port Development Plan** contains the legal and technical documentation required to transfer related public policies to port management and also to attempt to bring these policies in line with the necessary private initiatives - both agents and operators as well as individual users of port services. The document was approved in 2005 and amended several times; the one currently in force was approved by the Ministry of Transport and Communications in 2012. According to the aforementioned National Plan, the existing Regional Port Authorities (RPAs) have a maximum of five years to attain approval of master plans for the regional port terminals under their jurisdiction, and they can sign management agreements with the National Port Authority in order to draft these master plans.

The Lambayeque Regional Port Authority was set up on 11th September 2012. Within the time frames established by

law, in March 2013 the Lambayeque Regional Government released a call for tenders for developing the Master Plan for the regional port terminal. The tender was awarded to the Lambayeque Port Consortium, which comprised the Valenciaport Foundation, Acciona Engineering and OIST, S.A.

Their objective was to develop the Master Plan for the Lambayeque Region Port Terminal, defining port infrastructure needs and the equipment required to establish a harmonious development of port facilities in the short-, medium- and long-term. The physical, economic and strategic potential was also identified in alignment with a number of elements including: forecasted traffic flow and demand for services; the evolution of international trade and transport; the requirements of the port's area of influence, including the location of a logistics zone; and the expected regional and national economic development.

The project is divided into fourteen phases / products that combine to respond to the Master Plan structure and contents, as defined in the National Plan.

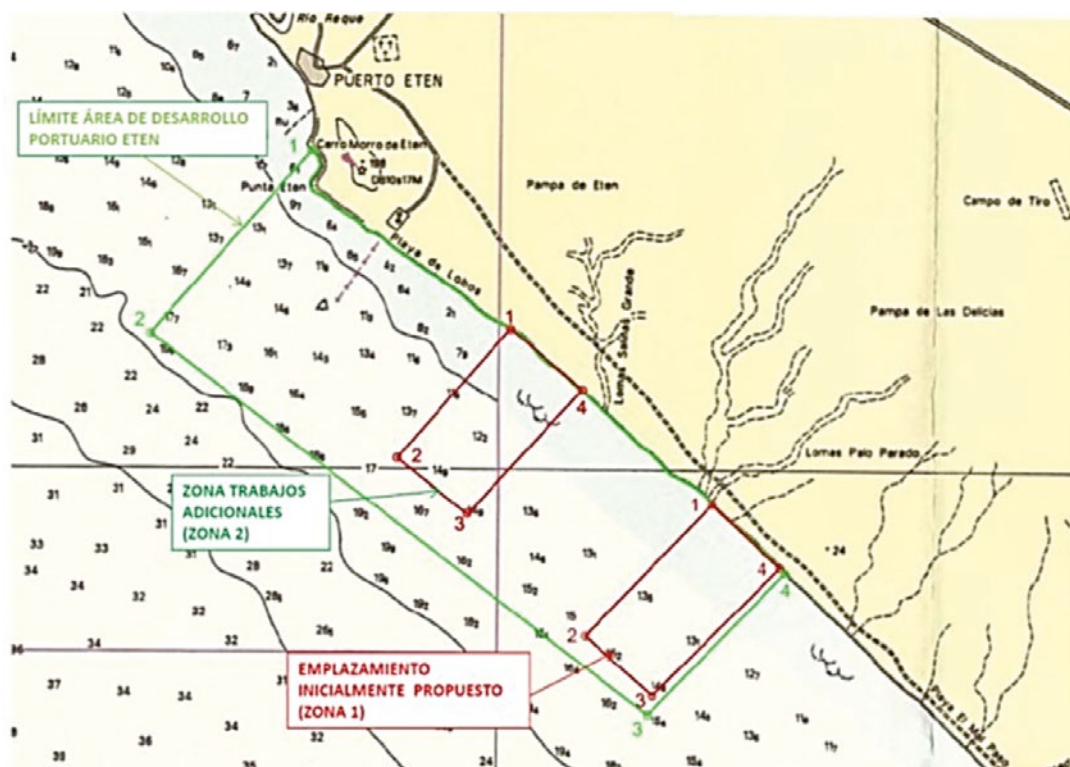
METHODOLOGY: CONNECTION BETWEEN PHASES, MASTER PLAN PRODUCTS AND CONTENT FOR SELECTED LOCATION OF PORT TERMINAL: ZONE 2 PORT ETEN DEVELOPMENT AREA



The following results were achieved:

- **The location of the port facility** on the coast of Lambayeque region was determined using multi-criteria analysis.

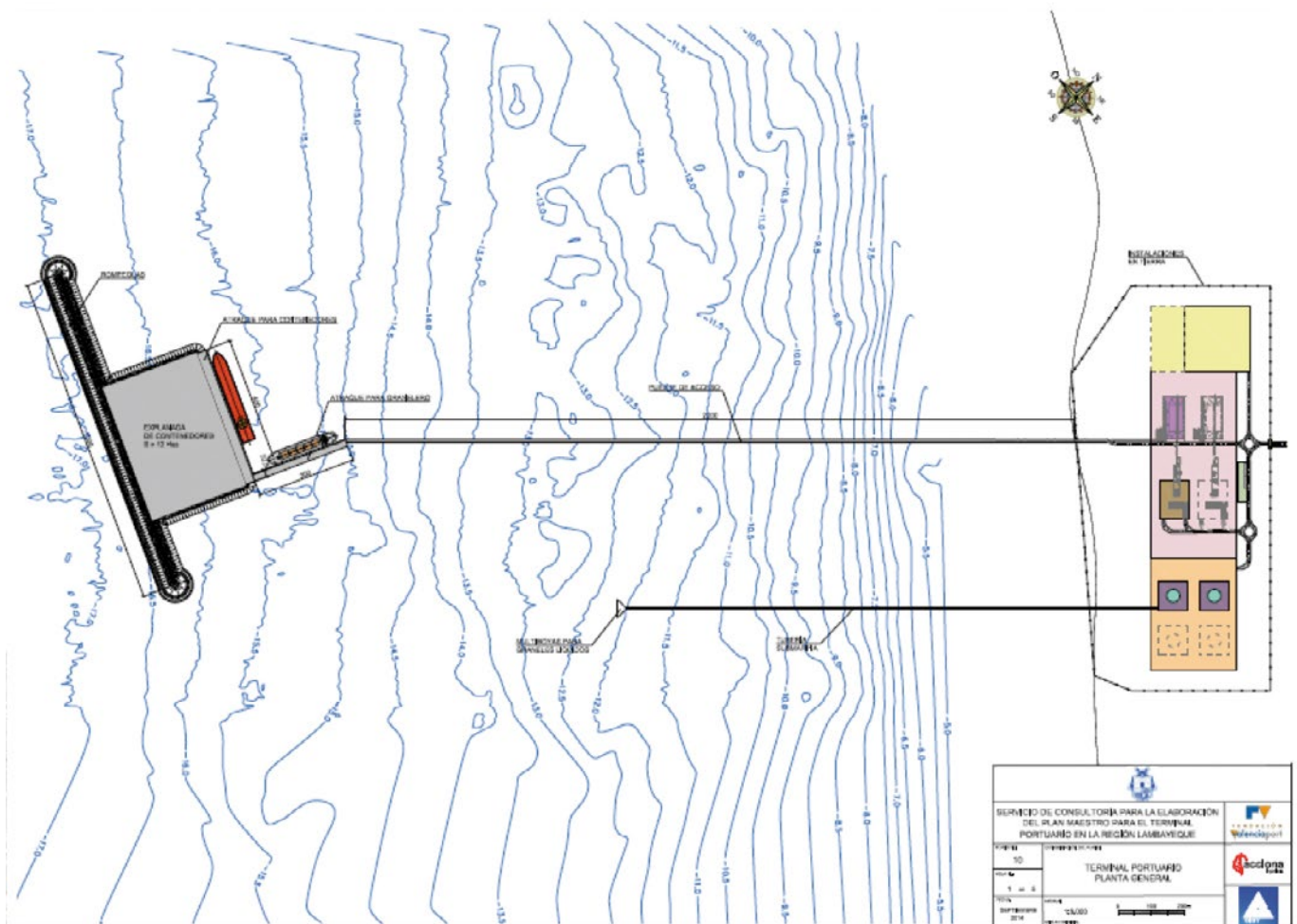
SITE SELECTED FOR PORT TERMINAL LOCATION: ZONE 2 OF THE PORT OF ETEN DEVELOPMENT AREA



PROJECTS

- **Forecasted demand** for services relating to cargo and ships, both in terms of existing traffic in the hinterland and its evolution, as well as potential traffic as determined by an inter-port competitiveness analysis.
- Establishment of an **operational model** for the facilities.
- Execution of technical, economic and environmental studies to support the different development alternatives proposed.
- Definition of the most suitable design and investment alternatives for the new infrastructure, with implementation stages outlined.

PORT TERMINAL LOCATION



- Analysis of **accessibility by land and the urban environment**.
- **Socio-environmental assessment** of the potential impacts of the construction works and operation of the terminal. Proposals for community outreach programmes, coordination and agreements reached with the public, in order to establish a suitable framework for fostering relations between the port and its surrounding city.
- Preliminary study to determine the location of an additional **logistics area** servicing port activities.
- Deployment of a **face-to-face and online training** programme to support the Lambayeque region's port community.



both the regional and national level, and from both social and economic spheres.

CONFERENCES

USAT
Universidad Católica
Santo Toribio de Mogrovejo

APRIL
Autoridad Portuaria
Regional Lambayeque

Conferencia Internacional Terminal Portuario de Lambayeque

Planificación y Desarrollo Económico

Ponentes

Ing. Arturo Monfort
Ing. Jorge Nakazaki
Ing. Mulinas Servigón

Jueves 29 mayo

10:30 am - Auditorio 802 USAT

Temas

01 Instrumentos de Planificación y Gestión Portuaria Aplicada al Terminal Portuario de Lambayeque

02 Avances del Plan Maestro.

TECHNICAL SUPPORT FOR THE IMPLEMENTATION OF THE INTELLIGENT PORT LOGISTICS CHAIN PROJECT: INTERNATIONAL EXPERIENCE IN PORT COMMUNITY INFORMATION MANAGEMENT

TIME FRAME: March 2013 - March 2015

FUNDING BODY: Federal Government of Brazil – The FEESC of the Federal University of Santa Catalina (UFSC)



PROJECT JUSTIFICATION AND RESULTS:

In December 2009, the Brazilian Government, along with its Spanish counterpart, issued a call for tenders for a “Feasibility Study for the Design and Implementation of a Port Single Window” in the maritime ports overseen by the Brazilian Ports Secretariat (SEP / PR). A consortium composed of Valenciaport Foundation and Infoport Valencia S.A. was selected to develop the study, in line with the guidelines of the Spanish Government’s Fund for Feasibility Studies (FEV).

This study enabled the identification of the main shortcomings and opportunities for improvement in the port-logistics procedures in the port of Santos, which can be summarized as follows: i) the need for an effective single window for national government systems that incorporates all the governing bodies involved, ii) the need for paperless terminals, and iii) the opportunity to expand the Paperless Port to port-logistics loading procedures, by extending it to

private partners. This set of data was taken as a basis for developing a Strategic Planning Proposal for the Port Single Window, thus concluding the study.

On 9th August 2011, a project completion meeting was held and the project results were presented. There was evidence of a notable correlation between the study’s recommendations and a number of ongoing SEP/PR initiatives, especially the project “Intelligent Port Logistics Chain”. Altogether, Valenciaport Foundation’s participation, calling on their international experience in information management in the port community, represents an important contribution to the implementation of the project.

Valenciaport Foundation’s contribution to the study lies in its international experience with respect to port community information management and knowledge transfer on subjects related to the “Intelligent Port Logistics Chain” project. (CLPI).

MODELO DE NEGOCIO CLPI - Brasil					
	Concepción	Inversión	Desarrollo	Gestión	Manutención
SISTEMA PORTOLOG					
Corto Plazo	SEP/PR	SEP/PR	SERPRO	SEP/PR	SERPRO
Medio-Largo Plazo	-	SEP/PR	-	SEP/PR	SERPRO
CENTRAL DE CONTROL, PUERTA DE ACCESO, GATES AUTOMATIZADOS PÚBLICOS, PRE-GATES					
Corto Plazo	SEP/PR	SEP/PR	Iniciativa Privada	AP - Concesionario	Iniciativa Privada
Medio-Largo Plazo	-	AP	-	AP - Concesionario	AP - Concesionario
GATES AUTOMATIZADOS DE LOS TERMINALES					
Corto Plazo	SEP/PR – AP – Iniciativa Privada	Iniciativa Privada	Iniciativa Privada	Iniciativa Privada	Iniciativa Privada
Medio-Largo Plazo	-	Iniciativa Privada	-	Iniciativa Privada	Iniciativa Privada
PUNTOS DE CONTROL AUTOMATIZADOS					
Corto Plazo	SEP/PR – AP	Gobierno - Iniciativa Privada	Gobierno - Iniciativa Privada	Gobierno - Iniciativa Privada	Gobierno - Iniciativa Privada
Medio-Largo Plazo	-	Gobierno - Iniciativa Privada	-	Gobierno - Iniciativa Privada	Gobierno - Iniciativa Privada
PUNTOS DE CONTROL INFORMATIZADO					
Corto Plazo	SEP/PR – AP	Iniciativa Privada	Iniciativa Privada	Iniciativa Privada	Iniciativa Privada
Medio-Largo Plazo	-	Iniciativa Privada	-	Iniciativa Privada	Iniciativa Privada

Leyenda: Poder Público Iniciativa Privada

OBJECTIVES:

The project structure was divided into two phases and the following objectives were set for each phase:

The principal objective of Phase 1 is to establish an international benchmark for matters related to the Intelligent Port Logistics Chain project. It is then further divided into the following sub-objectives:

- Identify international initiatives and cases related to the Intelligent Port Logistics Chain project, analysing information from both before and after the implementation of the solutions and technologies employed in each case;

- With respect to international cases, estimate the initial investment required for the implementation of a system similar to the 'Intelligent Port Logistics Chain' system, as well as the monthly/annual costs of the solutions and determine who is to assume responsibility for paying said costs;
- Analyse the financial impact of the implementation of this type of project on those involved;
- Identify the economic, social and environmental benefits stemming from the implementation of this type of project.

PROJECTS

The principal objective of Phase 2 is to provide support to SEP/PR initiatives concerning the implementation of the Intelligent Port Logistics Chain project and the interoperability of existing and planned future systems in Brazil. Within Phase 2, the following sub-objectives were defined:

- Analyse the interoperability of existing and planned future systems in Brazil;
- Identify common international practices and elements regarding the initiative carried out in Brazilian ports, as well as an analysis of synergies between them;
- Determine needs and opportunities for the implementation of cluster platforms and propose formal agreements with participating organizations and systems;
- Identify and assess the parties responsible for investing in, developing, managing and maintaining the cluster platforms;
- Carry out a pricing study to establish the costs for the port and determine the financial impact on the interested parties in the 'Intelligent Port Logistics Chain' project;
- Propose a business model for the port logistics chain information management, including legal and institutional aspects;
- Propose a process harmonisation plan based on internationally-used models.

RESULTS ACHIEVED:

- Identification and analysis of actual international initiatives that share similarities with the Intelligent Port Logistics Chain project in Brazil both in terms of management and applied technological solutions. Of those, the most noteworthy included Valenciaport's gate automation, paperless port, and PCS, along with the initiatives related to ZEAL in the Port of Valparaíso;
- Estimation of the cost structure for CLPI in Brazil, based on international practices;
- Estimation of the benefits of CLPI in Brazil, based on international practices;
- Analysis of the interoperability between the systems used in the operation of the CLPI project, based on international experience;
- Proposal of a cluster platform for the CLPI project, along with associated organizational and cost structures, based on international experience;
- Proposal of a business model for information management in the port logistics chain;
- Proposal of a process harmonisation plan for the CLPI project.



IMPLEMENTATION PLAN FOR AUTOMATING THE POSITIONING OF CONTAINER EQUIPMENT

OBJECTIVE: The project has a dual objective. On the one hand, it aims to identify and define an optimal solution for automating the positioning of containers and equipment in the Lázaro Cárdenas Terminal (HPHLA-LCTPC). On the other hand, it focuses on providing practical training in this field to Lázaro Cárdenas Terminal staff during project development.



**Lázaro Cárdenas Terminal
Portuaria de Contenedores**

TIME FRAME: April - August 2013

FUNDING BODY: Lázaro Cárdenas Port Terminal

GRAIN DOCK OF THE PORT OF CALLAO'S NORTH TERMINAL

OBJECTIVE: APMT Callao is a concessionaire of the Port of Callao's North Terminal which forms part of the grain dock. By means of this project, APMT Callao seeks to evaluate and improve the operating model proposed in the initial offer set out in the concession contract, in order to ensure a minimum productivity rate per moored ship of 1,200 tonnes/hour for cereals, as per the conditions stated in the offer and the contract.

The specific objectives are

- Assess the forecast demand for grain traffic both in terms of tonnes per type of freight as well as ship type, frequency, etc.
- Identify the most appropriate equipment to be installed in APMT Callao for handling grain in the north dock of the Port of Callao, based on the review carried out as a result of the previous objective.
- If necessary, assist APMT Callao in justifying to the National Port Authority the modification of the contract in force.

TIME FRAME: October 2012 - February 2013

FUNDING BODY: APMT Callao



ASSESSMENT OF CURRENT PORT ACCESS CONTROLS IN THE PORT OF MONTEVIDEO AND PROPOSAL FOR IMPROVEMENT

OBJECTIVE: The overall project objectives are to produce an assessment of the current state of the Port of Montevideo in terms of port access control and regulatory procedures; to develop a proposal for improvement and recommendations for the implementation of a pilot plan for customs control at the entries to the Port of Montevideo; and to assist Uruguay's National Customs Authority (DNA) as it modernizes in order to facilitate trade.



TIME FRAME: April - November 2013

FUNDING BODY: National Customs Authority (DNA) of Uruguay

INTERNATIONALIZATION OF VALENCIAPORT CLUSTER

OBJECTIVE: The actions developed and implemented by the Valenciaport Foundation in different countries, through this activity, aim to consolidate the international position of Valenciaport and to provide the necessary support for establishing and bolstering Valencian and Spanish companies abroad. This activity is underpinned by a framework of cooperation and links with the different regions.

To this end, Valenciaport Foundation promotes participation in the development of collaborative projects with foreign organizations, and the subsequent sharing of Valenciaport's best practices, by signing technical, economic and/or social partnership agreements in different sectors in which it is involved (research, transportation, training, environmental management, safety, quality, ICT, CSR, intermodality, short sea shipping, port development). Valenciaport Foundation also seeks to become involved in working groups and networks.

TIME FRAME: January 2010 - December 2013

FUNDING BODY: Port Authority of Valencia

IMPLEMENTATION OF AUTOMATIC CONTROL PROCEDURES IN NATIONAL CUSTOMS AUTHORITY OPERATIONS AT ENTRIES TO THE PORT OF MONTEVIDEO

OBJECTIVE: The aim of the project is to support the DNA in the proper development, deployment and implementation of all elements required for automatic control of the entry and exit of goods in the Maciel pilot. It also has a joint focus on implementing the definitive solution and managing the impact on different actors and institutions, caused by the introduction of automatic control at all entries to the Port of Montevideo. In this way, the project seeks to ensure that benefits are maximized and risks are minimized, that the sustainability of the solution is guaranteed and that it can be extended to other facilities where Customs carries out border control, such as the National Verification Centre, Free Zones and border crossings.



TIME FRAME: October 2014 - September 2015

FUNDING BODY: National Customs Authority (DNA) of Uruguay

STUDY TO DEVELOP A STRATEGIC INTERMODAL PLAN FOR TRANSPORT INFRASTRUCTURE

PROJECT PARTNERS:

EPYPSA



OBJECTIVE: The Colombian Ministry of Transport requires the preparation of a Strategic Intermodal Plan for Transport Infrastructure, based on modelling transport supply and demand, in order to consolidate the country's intermodal strategy and to enable the programming of necessary long-term actions.

The main goals and objectives of this project are:

- Conduct an assessment of major transport infrastructure projects from a national and regional perspective, considering all transport modes.
- Explore in more depth the potential of intermodal transport, with emphasis on the new demands that may be generated by the mining and energy sector, agribusiness and new free trade agreements. The aim here is to present the results in a document that summarizes the main technical aspects, recommendations and guidelines for developing major national infrastructure projects in the period 2012-2032.
- Set out a proposal for the prioritization and development of transport infrastructure in the short-, medium- and long-term, by drawing up a transport model that incorporates all modes and takes into account the main scenarios according to the Development Plan and Transport Master Plan 2010-2032.

TIME FRAME: October 2012 - June 2013

FUNDING BODY: The Colombian Ministry of Transport (EPYPSA contracted the services of Valenciaport Foundation as an expert in logistics)

HIRING A CONSULTANT FOR THE COMPREHENSIVE REVIEW OF INALOG'S 2014 - 2016 STRATEGIC PLAN

OBJECTIVE: The objective of this consultancy project is to advise and support the National Institute of Logistics (INALOG) in revising and improving the established Strategic Plan for the period 2014-2016.

The specific objectives are as follows:

- Critical analysis of the 2014-2016 Strategic Plan.
- Determining alternatives for adapting the organizational structure of INALOG.
- Identifying projects and components in which the CAF can participate.
- Gauging financing and/or technical cooperation from CAF for some projects.



TIME FRAME: October - December 2014

FUNDING BODY: Andean Development Corporation (CAF)

2.2.7. Databases and simulators

As part of its role helping the port-logistics community to enhance its competitiveness and improve the structuring of member companies and institutions, the Valenciaport Foundation is undertaking a series of actions aimed at developing market-oriented information and making it available to the Port Authority of Valencia and the companies that make up the cluster. This information helps said companies in their strategic

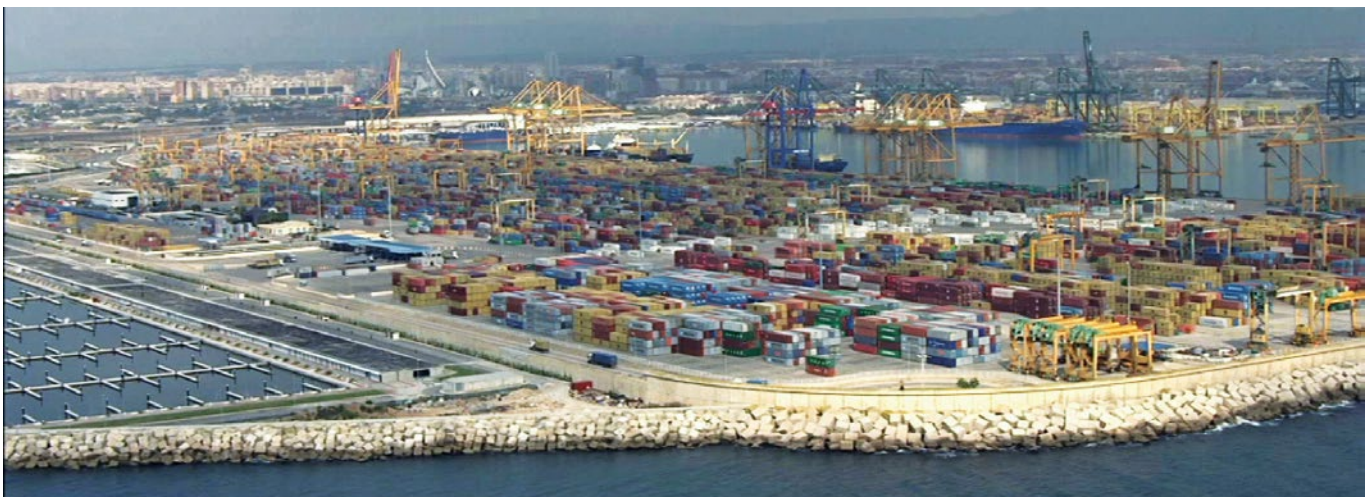
and operational decision-making. In this regard, the Valenciaport Foundation uses databases and simulators to produce comprehensive, quality information. The databases Lineport, LineRail and TradeTrans are continuously updated and maintained, while semi-annual newsletters Lineport (ISSN: 2173-7150, available in Spanish and English) and LineRail (ISSN: 2174-6516) are published, and other tools, such as Simhinterland, are developed to make the databases as informative as possible.

TRADE-TRANS: SPANISH TRADE AND TRANSPORT FLOWS

The purpose of this database is to complement the foreign trade processes provided by the Directorate General of Customs and Excise of the State Tax Agency. This is done via several variables that supply information on the requirements for the transport of goods as well as a detailed description of the existing transport alternatives for that particular trade operation and specifications in terms of cost, time and infrastructure variables of each alternative.

HINTERLAND SIMULATOR FOR PORTS MANAGED BY THE PORT AUTHORITY OF VALENCIA

The ultimate goal is to develop a tool to simulate the hinterland of the ports managed by the Port Authority of Valencia (PAV) and estimate that area of influence for other major Spanish ports with respect to container traffic. This tool and the estimation of other Spanish ports' hinterlands allows Valenciaport Foundation to detail the export and import flows passing through the different ports under study, the origin and destination of goods within Spain, the type of goods handled and the countries of origin and destination of said products. The tool is based on data from cargo manifests and summary declarations for unloading goods stored by the Port Authority of Valencia, public statistics from other port authorities and data from the State Tax Agency's database containing Spain's Foreign Trade Statistics.



LINEPORT: A TOOL FOR ANALYSING SSS IN SPAIN

The Lineport database contains information on the characteristics of the regular short sea shipping (SSS) services connecting Spanish ports with other EU ports or ports in countries bordering the Adriatic, Baltic, Aegean, Mediterranean, Black and North Seas.

The information contained in Lineport offers a comprehensive view of the SSS services offered in Spain and enables detailed analysis of the characteristics of such services in each of the ports, thereby contributing to a better understanding of the current state of SSS in Spain, its limitations and potential as an alternative / accompaniment to road transport.

The potential outputs of the Lineport database are:

- Provide the Spanish Port-Logistics Community with comprehensive, quality information on the SSS service offering, thus better equipping them for decision-making in their respective jurisdictions.
- Publication of a biannual newsletter on the state of SSS in Spain with indicators of the SSS and Motorways of the Sea service offering. The Lineport Newsletter can be downloaded free from Valenciaport Foundation's website: www.fundacion.valenciaport.com.

LINERAIL: A TOOL FOR ANALYSING RAIL SERVICES IN SPAIN

The LineRail database compiles detailed information about regular rail services offered in Spain with the aim of providing quality information to shippers and operators interested in using rail to transport their goods.

The information in the database is conveyed in the LineRail newsletter published every six months on the Valenciaport Foundation website www.fundación.valenciaport.com.

The data provided both in this biannual newsletter as well as through specific consultations make it the first tool of its kind allowing a comprehensive analysis of the features and evolution of rail services in each of the railway terminals. In this way, it contributes to a better understanding of the rail transport service offering in Spain, its limitations and potential in terms of intra-European freight transport.

Through the launch of this new analytical service, the Valenciaport Foundation continues to expand its field of statistical tools made available to the Spanish logistics community with comprehensive, quality information suitable for analysing the range of services to complement road-only transport.

11

Enero-junio 2014

Boletín



En portada

MONALISA 2.0. Introduciendo el transporte marítimo en la era digital

El proyecto MONALISA 2.0 se encuadra dentro de uno de los principales retos actuales de la Unión Europea en materia de transporte, el incremento de la seguridad, eficiencia y sostenibilidad del transporte marítimo. El proyecto, formado por 39 socios de 10 países entre los que se encuentra la Fundación Valenciaport pretende contribuir a la promoción de las Autopistas del Mar mediante la implementación de una serie de acciones en materia tecnológica, operativa y organizacional, alineadas con las necesidades y recomendaciones de la Comisión Europea en materia de seguridad marítima. Magnus Sundström, coordinador del proyecto y Ulf Siwe, responsable de comunicación, colaboran en esta edición del Boletín LinePort, presentando la naturaleza y objetivos del proyecto así como los resultados esperados del mismo que se traducirán en nuevos instrumentos de mejora para el Transporte Marítimo de Corta Distancia.

"La visión consiste en transformar por completo toda la cadena de transporte y perfeccionarla proporcionando información en tiempo real a todas las partes interesadas y autorizadas. Se denomina Gestión del Tráfico Marítimo (STM, en sus siglas en inglés) y supondrá una revolución del sector en su conjunto. Sería algo comparable a la introducción del Smartphone: al principio nadie sabía realmente para qué lo que necesitaban, pero ahora no pueden vivir sin él", explica el coordinador del proyecto, Magnus Sundström, al que avala el éxito de proyectos anteriores. "Los beneficios a corto plazo de MONALISA 2.0 son la mejora de la seguridad, de la eficiencia y de la protección medioambiental. La seguridad se verá reforzada por iniciativas específicas a bordo de los buques, como el posicionamiento en interiores, y en tierra, como la evacuación masiva en un puerto. Nuestra intención es dotar al sector de herramientas que permitan evitar incidentes y gestionar los que ocurran de una manera más eficaz. Creemos que marinos, pasajeros y mercancías se merecen travesías más seguras y eficientes".

Antecedentes

El componente STM de MONALISA 2.0 viene avalado por la experiencia y los resultados del precedente proyecto MONALISA en el que se demostró la eficacia del Intercambio de Rutas.

Hoy en día, los barcos conocen sus rutas. Los capitanes utilizan proveedores de servicios para optimizarlas basándose en información de buques y en datos marítimos y meteorológicos. Pero la información detallada de la ruta queda restringida a cada barco. Actualmen-

te cuando se cruzan en travesía los buques disponen de buenos datos AIS (siglas en inglés de Automatic Identification System): posición, velocidad, destino final, etc. Pero gracias a la introducción del sistema de Intercambio de Rutas los barcos conocerán además los movimientos previstos de otras embarcaciones cercanas. Las herramientas anti-colisión pueden generar avisos cuando un barco cercano se esté desviando de su ruta prevista. Esto permitirá a los oficiales del buque reaccionar a tiempo, prever posibles incidentes y por tanto, evitar situaciones peligrosas.

Otra idea que se planteó era la de implantar el intercambio de información a gran escala lo que implica el desarrollo de un sistema de demostración funcionalmente definido técnicamente y en sus procedimientos, con el objetivo final de facilitar el intercambio de información marítima a escala mundial.

Pero entonces el Costa Concordia se hundió.



© Copyright. 2009 Fundación Valenciaport. 

06

Boletín



Julio-Diciembre 2013

En portada

Exportaciones de frutas y hortalizas por tren

Para España, el sector de frutas y hortalizas constituye el principal motor de las exportaciones a Europa. Así, durante el año 2013 los envíos de frutas y hortalizas (capítulos 7 y 8 de la nomenclatura combinada) representaron el 13% del total exportado a Europa en peso, alcanzando la cifra más elevada de los últimos años con 11.368 millones de euros y un volumen de 12,2 millones de toneladas exportadas a Europa. Sin embargo, mientras el transporte integral por carretera mantiene cuotas superiores al 98%, los modos alternativos ferroviario y transporte marítimo de corta distancia no consiguen posicionarse como alternativas reales para el transporte de estos productos.

En esta edición del boletín LineRail, Encarna Pitarch, Directora de Logística de Anecoop, plantea los factores que condicionan la elección del modo de transporte para los envíos de productos hortofrutícolas y las expectativas futuras del transporte ferroviario para las exportaciones del sector a Europa.

Anecoop es la cooperativa española de productos agroalimentarios líder en la comercialización de frutas y hortalizas. Esta cooperativa agraria aglutina a 84 socios y colaboradores y está presente en 57 países con filiales consolidadas en Francia, Polonia, Eslovaquia, República Checa, Holanda, Inglaterra y Rusia.

¿Cuáles son los principales mercados en las exportaciones de los productos comercializados por Anecoop?

El 87% del negocio de Anecoop procede del exterior, estructurado en la red de empresas y clientes en distintos países. Nuestro principal cliente es el mercado europeo, con Francia y Alemania a la cabeza seguidos de Suecia, Gran Bretaña, Italia, Polonia, República Checa, Holanda y Bélgica como principales mercados. Anecoop se ha consolidado como el primer exportador y segundo comercializador de cítricos del mundo.

¿Qué papel juega Anecoop en las exportaciones?

El papel de Anecoop en las exportaciones no sólo es vender y cobrar sino gestionar eficazmente los mercados exteriores para conseguir incrementar el volumen de mercancías y obtener una óptima rentabilidad para

sus socios. La aportación de Anecoop se basa en, por un lado, identificar el cliente final, sus necesidades y potencialidades y, por otro lado, decidir en cada mercado los modos de transporte más eficaces para llegar al cliente deseado.

Actualmente, ¿qué modos de transporte utilizan en sus envíos a Europa?

El principal modo de transporte que utiliza Anecoop es el transporte integral por carretera. En la pasada campaña, las exportaciones por carretera a Europa representaron el 95% frente al 4% y 1% de los modos marítimo y ferroviario respectivamente. Aunque este es el patrón modal seguido en los últimos años, cabe señalar que durante los años 70-80 el transporte ferroviario representó cuotas superiores al 40% para las exportaciones de cítricos a Europa.

© Copyright. 2011 Fundación Valenciaport. 

Front cover of Issue 11 of the Lineport Newsletter

Front cover of Issue 6 of the Linerail Newsletter





3

AGREEMENTS

3.1. INTRODUCTION

Between January 2013 and December 2014, the Valenciaport Foundation set up multiple partnership agreements with a range of organizations in the transport and logistics sector to exploit existing synergies between the two parties and to work hand-in-hand on various projects, such as organizing training courses and seminars, among other activities.



3.2. LIST OF AGREEMENTS

8/01/2013

Agreement between the Port Authority of Valencia and the Valenciaport Foundation for a grant concession for the implementation of activities for 2013. The purpose of this agreement is to confer the Valenciaport Foundation the grant awarded by the Board of Directors of the Port Authority of Valencia.

14/03/2013

Memorandum of Understanding between Valenciaport Foundation and the General Secretariat of the Organization of American States, via the Secretariat of the Inter-American Committee on Ports. This agreement aims to set up a cooperative framework for promoting synergies in the implementation of programmes, projects and activities designed to encourage the exchange of experiences, knowledge and best practices. It also aims to promote the development, implementation and consolidation of the port sector and to work together for a comprehensive development plan for South American ports.

31/05/2013

Agreement on a framework for cooperation and technical assistance in port training between the Valenciaport Foundation and the company Peru Ports & Associates of the Republic of Peru. The objective of this agreement is to establish cooperation in training-related matters, contributing to a better training of port-maritime staff of their respective countries, as well as of third countries that might require collaboration –joint cooperation.



AGREEMENTS

26/06/2013

Agreement on technological cooperation between the firm Aura and the Valenciaport Foundation. The main goal of this partnership agreement is to design a vertical pilot on the AuraPortal platform for improving port management in key business processes. The experience gained in the pilot enables this knowledge to be exported to the entire port logistics community.

8/01/2014

Agreement between the Port Authority of Valencia and the Valenciaport Foundation for awarding a grant concession for the implementation of activities for 2014. The purpose of this agreement is to confer the Valenciaport Foundation the grant approved by the Board of Directors of the Port Authority of Valencia.

22/07/2014

Partnership agreement between INECO and the Valenciaport Foundation. The aim of this agreement is to formalize the parties' desire to collaborate in all activities related to port-logistic consulting at an international level, and particularly in Latin America, Africa and the Middle East.

30/09/2014

Framework partnership agreement between the Valenciaport Foundation and the Chilean Chamber of Customs. This agreement aims to lay the foundations for collaboration between the Valenciaport Foundation and the Chilean Chamber of Customs, in areas of mutual interest, such as research, promotion, education, capacity-building, technical training and joint projects, through its CELP Foundation and the Training and Development Centre of the Chilean Chamber of Customs (Camcap).



3.3 EUROPHAR



EUROPHAR is a European Economic Interest Association, founded in 1997 by the Port Authorities of Valencia, Marseille and Genoa to encourage sustainable development and environmental protection in European ports and their surrounding areas.

Providing its knowledge and experience in defining and implementing environmental management systems in ports, EUROPHAR minimizes the environmental impact of port activities and helps protect surrounding areas such as beaches, port-city interfaces, ecosystems, and so on. It also supplies security systems adapted to the industrial environment and port areas, particularly in the port-city interface.

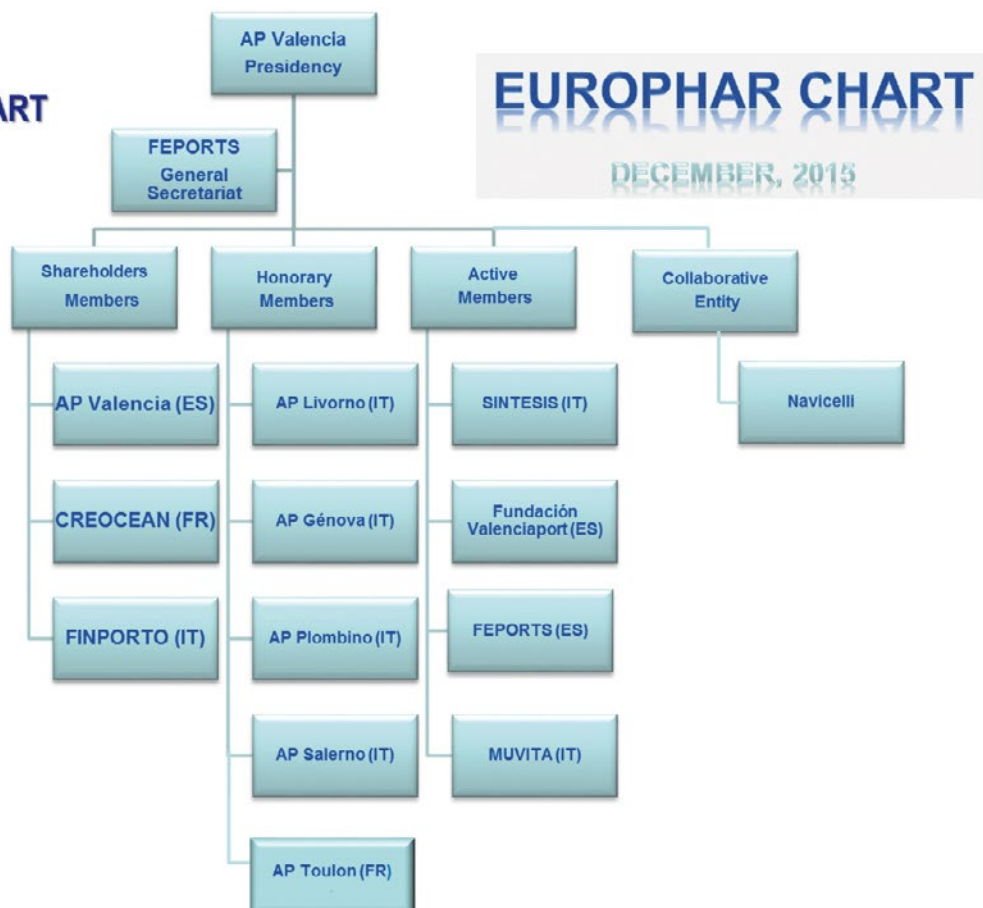
Lastly, EUROPHAR participates in training programmes for port agents and raises public awareness and promotes

understanding of environmental ideas and concepts of safety underpinning port-management models.

In 2010, the Valenciaport Foundation became a Europhar partner. This boosted its strategy of developing innovative initiatives in two key areas of port activity: energy efficiency in port facilities, with a special emphasis on container-terminal equipment, and safety in port facilities, a trending topic in the field of European R&D&I.

During 2013 and 2014 the Foundation played an active role in EUROPHAR, as the main partner involved in the project "MEDUSA - MultiOrder dependency Approaches for managing cascading effects in ports' overall supply chain and their integration in risk assessment framework". The MEDUSA project is co-financed by the European Commission through DG HOME and it focuses on analysing protection risks through the supply chain, with a particular interest in information systems integration. EUROPHAR is also a member of the interest groups established as part of the SEA TERMINALS and GREENBERTH projects, focusing on energy efficiency in ports, the reduction of the environmental impact of shipping and the use of cleaner fuels.

2. CURRENT CHART





4

ASSOCIATIONS

4. VALENCIAPORT FOUNDATION'S MEMBERSHIP OF ASSOCIATIONS

- **Spanish Short Sea Shipping Promotion Centre**
- **Association for the Collaboration between Ports and Cities (RETE)**
- **International Association of Cities and Ports (AIVP)**
- Women's International Shipping & Trading Association (WISTA) Spain
- Forética
- International Association of Maritime Economics (IAME)
- International Maritime Statistics Forum (IMSF)
- ICC International Chamber of Commerce
- **Technology Platform for Integrated Logistics, Intermodality and Mobility (Logistop)**
- **Spanish Maritime Technology Platform**
- European Logistics Technology Platform (Alliance for Logistics Innovation through Collaboration in Europe - ALICE)
- PPP Vessels for the future



5

SEMINARS AND
CONFERENCES

RESEARCH RESULTS / “EXCHANGE OF IDEAS WITH THE PORT-LOGISTICS COMMUNITY”

5.1. INTRODUCTION

The Valenciaport Foundation organizes a programme of research seminars targeted at the port-logistics cluster, designed to present its project results to the widest audience possible and to promote the exchange of ideas with the Port Community. In the period 2013-2014, the Valenciaport Foundation has organized 18 seminars and conferences, several in collaboration with other organizations.

5.2. LIST OF SEMINARS AND CONFERENCES

4th April 2013

“The importance of digital identity in our increasingly connected society”. Conference organized by Valenciaport Foundation and delivered by Rames Sarwat. Valencia

29th and 30th May 2013

“6th Conference on Innovation in the Port Cluster and Mid-Term Conference of the GREENCRANES Project. Sustainability and Innovation: the Intelligent Way”. Organized by Valenciaport Foundation in collaboration with the Port Authority of Valencia,

31st May 2013

“Informative conference on the job opportunities from cruise ship tourism in Valencia.” Organized by the Centres of Tourism (CdT) Network of the Ministry of Economy, Industry, Tourism and Employment, in collaboration with the Valenciaport Foundation. Valencia (Spain).

3rd June 2013

“2nd Informative conference on the job opportunities from cruise ship tourism in the Valencian Community.” Organized by Valenciaport Foundation in collaboration with the Port Authority of Valencia and MOBICACREW. Valencia (Spain).

11th June 2013

“Conference on the 2006 Maritime Labour Convention of the ILO”. Organized by Valenciaport Foundation in collaboration with the Port Classroom (Aula Portuaria). Valencia (Spain).



2nd Informative conference on the job opportunities from cruise ship tourism, Valencia, 3rd June 2013



International Conference on the Inte-Transit project: “ICT Technologies as enablers for improved operations in modern MED ports” Valencia, 20th-21st November 2014



Rames Sarwat Conference, 4th April 2013

SEMINARS AND CONFERENCES

24th and 25th June 2013

“Conference on Valenciaport Traffic Manager Programme”. Organized by Valenciaport Foundation in collaboration with CETREN. Valencia (Spain).

18th September 2013

“2nd Conference on Promoting Social Responsibility in the Port Community. Challenges, developments and opportunities.”. Organized by Valenciaport Foundation in collaboration with the Port Authority of Valencia. Valencia (Spain).

2nd December 2013

“GREENCRANES Valencia Demo Day”. Organized by Valenciaport Foundation in collaboration with the Port Authority of Valencia and Noatum within the framework of the TEN-T GREENCRANES project. Valencia (Spain).

5th February 2014

“Employment conference: Work on a cruise ship”. Organized by Valenciaport Foundation in collaboration with The Seven Seas Group. Valencia (Spain).

17th February 2014

Seminar “Possibilities for reclaiming the tax on retail sales of hydrocarbons (known as the ‘health cent’) paid in financial years 2010, 2011 and 2012”. Organized by the AAAIPEC and sponsored by Garrigues. Valencia (Spain).

26th March 2014

“Debate: Challenges faced by freight forwarders in the recovery of import and export traffic in the Port of Valencia”. Organized by the AAAIPEC and the Valenciaport Foundation in collaboration with the Port Authority of Valencia. Valencia (Spain).

27th March 2014

“FUTUREMED Intermediate Conference: Opportunities and Challenges for Territorial Integration of Seaports: ICT, Infrastructures and Services”. Organized by Valenciaport Foundation within the framework of MED Futuremed project. Valencia (Spain).

8th April 2014

“Workshop for companies: How can we finance our R&D&i projects? CDTI instruments and other relevant programmes”. Organized by REDIT, in collaboration with iMAUT, AIMPLAS, ITENE and the Valenciaport Foundation. Paterna, Valencia (Spain).



15th May 2014

“GREENCRANES Final Info Day”. Organized by Valenciaport Foundation within the framework of the TEN-T GREENCRANES project. Brussels (Belgium).

12th June 2014

“Conference on Noise-levels on ships: the consequences of the entry into force of Royal Decree 286/2006 and its application to maritime transport”. Organized by Valenciaport Foundation in collaboration with the Association of Naval and Ocean Engineers. Valencia (Spain).

16th September 2014

“CO-EFFICIENT CONFERENCE: Valencia Energy and Logistics Efficiency”. Organized by Valenciaport Foundation within the framework of the MED Co-Efficient project. Valencia (Spain).

7th October 2014

“3rd Conference on Promoting Social Responsibility in the Port Community. Challenges, developments and opportunities”. Organized by Valenciaport Foundation in collaboration with the Port Authority of Valencia. Valencia (Spain).

30th-31st October 2014

“B2MoS Mid-Term Conference”. Organized by Valenciaport Foundation within the framework of the TEN-T B2MoS project. Valencia (Spain).

11th November 2014

“The container ship: naval engineering response to logistics challenges of logistics.” Organized by Valenciaport Foundation in collaboration with the Association of Naval and Ocean Engineers. Valencia (Spain).

20th-21st November 2014

“International Conference on the Inte-Transit project: “ICT Technologies as enablers for improved operations in modern MED ports”. Organized by Valenciaport Foundation within the framework of the MED Inte-Transit project. Valencia (Spain).

10th December 2014

“SEA TERMINALS Kick-Off Meeting”. Organized by Valenciaport Foundation in collaboration with the Port Authority of Valencia within the framework of the TEN-T SEA TERMINALS project. Valencia (Spain).



FUTUREMED INTERMEDIATE CONFERENCE

- VALENCIA, 27th March 2014 -

Opportunities and Challenges for Territorial Integration of Seaports: ICT, Infrastructures and Services

Futuremed is dedicated to enhancing the competitiveness of port-hinterland systems of the Med Area by addressing three strategic sectors: freight, passenger and tourist traffics



Poster for the “Futuremed Mid-Term Conference” Valencia, 27th March 2014



Co-financed by the European Union
Trans-European Transport Network (TEN-T)

Mid Term Conference

30 -31 October 2014



Post for the “B2MoS Mid-Term Conference” Valencia, 30th-31st October 2014



6

PUBLICATIONS AND PARTICIPATION IN FORUMS AND CONFERENCES

6.1. INTRODUCTION

With the shared aim of disseminating the results of the research carried out by the Valencia Foundation, members of the different departments have participated in and delivered presentations at numerous conferences, scientific meetings, forums, and so on. They have also published books, chapters of books, and research articles on port-logistics issues.

Outlined below are the publications produced during this period:

6.2. LIST

6.2.1. Articles

"Innovation in Ports Security through Cooperation Projects. Techniques for risk assessment".

In SSMDE: Secure and Sustainable maritime digital environment. Number 202. Track: SS1.
Company, Rafael; Incertis, David. (June 2014).

"Evaluating efficiency of international container shipping lines: A bootstrap DEA approach".

In Maritime Economics & Logistics, 16 (1) (DOI: 10.1057/mel.2013.21)
Gutiérrez, Ester; Lozano, Sebastián; Furió, Salvador (March, 2014).

"Optimization of Empty Container Movements Using Street-Turn: Application to Valencia Hinterland".

In Computers and Industrial Engineering, 66. Pages 909-917.
Furió, Salvador; Andrés, Carlos; Adenso-Díaz, Belarmino; Lozano, Sebastián (December 2013).

"GREENCRANES: Testing the Way to Real Sustainability in Ports".

In Port Technology International. Pages 79-81.
Giménez, José Andrés (November 2013).

"Bicriteria Optimization Model for Locating Maritime Container Depots: Application to Port of Valencia".

In Networks and Spatial Economics, Pages 1-18 (ISSN 1572-9427)
Palacio, Antonio; Adenso-Díaz, Belarmino; Lozano, Sebastián; Furió, Salvador (September 2013).

"The challenge facing Customs for facilitating and ensuring the safety of international maritime transport" (Original title: La aduana ante el reto de la facilitación y la seguridad en el transporte marítimo internacional)

In the 5th International Transport Congress: A new organization of the Transport Market. Castellón (Spain). Ed: Marcial Pons, Ediciones jurídicas y sociales. S.A. Pages 847-863. ISBN 978-84-15664-76-5. Madrid (Spain).
García-Luján López, Jesús; Iborra Gómez, Sonia (2013).

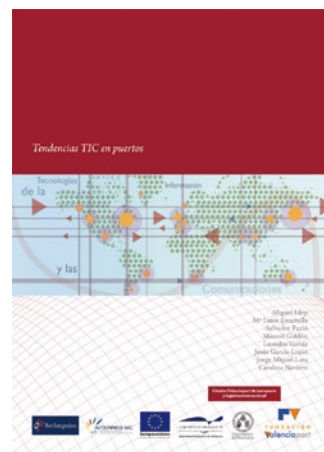
6.2.2. Books

"Outsourcing logistics in a globalized economy. Analysis of 3PLs in the Valencian Community" (Original title: La externalización de la logística en una economía globalizada. Análisis de los 3PL en la Comunidad Valenciana)

ISBN: 978-84-940351-4-2
Coca, Pedro (2013)

"ICT Trends in Ports" (Original title: Tendencias TIC en puertos)

ISBN: 978-84-940351-3-5
Llop, Miguel; Escamilla, M^a Luisa; Furió, Salvador; Galdón, Manuel; García, Leandro; García-Luján, Jesús; Lara, Jorge Miguel; Navarro, Carolina (2013)



6.2.3. Chapters of books

"Valencia Cruise Terminal, Spain".

In COST Action TU 1001. Athena Roumboutsos, Sheisa Farrell, Champika Lasanthi Liyanage, Rosário Macário (Publishers) Public Private Partnerships in Transport: Trends and Theory P3T3. Discussion Papers. Part II Case Studies. Volume: Part II Case Studies, ISBN 978-88-97781-61-5. Pages 141-153.
Juan Martínez, Carmen; Pérez García, Eva (2013).

“Port Community Systems in Maritime and Rail Transport Integration: The Case of Valencia, Spain. Dry ports: a global perspective: challenges and developments in serving hinterlands”.

In Rickard Berqvist, Gordon Wilmsmeier, y Kevin Cullinane (Publishers). Dry ports: a global perspective: challenges and developments in serving hinterlands. Pages 49-65. ISBN 978-1-4094-4424-4 Furió Pruñonosa, Salvador (2013).

6.2.4. Presentations

“ICTs for Integrated Port-Hinterland Intermodal Corridors. Improving the Port-Hinterland Interface in the Mediterranean ICT Supply Chain Management”.

18th Panhellenic Logistics Conference. Thessalonica (Greece)
Furió, Salvador (November 2014)

“Overview of PCS Projects. Future Challenges and Opportunities for Port Community Systems”.

IPCSA Research Meeting. Le Havre (France)
Furió, Salvador (November 2014)

“Practice Communities as Continual Training Tools”

First Meeting of Capacity Building Leaders of Latin American Commercial Entities. Miami (Florida)
Furió, Salvador; Cornejo, Rafael; Feliz, Jovanny; Libby, Margarita (November 2014)

“Presentation of energy efficiency projects led by Valenciaport Foundation: GREENCRANES and SEATERMINALS”.

GREENPORT Congress. Barcelona (Spain)
Giménez, José Andrés (October 2014)

“Presentation of success stories in using liquefied natural gas (LNG) to power port machinery.”

“Maritime Transport, Energy and the Environment” Seminar organized by the Gas Natural Fenosa Foundation. Palma de Mallorca (Spain)
Giménez, José Andrés (October 2014)

“Support for promoting social responsibility. Opportunities. Future Proposals.”

3rd Conference on Promoting Social Responsibility in the Port Community. Valenciaport Foundation and the Port Authority of Valencia. Valencia (Spain)
Blaya Hernández, Pilar (October 2014)

“MEDNET pilot actions: facilitating trade and sea transport in the Mediterranean”.

Conference: Towards facilitated Trade and Sea Transport in the Mediterranean. St. Julians (Malta)
Llop, Miguel; Sáez, Lorena (October 2014)

“Sea-Terminals Project, Smart, Energy-Efficient and Adaptive Terminals”.

International Congress: New Technologies in Energy Engineering and Environmental Protection. Opatija-Rijeka (Croatia)
Company, Rafael (October 2014)

“Greenberth project: overview, goals and obtained results”.

International Congress: New Technologies in Energy Engineering and Environmental Protection. Opatija-Rijeka (Croatia)
Company, Rafael (October 2014)

“Facilitation measures towards the competitiveness of Mediterranean ports - MEDNET Prototypes”.

Conference: Ports Hinterland connections and customs procedures: The Case of European Union Project MEDNET. Geneva (Switzerland)
Llop, Miguel (September 2014)

Best practices in Port Management

Port Finance Conference Morocco. Casablanca (Morocco)
Ernoux, Vincent (September 2014)

“Synergy and cooperation in the Adriatic Sea through the EU projects: The MEDNET and B2MoS Projects”.

Conference: Adriatic Motorways of the Sea Master Plan. Rome (Italy)
Deehan, Sean (July 2014)

“B2MoS: From the Group Up”.

Intelligent Exchange - Data Exchange for Smooth Maritime and Logistics Processes. The annual conference of the European Port Community Systems Association. Civitavecchia, Port of Rome (Italy)
Pérez, Eva (June 2014)

“A Multi-Disciplinary Approach for Excellence in Innovation. Challenges facing European Ports: Experiences and Solutions Adopted in the Port of Valencia”.

Technological Innovation in Ports and Terminals. International Masterclass. Fleming Europe Events. Livorno (Italy)
Pérez, Eva (June 2014)

“Automation in Port Container Terminals”.

11th Transport Engineering Congress (CIT 2014). Santander (Spain)
Martín, Ana M^a; Monfort, Arturo; Sapiña, Rafael; Monterde, Noemí; Calduch, David (June 2014)

**“Aplicación de la simulación en la planificación y explotación de terminales portuarias de contenedores”.
(Using simulation for planning and operation of port container terminals.)**

11th Transport Engineering Congress (CIT 2014).

Santander (Spain)

Yarza, Iñaki; Sapiña, Rafael; Martín, Ana M^a; Monfort, Arturo; Monterde, Noemí; Calduch, David (June 2014)

“Port competitiveness and attractiveness: The MEDNET Project”.

SITL Conference. Paris (France)

Llop, Miguel (April 2014)

“E-Maritime for Port Operations”.

Designing RDI Strategy Workshops. Brussels (Belgium)

Furió, Salvador (March 2014)

“The experience of promoting social responsibility in Valenciaport”.

Implementation kick-off conference. Port Authority of Alicante. Alicante (Spain)

Blaya, Pilar (December 2013)

“From MOS4MOS to B2MOS”.

Maritime Single Window Summit. Lisbon (Portugal)

Pérez, Eva (November 2013)

“Transport Partnerships as Public-Private Joint Ventures: The Case of Motorways of the Sea”.

Congress: Global Challenges in PPP. Antwerp (Belgium)

Juan, Carmen; Olmos, Fernando; Pérez, Eva (November 2013)

“Intermodal Transport and Logistics”

Andean Development Corporation (CAF) Study tour. Valencia (Spain)

Furió, Salvador (October 2013)

“GREENCRANES Project: a TEN-T Success Story”.

TEN-T Innovation and New Technologies Conference: Seizing New Opportunities in All Modes of Transport.

TEN-T Days 2013. Tallinn (Estonia)

Giménez, José Andrés (October 2013)

“From MOS4MOS to B2MOS”.

TEN-T Days. Helsinki (Finland)

Pérez, Eva (October 2013)

“From MOS4MOS to B2MOS”.

TEN-T Days. Tallinn (Estonia)

Pérez, Eva (October 2013)

“GREEN Technologies and Eco-Efficient Alternatives for CRANES and Operations at Port Container Terminals (Greencranes Project)”.

2013 China Ports and Shipping Development Forum.

Shanghai (China). Ferrús, Gabriel (October 2013)

“Promoting the Implementation of Social Responsibility in Valenciaport. APORTEM Project.”

2nd Conference on Promoting Social Responsibility in the Port Community. Valenciaport Foundation and the Port Authority of Valencia. Valencia (Spain)

Blaya, Pilar (September 2013)

“Social Responsibility and the Third Sector. Necessary Cooperation. The Experience of Valenciaport Foundation”.

Polytechnic University of Valencia. Valencia (Spain)

Blaya Hernández, Pilar (September 2013)

“Greencranes: Testing the way to real sustainability in ports”.

4th NGVA Europe International Show & Workshops. Gothenburg (Sweden)

Ferrús, Gabriel (June 2013)

Pilot experiences of energy efficiency in port container terminals.

12th Spanish Conference on Coastal Engineering and Ports. Cartagena (Spain)

Sapiña, Rafael; Martín, Ana M^a; Monfort, Arturo; Calduch, David; Monterde, Noemí; Vieira, Paula (May 2013)

Simulation tools in port container terminals

12th Spanish Conference on Coastal Engineering and Ports. Cartagena (Spain)

Sapiña, Rafael; Yarza, Iñaki; Martín, Ana M^a; Monfort, Arturo; Monterde, Noemí (May 2013)

Technological innovations and management advances in port container terminals: a categorization.

12th Spanish Conference on Coastal Engineering and Ports. Cartagena (Spain) Monfort, Arturo; Monterde, Noemí; Martín, Ana M^a; Calduch, David; Sapiña, Rafael; Vieira, Paula (May 2013)

“Mapping of Port Container Terminals Energy Profiles”.

6th Port Innovation Congress and GREENCRANES Intermediate InfoDay. Chairman of the GREENCRANES Prototypes and Pilot Plans Session. Valencia (Spain)

Giménez, José Andrés (May 2013)

“Maritime-Rail Integration. Intermodality and Logistics Platforms”.

EU Twinning Project-Ukraine. Valencia (Spain)

Furió, Salvador (April 2013)

The importance of training professionals. The experience of Valenciaport.

3rd Nebrija University-Santander Conference on CSR.

“Universities showing responsibility to companies, companies showing responsibility to universities”. Nebrija University. Madrid (Spain)

Blaya, Pilar (March 2013)

PUBLICATIONS AND PARTICIPATION IN FORUMS AND CONFERENCES

“Experience of the Valenciaport Foundation in designing fact-finding tools for value creation: building foundations for the recognition of women’s work in the port “Port Woman of the Year” and the design of an observatory.”

Hemispheric Seminar on public policy and the visibility of women in the port sector in the Americas CIP-OAS. Santo Domingo (Dominican Republic)
Muñoz, Andrea (March 2013)



Salvador Furió's presentation at the 18th Panhellenic Logistics Conference, Thessalonica (Greece) November 2014



Miguel Garín's presentation at the Seminar for Port Management Executives, organized by the American Association of Port Authorities (AAPA)





7

TRAINING



7.1. THE BACKGROUND TO IPEC-TRAINING

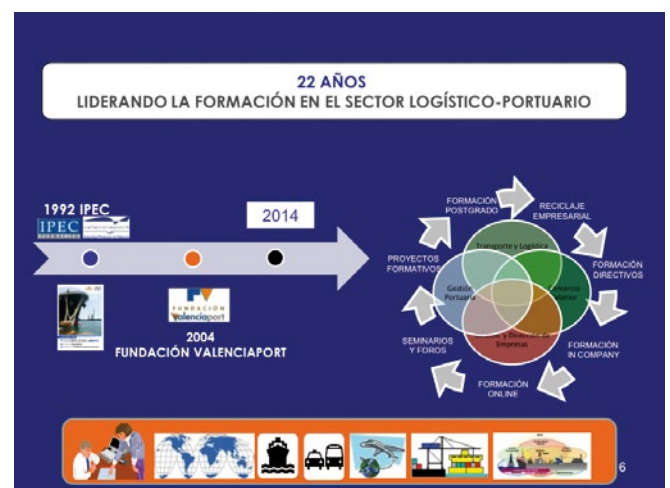


The Valenciaport Foundation training department, known as “IPEC-TRAINING” (IPEC-FORMACIÓN in Spanish) is established as the Training Centre of Excellence serving the Port-Logistics Community.

When Valenciaport Foundation was founded in April 2004, IPEC-TRAINING was set up as one of the departments. However, its programme of activities did not start from scratch, but rather took advantage of the accumulated experience of IPEC, the previous training department of the Port Authority of Valencia (PAV), which had been developing training activities aimed at the port sector since its creation in 1992.

In 1992 the Port Authority of Valencia and the Comillas Pontifical University of Madrid created the **Master’s Degree in Port Management and Intermodal Transport (MGPT), Specialist Courses in Maritime Transport, Land Transport, Intermodal Transport and Port Management, and Senior Management Training Courses.** These courses have become established as the most prestigious Spanish-language training programmes specializing in the field of port and transport, and have had a far-reaching impact amongst professionals and young postgraduates in Spain, other regions in Europe, and Latin America.

Now, more than 22 years later, the Valenciaport Foundation is the leading training organization in the thanks to its complete and comprehensive range of training products.



7.2. CORNERSTONES OF TRAINING AND ACHIEVEMENTS, 2013-2014

The Valenciaport Foundation training department is focused on:

INNOVATION - QUALITY - CONTINUOUS IMPROVEMENT

Innovation, understood as a source of growth, a determining factor in achieving competitive advantages, and a way to promote learning and the creation of new knowledge in the organization.

Quality, represents our commitment to satisfying the needs and expectations of our customers. To this end, we guarantee the promotion of a culture of quality, based on the principles of honesty, leadership, and human resources development.

Continuous improvement at all levels, but especially for staff, encouraging training and participation.

All of this comes under the Valenciaport “umbrella”, with links the Port Authority of Valencia and a clear focus on the national and international Port Community.



There are a number of noteworthy achievements from the period 2013-2014 that stand out due to their originality and innovativeness, their contribution to the internationalization of Valenciaport's brand image, their prestige, or academic impact and societal effects - both nationally and internationally. They are as follows:

Post Graduate Highlights:

- The start of the **Master's Degree in Port Management and Intermodal Transport in Colombia** through a collaboration agreement with ASOPORTUARIA (Atlantic Ports Association). The course consists of 60% on-line studies and 40% face-to-face studies in Barranquilla and in Valencia.
- **The high percentage of job placements** of Master's students through companies internships (**21st, 22nd, and 23rd Master's in Valencia**), representing an indicator of recovery and cohesion within our port community.

Business Retraining Highlights:

- The rise in **"In-Company" training** programmes designed specifically for businesses within the Port-Logistics Community.
- **The renewal of general, business, technical, and managerial English programmes** for businesses in the sector. An innovative methodology from a new strategic partner has allowed an increase in the number of students.

International Cooperation Highlights:

- The opening of a new line of **work with Africa**, specifically in Equatorial Guinea and Angola. This deals with port management, terminal management, and the training of stevedores.
- The signing of collaboration agreements for training development in Panama, Ecuador, Peru, Mexico, Chile, and Colombia over the next two years.

External Collaboration Highlights:

- The organization of more than 20 forums, seminars, and meetings, attended by more than 500 people, in collaboration with different organizations, companies, professional associations, etc.
- Port-logistics meetings in which leading figures in the sector share their experiences with Valenciaport Foundation's Alumni Association (AAAIPEC).

Employment and Youth Support Highlights:

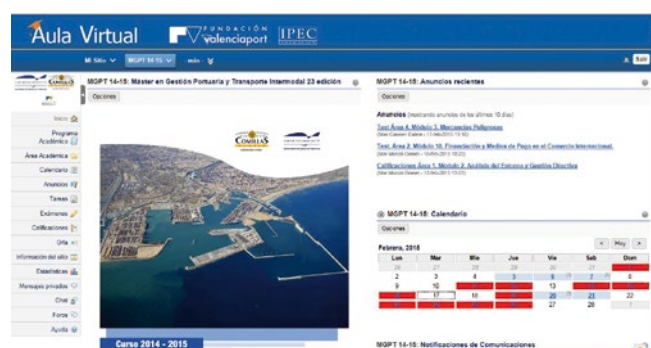
- Scholarship programme
- Meetings with recruiters and job interviews in the cruise ship forum
- Company internships
- Employment agency

Management Highlights:

- The renewal and maintenance, year after year, of the **ISO 9001:2008 certification** by Lloyd's Register Quality Assurance. The Quality Management System is applicable to the "Design, delivery, and management of non-regulated in-house training subsidized according to the requirements and designs of public and private organizations in the areas of: management and leadership of companies; foreign trade; sea, land and air transport; logistics, and port management. Designed in accordance with the competency-based management requirements for port authorities."



- The consolidation of the online platform **"VIRTUAL CLASSROOM" (AULA VIRTUAL)** as a support to on-line courses. This also provides educational support for all face-to-face courses.



- The development of new unique and authentic **teaching materials** in the areas of customs, trade, logistics, ports and transport.

- The strengthening of **Collaborative Networking** between alumni and teachers through social networks:
 - Facebook
 - LinkedIn
- The achievement of a greater level of involvement and participation from the national port community with the Valenciaport Foundation through the support of the **Tripartite Foundation Business Partnership Agreement**. The Valenciaport Foundation, as the organizer of subsidized training, processes free-of-charge the allowances granted by the Tripartite Foundation, and organizes well-planned training activities suitable to the relevant business areas, based on their training credits.

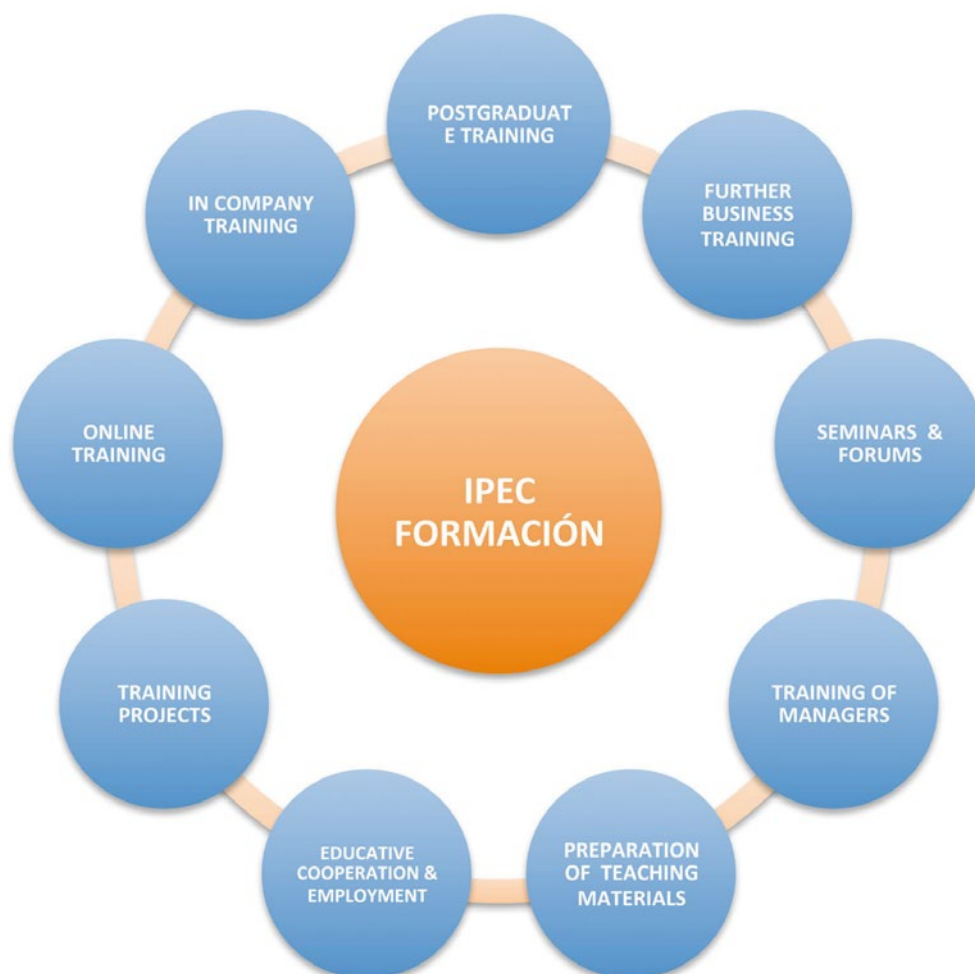
7.3. LINES OF WORK

Training is one the main areas of activity for the Valenciaport Foundation, and it dedicates great effort towards lasting improvements in training for professionals who are developing, or who wish to develop, their work in the Port-Logistics sector. Professionals are encouraged to be open-minded towards updated information, innovation, and change which is a perpetual product of the continuing internationalization of the economy.

To this end, **IPEC-Training** promotes, directs, and develops training programmes specialized in business management, ports, foreign trade, logistics and transport. The main lines of work include:



Fundación Tripartita
PARA LA FORMACIÓN EN EL EMPLEO



MODALITIES

Programmes and courses are given in two different forms:

On-site at either the Valenciaport Foundation or at clients' facilities, designing a range of "In-Company" training according to specific requirements.

On-line, an area in which Valenciaport Foundation has grown thanks to the development of the "Virtual Classroom" platform.

STUDENT BODY

Furthermore, these programmes are offered both in Spain and abroad, principally in Spanish-speaking countries. Their contents are designed for each specific target audience: executives, middle management and general staff.

The student body is composed of:

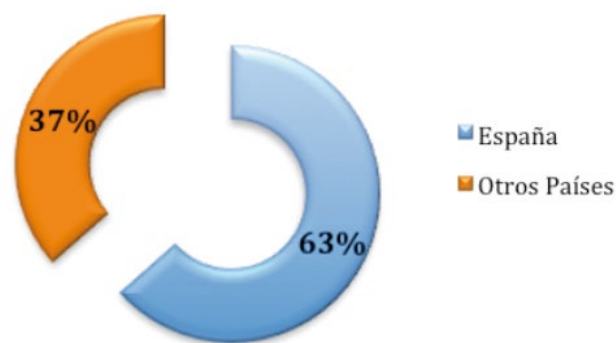
- **Working Professionals**, mostly from private companies in the Port Community and Port Authorities. The training needs met include:- El reciclaje formativo y la oportunidad de adquirir nuevos conocimientos
 - Retraining and the opportunity to acquire new skillsets
 - Comparing acquired knowledge with other professionals
 - Forging open-minded approaches
 - Facilitating a new vision of business, helping cultural change
- **Young Postgraduates and the Unemployed**, mainly graduates of technical degrees. Our training provides:
 - New knowledge
 - Introduction to business realities and practices
 - Improving personal qualifications
 - Help finding a job

The students' backgrounds, after 22 years of development, highlights the diversity and integration of professional and academic profiles in a sector that is continually changing.

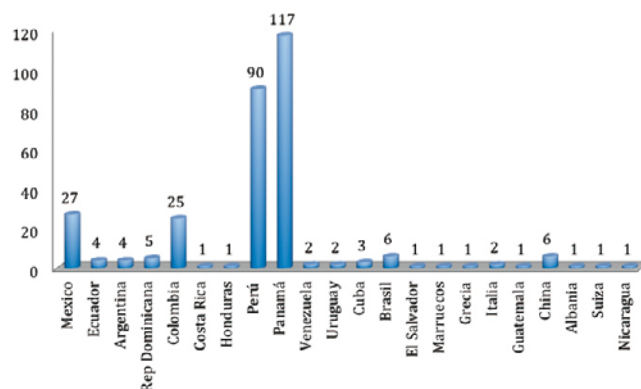
Spanish students generally have technical backgrounds, although all fields of university qualifications are represented (Engineering, Law, Economics, Philology, Business Management and Administration, etc.). Students generally come from Valencia, Madrid, Asturias, Catalonia, Andalusia and the Basque Country, reaching across almost the entire country.

The international student body hails mainly from Panama, Colombia, Mexico and Peru, thanks to on-line content and on-site training that takes place both Valencia and in the respective Latin American countries. In the last two years of the Master's Programme and Specialist Courses, 37% of the student body were from overseas.

Composition of Postgraduate Student Body 1992-2014

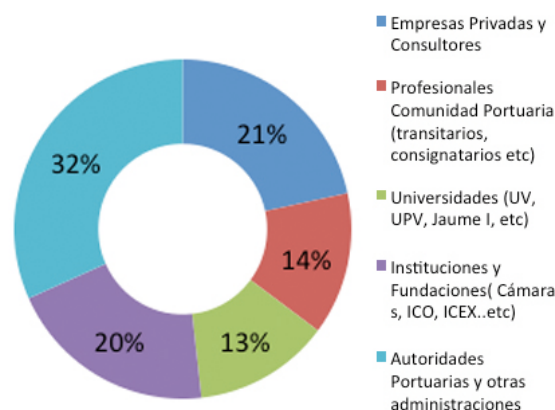


Composition of Foreign Postgraduate Body (1992-2014)



TEACHING STAFF

The teaching staff is made up of **250 professionals** from Universities, from private companies linked to the Port Community and other sectors, and from the Port Administration, Institutions, Foundations and Authorities.



7.3.1. University Postgraduate Training

In collaboration with the ICADE Business School and on behalf of the Port Authority of Valencia (Spain), the Valenciaport Foundation manages an ambitious programme of postgraduate training in business management, logistics, ports, and transport, targeted at managers and recent graduates. This programme has been offered since 1992 and consists of the following courses:

Master's Degree in Port Management and Intermodal Transport. Valencia (22nd and 23rd edition)

Master's Degree in Port Management and Intermodal Transport. Colombia

Specialist Courses (20th and 21st editions)

- Land Transport
- Maritime Transport
- Intermodal Transport
- Port Management

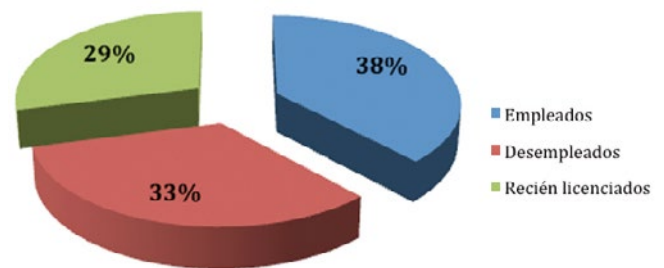
During the 2013-2014 period, **1,636 hours** of postgraduate training was offered with **133 students** trained.

A similar percentage of students from 3 different professional backgrounds attended the postgraduate courses

- 29% were recent graduates from various degrees.

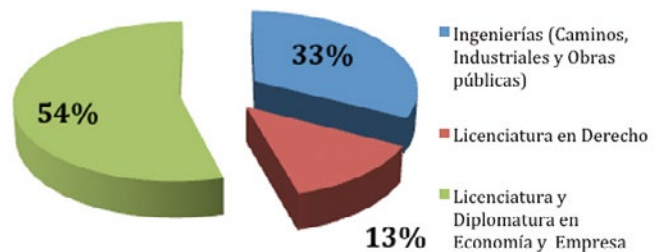
- 38% were working professionals from the port-logistics sector.
- 33% were unemployed workers from other sectors, normally with an average of 10 years' experience, looking for retraining for a new professional career in the port-logistics sector.

Student Profiles by employment status



There is a range of qualifications held by students in the postgraduate courses programmes, but they generally represent 3 disciplines; Engineering Sector, Legal Sector, and the Economy and Business Sector.

Student Profiles by University Qualifications





Picture of the students of the 22nd edition of the Masters in Port Management and Intermodal Transport

7.3.2. Cluster Training

More for the sector. How it has changed...

There is no doubt that the University Training Programmes planted the seed for what is today IPEC-Training. However, the experience accumulated, and above all, the response from the sector, have led us recently to develop and market Business Training Programmes. These programmes are composed of short courses, oriented to the vocational training of managers, middle management, and general staff of the businesses that operate in the ports and the associated logistics community. The aim is to facilitate retraining and improve staff job prospects, as well as to promote the creation of a new pool of professionals who can meet the future needs of the sector.

In response to this objective, **956 students** completed training in 2013 and 2014 representing **1,324 hours** of Further Business Training, which can be broken down into:

- 3 editions of the Course on Customs Procedures for Shippers
- 2 editions of the “Basic operating level for the prevention and fight against contamination in the loading, unloading, and handling of hydrocarbons in marine and port areas” course, approved by the General Directorate of the Merchant Navy
- Incoterms Workshop
- 2 editions of the Handling of Dangerous Goods Course
- Negotiation Workshop for Logistics Operators
- Exempt Areas and Authorized Economic Operator Course
- Language Courses for the Port Community: English (various levels).
- Cruise Ship specific English course
- Container Logistics on-line course
- On-line language courses
- 2 Office IT on-line courses
- 2 editions of the Road Transport Operator Training on-line course
- Incoterms Workshop on-line course
- International Trade Documentation on-line course
- Effective management of Maritime Transport on-line course
- Port Services on-line course
- Logistic Operator Costs on-line course

The Formula: The Port Classroom (Aula Portuaria) Group



The **Port Classroom Group** is a well-established working group composed of professionals and associations from the sector whose objective is to identify the necessary training needs for port-logistic professionals and to prepare new educational materials that serve as a basis for teaching courses and other similar activities, such as seminars, conferences and publications. This will function to combine efforts and to give an integrated image of the port community, responding to the market with a training offer that enjoys wide approval.

This group is composed of the following members:

- Valencia Shipping Association (ANV)
- Valencia Association of Freight Forwarders, Shippers and Related Companies Association (ATEIA Valencia)
- Port of Valencia Collective Charitable Society (Montepío del Colectivo Portuario de Valencia)
- Port of Valencia Guarantee of Quality
- Official Association of Customs and Commission Agents of Valencia (COACAV)
- Spanish Association of Container Repairing Depots (ARCE)
- The State Stevedoring Company for the Port of (SAGEP)

- Association of and Container Transport Companies (ELTC)
- Mooring Service Providers of the Port of Valencia
- Port Authority of Valencia (PAV)
- Valenciaport Foundation through the IPEC-Training department

7.3.3. On-Line Training for Ibero-American Specialists

In 2004, IPEC-Training, along with the Port Authority of Valencia, the Economic and Technological Development Distance Learning Centre Foundation (CEDDET), and with the collaboration of the State Ports of Spain Organization (OPPE), launched an on-line training project for Ibero-American professionals. Thanks to this training project, **a Port Management and Planning Course**, as well as a **course on Port Management and International Trade**, are presently offered. These two on-line programmes have reached their 10th and 6th editions respectively and, on completion, offer ten scholarships to outstanding students for the Valencia "Port Workshop" - an ideal combination of online and face-to-face training.

In October 2007, the **Ibero-American Network of Experts** (REI) in Port Management was created, with the objective of providing a virtual space for content and experiences among the alumni of the on-line programmes and the teaching staff. This platform, which already includes 338 members, forms a dynamic space which provides different activities, including discussion forums on topics of current interest, short refresher courses, a biannual e-newsletter, and a news bulletin. This guarantees an attitude geared towards collaboration and the exchange of experiences and views between port-logistics professionals.

The period from 2013 to 2014 included the following notable activities:

COURSES AND WORKSHOPS

The objective here is to improve the ongoing training of alumni and members of the REI.

- Port Management and Planning (10th Edition)
- Port Management in International Trade (6th edition)

FORUMS

Virtual spaces for use as an exchange which brings together experts and interested parties to share experiences and discuss various issues.

- International Physical Distribution in Maritime Transport
- Free Trade Agreements and their Impacts on Port Operations
- Hub Ports - Conditions for their Implementation
- Port Marketing as a Management Model for the Optimization of Port Operations - How to Draw up a Port Marketing Plan
- The Use of Rail Transport as a Land Alternative to Trucking with Ports

During the period 2013-2014, 117 students have completed training representing a total of 372 hours of on-line training for Ibero-American specialists.

PERMANENT WORK GROUPS

The REI provides resources to bring together certain people in order to work towards a common goal on a specific subject.

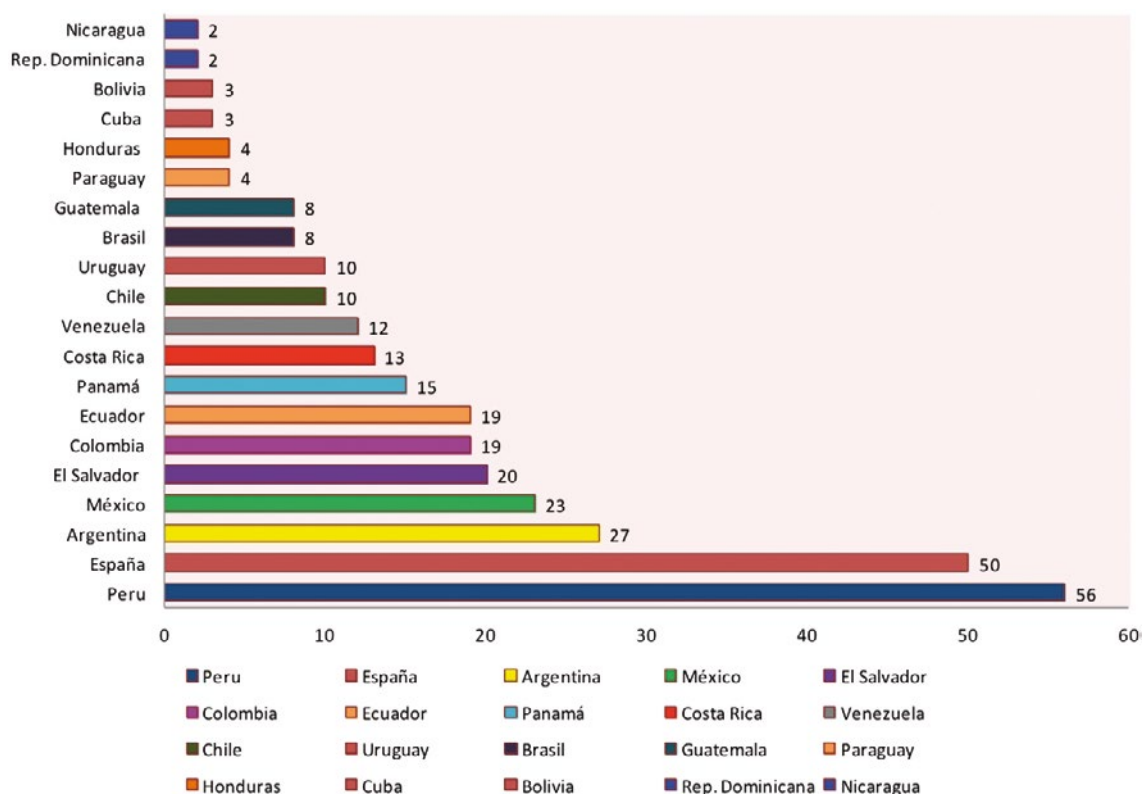
- Port Statistics and Indicators
- Port Regulations
- Design and Execution of Marketing Plans

E-NEWSLETTER

Publication of 2 biannual REI e-newsletters with opinion articles, conclusions from forums, publications, and announcements of workshops.



Members of the REI in Port Management



7.3.4. In-company Cluster Training

The design of specific programmes for national and international businesses, both public and private, based on needs-analysis.

During the period of 2013-2014 **392 students** have completed training representing **1,561 hours** of In-Company Cluster Training

The most recent examples include:

- English courses
- Port Management courses
- Stevedore Training Courses
- Tramp Chartering Workshop
- Course in Navigability and Operations Planning in Container Terminals
- Customs Procedures for Shipper Activities
- Key Logistics in International Trade
- Preparation for Certification as an Authorized Economic Operator (AEO)

- Dangerous Goods Course
- On-line Course for the Effective Maritime Transport Management (Two editions)
- On-line Incoterms practical workshop (two editions)

7.3.5. Seminars and Forums

IPEC-Training also hopes to serve as a platform and specialized forum for port representatives to share views, discuss positions, and to inform of future actions. To this end, IPEC-Training organizes seminars and conferences specialized in port-logistics from the best professionals in the field.

During the period 2013-2014, **1,073 students** completed training, representing a total of **123 hours** of training in seminars and conferences.

Some examples are shown in the Seminars and Conferences section of this report (see page 108).

7.3.6. Teaching Materials

New teaching materials, technologically adapted to the required teaching methods and dealing with issues which call for increased training in the port-logistics sector are being developed. The aim is to provide the basis for training courses that the Foundation offers, and many of these materials are also edited by the Foundation for sale and for reference in the Documentation Centre.

With the on-line development of the “Virtual Classroom” platform, new teaching materials have been prepared for on-line teaching:

1. International Trade Documents
2. Incoterms Practical Workshop
3. Effective Maritime Transport Management
4. Logistic Operator Costs
5. Management Tools
6. Design of Maritime and River Navigation Channels
7. Port-city Relations
8. Free Trade Agreements
9. Exempt Areas and Authorized Economic Operator (AEO)
10. Naval Construction
11. Maritime Policy and Transport
12. International Law, Contracts and Insurance
13. Air Freight Logistics
14. Fluvial Hydraulics in Navigable Rivers
15. Corporate Social Responsibility
16. Barranquilla Port Process Innovation Workshop

7.3.7. International Educational Cooperation

Since its creation in April 2004, the Valenciaport Foundation has principally focused its international efforts and dedication on Latin America. It has served as a tool for the Port of Valencia and for the internationalization of the Spanish port-logistics community, establishing cooperation schemes and acting as an institutional support reference.

However, in 2013 work began in Equatorial Guinea, Africa, training terminal managers and stevedores. This represented a challenge to the Valenciaport Foundation, although the notable results achieved led

to the repetition of training programmes in 2014 and the continuing development in the coming years.

The experience of IPEC-Training in the design and implementation of training programmes has been internationalized through the signing of collaboration agreements with universities and other Ibero-American entities with the following objectives:

- To promote scientific and cultural cooperation through exchanges of specialists and students
- To conduct conferences, seminars, symposiums and joint scientific research
- To coordinate educational and managerial weeks as a complement to studies
- To offer scholarship programmes and study grants linked to training programmes
- To exchange plans, programmes, study materials, audio-visual material and scientific-technical information



In the period 2013-2014 courses have been conducted in:

EQUATORIAL GUINEA (Bata-Malabo and Valencia)

- Port machinery management courses for stevedores. This has trained 47 stevedores in:
 - TerminalTrack
 - ReachStacker
 - Forklifts
- Port Management and Terminal Operation courses (in Bata and Malabo)
- Port Management - Executive Programme course (in Valencia)

TRAINING

PERU - LAMBAYEQUE

- Project - "Consultation Services for Developing the Master Plan for the Lambayeque Region Port Terminal". Within the project, a programme of 5 on-line courses on port matters was developed for 30 students.

COLOMBIA- ASOPORTUARIA

- Development of the second international Master's degree in Port Management and Intermodal Transport in Colombia (Barranquilla) within in the framework of the signed agreement with ASOPORTUARIA (Atlantic Ports Association) with 16 students, directors and

managers of port terminals. 60% of the programme was delivered on-line, with 40% on-site classes, taught in Colombia and Spain (Valencia).

ECUADOR- INECO

- Development, in collaboration with Ineco, of Port Infrastructure Design seminar for engineering consultants and staff from the Ministry of Transport in Quito, Ecuador. This included two weeks in Quito and a three-month on-line programme (July to August 2014) for 45 students.

Alongside these international projects, the Valenciaport Foundation annually manages the following projects:

STRUCTURING OF THE PORT COMMUNITY AROUND TRAINING SPONSORED BY THE PORT AUTHORITY OF VALENCIA

OBJECTIVE: In the competitive and ever-changing environment of trade and commerce today, human resources have proven to be the most effective tool for becoming more competitive and facing up to said changes. People make the difference, and for this reason, the Port Authority of Valencia (PAV) promotes an annual project to maximize the performance of sector professionals, both in Spain and in Ibero-America. This includes specific training programmes, cooperation scholarships, and the structural development of the Port Community.

The specific objective of these courses/seminars is to promote the transfer of Valenciaport's "Know how". Cultural, and especially linguistic, connections drive relations between these regions by creating the perfect stage for cooperation.

The activities of this project take shape through a programme of classroom-based educational scholarships:

- 2 Scholarships from the PAV and offered to Spanish citizens to attend the Master's Degree in Port Management and Intermodal Transport.
- 4 Scholarships through the CIP/OAS (The Inter-American Committee on Ports (CIP) of the Organization of the American States (OAS)), offered to Ibero-American professionals to complete the Master's Degree in Port Management and Intermodal Transport.
- 4 Scholarships through the OPPE (State Ports of Spain Organization), directed at Ibero-American specialists.

- PAV SCHOLARSHIPS. The Port Authority of Valencia (PAV) and the Valenciaport Foundation created a scholarship for professionals active in the Spanish port-logistics industry with a minimum of three years of experience in port management, intermodal transportation and/or international trade. During the 2013-2014 period, workers from MSC Terminal Valencia and TCV Stevedoring Company were awarded the scholarship.
- CIP/OAS SCHOLARSHIPS. The Inter-American Committee on Ports (CIP) of the Organization of American States (OAS) alongside the Valenciaport Foundation created **two scholarships for Ibero-American professionals** to complete the Master's

in Port Management and Intermodal Transport. Since the start of the scholarship programme with the OAS, professionals from Peru, Colombia, Mexico, Honduras, the Dominican Republic, El Salvador, Panama, and Argentina have attended this course via IPEC-Training. This training fulfils a dual purpose: to provide up-to-date knowledge on the principles of planning, organization, and business management related to transport and ports to Ibero-American professionals, and to promote interactions and collaborations between the institutes involved. During 2013-2014, students from Mexico, Peru, Nicaragua, and Colombia have been beneficiaries of these scholarships.

- OPPE Scholarships for Ibero-American Port Specialists. Two scholarships per year are provided for a month's stay in Valencia in order to provide knowledge of the Spanish port experience – in this case, Valenciaport – allowing a comparison with techniques employed in their respective countries. These scholarships are provided by the OPPE and the Port Authority of Valencia. In 2013-2014, students from Angola, Equatorial Guinea, and Colombia have received these scholarships.

Scholarship recipients CIP/OAS and OPPE (1994-2014)



7.4. AAAIPEC



The Alumni Association was founded in 1998 as a way to help graduates of the Master's and specialist courses to keep in touch with their classmates, professors and students who graduated in other years. The underlying aim is to enable members to stay up-to-date with the latest developments in their area of study as the sector evolves. By the end of 2014, the association had a hundred members from a range of different professions - engineers, lawyers, economists, Business Management and Administration graduates etc. - who work in the different companies that make up the Port Community (shippers, freight forwarders, logistics operators, public administration, stevedores, etc.).

The objectives of the Alumni Association are:

- To continue to stimulate the thirst-for-knowledge of all those for whom the training period was a positive experience.
- To promote human and professional relationships among a group of people united by this common denominator.
- To update relevant information in the thriving, dynamic trade and transport sector.
- To manage job opportunities, both in terms of internships for students and job placement for those who have already completed the training period.



Logistics meeting with José Luis Alabau

The Alumni Association focuses its work in four areas; professional (conferences/talks/seminars); employment; culture, leisure and sport; and a cross-cutting area dedicated to communication.

Detailed below are the main activities carried out in each of these areas in the 2013-2014 period:

Professional Activities (conferences, talks, seminars...):

- Round table: Railways and Ports: collaborating in order to expand.
- Debate: Challenges faced by freight forwarders in the recovery of import and export traffic in the Port of Valencia.
- Seminar on using LinkedIn to enhance networking on social networks.
- Conference on the 'health cent', a tax on fuel (sponsored by Garrigues).
- Visit to the cruise ship MSC Espléndida.
- Participation in the stowage workshop of the Master's in Port Management and Intermodal Transport.
- Six port-logistics meetings: talks/discussions with sector professionals with relevant experience

1. Francisco Roca Monzó, President of Roca Monzó;
2. Rafael Aznar, President of the Port Authority of Valencia;
3. Sven Valentin, Director of the Mediterranean Shipping Company Terminal;
4. Luis San Simón, Founding Member of the law firm San Simón;
5. Alejandro Arola, President of Arola;
6. José Luis Alabau, Director of TCV.



Paella competition of the port-logistics sector

Sport, Leisure and Cultural Activities:

- Sailing competition
- Go-Kart racing
- Taking part in the paella competition organized by the sector
- Christmas and summer dinners

Communication

The activities of the Association are communicated through various channels created for this purpose. Leisure activities are mainly posted to a Facebook group. For professional activities, a group was set up on the professional network LinkedIn in 2014. Objectives for this group include attracting more members as well as generating content which enhances the appeal of joining the group. Lastly, the Association website was set up in late 2014 and is still undergoing improvements.



Sailing Competition



Visit to the MSC Splendida

7.5. What does IPEC-TRAINING contribute to the sector?

- The backing of the **experience and know-how** gained during the 22 years spent providing training at all levels: executives, middle managers and general staff, in terms of both technical matters and generic skills. Staff from Port Authorities and from private companies, in Spain as well as overseas, have received training.
- **Design of customized training programmes**, based on specific job descriptions and which can be adapted to any company.
- An evaluation process to test candidate profiles, in order to match these profiles to the programmes designed thus ensuring the homogeneity of the groups and informing decision-making regarding the content and activities of each programme.
- **Dynamic and innovative methodology** combining theoretical knowledge with practical analysis.
- **Working together with the sector. The Aula Portuaria** (Port Classroom) is an established working group composed of professional and industry associations, working to identify training needs of port-maritime professionals as well as providing the primary communication channel.
- **Qualified, specialized teaching staff:** Specialists in the field, university professors and sector professionals. The programmes always include an expert on the relevant material, who works together with the management team of the Training Department to design the entire programme. The contents of the course or programme centre are developed in line with this plan and are delivered by selected professionals.
- **Continuously modernized facilities** that provide students with latest-generation audio-visual and IT resources.



8

DOCUMENTATION

The main task of the Documentation Department is to support the Foundation in all the research and development activities stemming from its participation in projects.

This support comprises activities ranging from the management of the documentation and know-how generated by carrying out such projects, to providing a key tool for searching and locating documents and information to assist and contribute to the resulting generation of knowledge.

In this regard, during the 2013-2014 period, the Documentation Department established three lines of activity:

- CEDIPORT
- Publishing
- Strategic Tracking

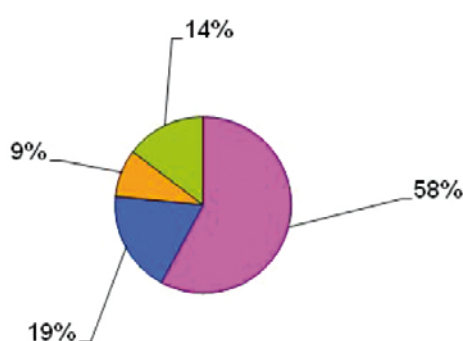
The aim of the CEDIPORT service is to provide information and documentation to the port community and its researchers. Particular attention is therefore paid to customer service and the effort to provide users with carefully selected documentary resources that support their professional work as well as a range of services that meet their information needs.

Underpinning all this is a great deal of technical work centring on tasks such as cataloguing, circulation (managing lending and returns), reference (conducting information searches and bibliographic reports) customer service, information alerts, duplicate management and managing the sales and distribution of publications issued by both the Valenciaport Foundation and the PAV.

At the end of the period 2013-2014, CEDIPORT comprised a total of 13,938 available documents, including monographs, reports, sectoral studies, and so on. This figure would be even higher - 23,525 documents - if we were to take into account the number of periodicals in the publication library; there are more than 50 titles, both national and international, offering users the most up-to-date information compared to the more well-established knowledge available in the monographs.

Nº OF DOCUMENTS IN THE ARCHIVE (nº inf. NOT grouped)									
	PAV	FREPORTS	VALENCIAPORT F	CEDIPORT	Theses	AB	Periodicals	Total without periodicals	TOTAL
2014	7606	2458	1150	1930	398	396	9587	13938	23525

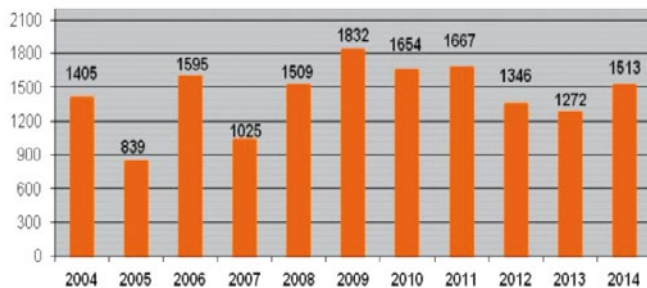
FONDO BIBLIOGRÁFICO EN PORCENTAJES
Total de ejemplares = 13.938



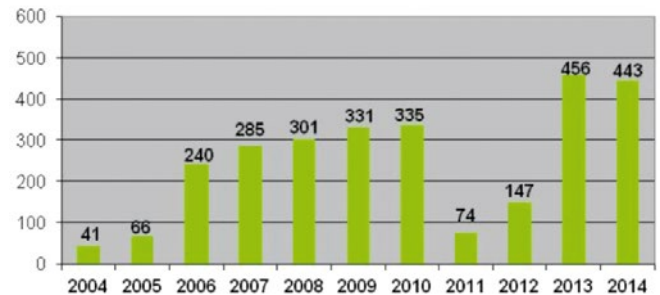
The document archive is therefore open and constantly expanding thanks to donations of institutional publications from related organizations as well as acquisitions made in response to the requests and needs of our users.

Responding to the documentary needs of our users and **raising the profile** of CEDIPORT's work has served to build up the use of these services over the years as reflected in statistics related to other services.

Nº DE PRÉSTAMOS



BÚSQUEDAS



Two new publications were produced in 2013 as a result of editorial activities in this period. These publications, which now form part of the Valenciaport Foundation's Technical Library, are:

- **Outsourcing logistics in a globalized economy. Analysis of 3PLs in the Valencian Community /** Pedro Coca Brown. Series: Logistics and Intermodality

- **ICT Trends in ports /** Miguel Llop, [et. al]. Series: Information Technologies

This activity also entails the management of sales, donations, dissemination and distribution of these publications, to which end the Documentation Department has collaborated with a number of technical bookstores nationwide and international distributors, gaining a presence in 2013 on the **online sales platform, Amazon.**

amazon.es Premium

HASTA 50% REBAJAS

Buscar: La terminal portuaria de contenedores como sistema nodal

2 resultados para Libros: "La terminal portuaria de contenedores como sistema nodal"

Mostrar resultados para: Todas las categorías Libros

Filtrar por: Precio 20 - 50 EUR (1) EUR a EUR GO

Disponibilidad: ☒ Incluir no disponibles

Resultados de "La terminal portuaria de contenedores como sistema nodal" en Libros Ver los 5 resultados...

La Terminal Portuaria de Contenedores como sistema nodal en la cadena logística (Planificación y Gestión Portuaria... 2012 de Arturo Monfort y Noemí Monterde. Encuadernación de biblioteca. EUR 35,00 usado y nuevo (1 oferta)

La Terminal Portuaria de Contenedores como sistema nodal en la cadena logística (Planificación y Gestión Portuaria... 1000. No disponible.

INNOVACIONES TECNOLÓGICAS Y DE GESTIÓN EN TERMINALES PORTUARIAS DE CONTENEDORES 2013 de Arturo Monfort, Noemí Monterde, Rafael Sapiña y otros

Terminal Portuario de Lambayeque: Apuntes y Aportes para el Plan Maestro Portuario 29 octubre 2014 de Luis Barrera Arreseque

TRILOGIA PROYECTO MASPORT 2013 de Arturo Monfort, Noemí Monterde, Rafael Sapiña y otros. EUR 70,00 nuevo (1 oferta)

Envío garantizado 2 a 3 días GRATIS ilimitado

100%

Finally it is worth highlighting that during this period the Documentation department has taken a proactive attitude, reflecting its objective to establish itself as a key tool within the project team. Therefore, it has sought to raise the profile of the work done by exploring new lines of communication with users, the result of which has been the launch in 2013 of the News Alert service, and in 2014, the Strategic Tracking service. This new service monitors different sources of information (both

print and electronic resources in, internal and external) in order to track a particular topic. As part of this tracking, news stories are based on parameters defined by users of the service. The final product is a report, sent as often as requested by the user, with news identified as relevant. LNG was the topic chosen for the pilot, for a documentary support service provided to Valenciaport Foundation's COSTA project. The two-year goal would be to track a larger number of topics related to projects.



CORPORATE SOCIAL RESPONSIBILITY AND COOPERATION



9

The Valenciaport Foundation remains committed to promoting Corporate Social Responsibility (CSR) in its area of influence, as a strategic tool which encourages innovation in management and maximizes the competitiveness of companies in the port community, thus reinforcing its impact on society as a whole.

In this regard, CSR is understood as a support to incorporate into management practices and actions carried out voluntarily that have a beneficial impact on the organization's surroundings, especially those focusing on labour, the environment and social issues.

To this end, the Foundation has consistently dedicated reliable resources to develop in matters relating to social responsibility in the sector, through consulting, guidance, training, the exchange of experiences and knowledge-sharing.

Related activities are mostly carried out in collaboration with or in support of actions of Valenciaport Foundation trustees, in aid of shared special stakeholders. In terms of social projects, attention is focused on the local community, in collaboration with associations and organizations with links to the port neighbourhood and the port logistics sector.

A number of specific projects which took place in 2013 and 2014 are worth highlighting;

- The project, **APORTEM** – Valencia Solidarity Port, is Valenciaport Foundation's most significant CSR initiative during this period to **encourage CSR in the port community**. In June 2013, the first 15 members formally joined the APORTEM initiative, for which the Valenciaport Foundation takes on responsibility for promotion, coordination and management of the project. APORTEM provides a forum for knowledge and guidance, and a platform to encourage the implementation of CSR in the Port of Valencia. The following 19 organizations are now members:

Port Authority of Valencia, Valenciaport Foundation, Valencian Association of Freight Forwarders, Shippers and Related Companies Association, Valencia Shipping Association, Official Association of Customs and Commission

Agents of Valencia, Noatum Ports Valencia S.A.U., TCV Stevedoring Company, S.A., Boluda Corporación Marítima, S.L., Propeller Club of Valencia, Mooring Service Providers of the Port of Valencia, Grupo Diario, Stevedoring Company - S.A.G.E.P. URBAMAR Levante, Docks Logistics Spain, S.A., Infoport Valencia, MSC Terminal Valencia, S.A.U., Tiba Internacional, S.A., Balearia y Aljibes Boscá.

Project implementation is assigned to the different project committees (Action Committee, Communication Committee and Training Committee). In terms of aid, APORTEM provides special, long-lasting support to six organisations representing most vulnerable community stakeholders around the Port of Valencia. It has supported blood drives and the collection of goods such as furniture and IT equipment, which have gone to benefit the non-profit organisations working with marginalized sections of the community.

In addition, the charitable running event PAS RAS AL PORT DE VALENCIA was held for the 27th time, with runners raising €1006. This sum paid for sport equipment to encourage a healthy lifestyle among students of the Santiago Apóstol school from the Cabañal District. Similarly, the Propeller Club of Valencia donated the money raised at their Christmas benefit dinner to projects supported by APORTEM. With the money raised by the Port Community, five more children were able to attend the Santa Ana Day-Care Centre and its cost of heating in winter was covered. Furthermore, musical instruments were purchased for schoolchildren of Santiago Apóstol, and a rototiller, 150 saplings and tools were donated to the Natzaré Neighbourhood Association's Self-Employment in Ecological Agriculture project, "Fent Camí".

In short, the objective of APORTEM is to foster collaborative projects which bring people together to maximize the potential of their efforts, as well as demonstrating cohesion and commitment to the Port Community and its surrounding area and local residents.



APOTEM meeting 2014

- **The engagement with stakeholders of the port environment** along with the commitment to promoting best practices among the port community, is reflected in the organization of technical meetings that seek to foster the relationship and exchange of experiences among professionals. Thus, the Valenciaport Foundation and the Port Authority of Valencia, with the support of APOTEM have organized the second and third **“Conference on Promoting Social Responsibility in the Port Community. Challenges, developments and opportunities.”** These two events, mainly targeted at companies in the sector, were held in the Port of Valencia in

September 2013 and in October 2014, respectively. As is standard, they first gave an overview of the current situation and main trends, both nationally and internationally, a selection of case studies that directly influenced their surroundings, and the presentation of specific potential opportunities for future development of CSR. As with the first such conference, both events were well received with a high turnout of experts and professionals to learn about the implementation of CSR in the most advanced companies. Overall, the attendees’ feedback collected in the evaluation surveys was highly satisfactory.



Opening of the “2nd Conference on Promoting Social Responsibility in the Port Community”, Valencia, September 2013



Opening of the “3rd Conference on Promoting Social Responsibility in the Port Community”, Valencia, October 2014

- **The assistance and advice provided to other organizations as they incorporate CSR** into their management approach, continues through support to companies that are planning socially responsible initiatives. The Foundation provides support for analysis and diagnostics, benchmarking, programme design, reporting, and actions related to social responsibility plans, in order to strengthen the competitiveness of the port community, as well as improve the knowledge and the inclusion of CSR in day-to-day operations.

In this regard, the most well-established collaboration is with the **Port Authority of Valencia**, where Valenciaport Foundation has from the very beginning contributed to the implementation of corporate social responsibility, especially in the initiatives of a social nature and those that reinforce the integration of the Port of Valencia with its environment.

- Concerning the collaboration in **publications** in order to **share learnings and to further the practice** of CSR there are two noteworthy activities in this period. The technical review in 2013 of the translation into Spanish of the Code of Conduct on Societal Integration of Ports (originally published in 2010 by the European Sea Ports Organization) and the technical review in 2014 of the Spanish translation of the Accountability Standard AA1000 - Stakeholder Engagement System, "Commitment of Special Interest Groups

"(2011). The Spanish versions of these two guides may be critical in terms of raising awareness of CSR practices among the Spanish-speaking port community.

- The **communication of best practices in CSR** is further reinforced by the collaboration in several **postgraduate programmes** and presentations made in various **forums**, where the experience of Valenciaport has also been shared:
 - 3rd Nebrija University-Santander Conference on CSR. "Universities showing responsibility to companies, companies showing responsibility to Universities. Nebrija University. Madrid. March 2013
 - "Social Responsibility and Third Sector. Necessary cooperation. The experience of the Valenciaport Foundation." Polytechnic University of Valencia. September 2013
 - "The experience of promoting social responsibility in Valenciaport". Implementation Kick-off Conference. Port Authority of Alicante. December 2013
 - Participation in the 'experts breakfasts' for the Valencian Community, organized by the publication 'Corresponsables', Polytechnic University. 2013 and 2014
 - "CSR and Sustainability: keys to generating greater public confidence in organizations". Corresponsables and Bancaja Foundation. Valencia. November 2014



Pilar Blaya during the conference of the Port Authority of Alicante, December 2013



CSR and Sustainability Conference, November 2014

CORPORATE SOCIAL RESPONSIBILITY AND COOPERATION

- **The promotion of corporate social action** aims to encourage collaboration, individually and also collectively, with initiatives supporting the most vulnerable people in the area immediately surrounding the port. Valenciaport Foundation thus coordinates initiatives for the entire port community which benefit local non-profit organizations with a focus on social charitable work such as food collection, providing basic necessities, toys, school supplies, clothing and other items for children at risk of social exclusion, immigrants without resources and

families in dire need. There are two annual charitable campaigns that, thanks to the dedication of the employees involved, have delivered several tonnes of food, thousands of personal care items and household products, school materials, clothing and basic necessities, to people in need of help. Thousands of games have cheered up children's Christmases and other holidays over the years, and financial contributions have meant that breakfast and afternoon snacks can be offered in situations of malnutrition and substandard housing.



- In terms of **relations with the surrounding area**, the Valenciaport Foundation is working to systematize the exchange of ideas with stakeholders through dialogue with the public and meetings with the most representative neighbourhood organizations and non-profit organizations operating in the surrounding areas. The Foundation similarly promotes public outreach projects centred on sports, culture, education, social events, sponsorship activities, conferences etc. Monitoring the social reality of the surroundings requires dialogue and collaboration with the various organizations with which the Valenciaport Foundation works in order to establish ongoing, stable relationships. The principal relationships are with the following organizations:
- Santiago Apóstol del Cabanyal School (Educational centre for socially-disadvantaged students) <http://www.santiagoapostolcabanyal.es>

- Asociación Arca de Noé (Noah's Ark Association) in Nazaret. <http://elarcanazarete.org>
- "Peter Maurin", Shelter for Sub-Saharan immigrants <http://www.isotrabajo.org/casa-peter-maurin-presentacion>
- "Dorothy Day" Shelter for Immigrant women and children". <http://www.isotrabajo.org/casa-de-acogida-dorothy-presentacion>
- Fundación Alanna. <http://www.alanna.org.es>
- Associació de Veïns i Veïnes de Natzeret (Nazaret Neighbourhood Association)
- Santa Anadaya centre for young people.
- Casa de la Caridad (Charitable organization): <http://www.casacaridad.com>
- Casa Cuna Santa Isabel (Residential charitable centre): <http://www.casacunasantaisabel.com>
- Valencia Food Bank. <http://www.bancodealimentosdevalencia.org/>

Most recently, the Foundation joined the SOCIOLIDARIOS project for social entrepreneurship, which seeks to promote company networking and potentially transformational projects that respond to societal commitments.



Signing the collaboration agreement between VF and Sociolidarios, 23rd November 2014

- The **monitoring of trends and policies** at both the national and international level, as well as the required benchmarking to make updated information available, is carried out through the principal relevant **discussion forums**. In addition, participating in networks reinforces Valenciaport's position in this regard. Accordingly, the Foundation is a member of the International Association of Cities and Ports (**IACP**) and the Association for the Collaboration between Ports and Cities (**RETE**), the two most important networks in the area of port-city relationships. With regard to social responsibility, the Foundation is an active member of key organizations such as **FORÉTICA**, Forum for the Evaluation of Ethical Management, and the **ÉTNOR** Foundation, which focuses on ethics for business and organizations. Both of these are pioneers in Spain and prominent internationally. Along the same lines, the Foundation also supports **DIRSE** – the Spanish Association of CSR Directors, **AEDIPE** in the Valencian Community, and **WISTA** – the Women's International Shipping & Trading Association.

PROMOTING THE IMPLEMENTATION OF CORPORATE SOCIAL RESPONSIBILITY IN VALENCIAPORT

WORK TEAM

FV Coordinator: Pilar Blaya

TIME FRAME: 2013 - 2014

OBJECTIVE: The implementation of Corporate Social Responsibility (CSR) is a response to the Port Authority of Valencia's desire - reflected in the goals outlined in its Strategic Plan - to strengthen its sustainable development model. This management model is underpinned by a number of guiding principles, of which social responsibility is one, along with complying with the law and taking a cooperative approach.

This project aims to extend the implementation of CSR among the port community and consolidate relationships within this environment. Accordingly, it is cross-cutting project, addressing all areas of management and informing decision-making in the short-, medium- and long-term. To that end, it covers both planning and actions from all areas of activity targeted at Valenciaport's area of influence as well as its main stakeholders: clients, staff, port logistics community and the general public.

In this context, the aim of this action incorporates several lines of work that bring together multiple shared initiatives as part of a CSR plan to be carried out by both organizations in order to promote CSR among the port community.

FUNDING BODY: Port Authority of Valencia

These actions, much like many of those developed in other areas, are based on our desire to dedicate time and effort to improving social and economic conditions in the

various areas in which the Foundation operates, in cooperation with our supporters as well as with national and international organizations that share this approach.



10

FINANCIAL
INFORMATION



VALENCIAPORT FOUNDATION

BALANCE SHEET

ASSETS	2014	2013
A) NON-CURRENT ASSETS	€129,028.70	€150,661.77 €€€
I. Intangible assets	€24,415.65	€28,261.26
5. IT applications	€24,415.65	€28,261.26
III. Tangible assets	€95,188.05	€122,400.51
2. Technical facilities and other tangible assets	€95,188.05	€120,700.51
VI. Long-term financial investments	€9,425.00	
4. Long-term deposits	€6,400.00	
5. Other financial assets	€3,025.00	€1,700.00
B) CURRENT ASSETS	€3,117,467.24	€4,408,211.01
I. Inventory	€48,334.13	€47,386.87
1. Operational assets	€40,103.10	€43,863.19
6. Advanced payments to suppliers	€8,231.03	€3,523.68
II. Activity users and other debtors	€2,724,894.19	€3,534,027.05
III. Commercial debtors and other accounts receivable	€254,715.32	€222,011.65
1. Provision of services and sales to clients	€249,900.18	€219,535.01
4. Staff	€4,815.14	€2,476.64
VII. Cash and cash equivalents	€89,523.60	€604,785.44
1. Cash	€89,523.60	€604,785.44
TOTAL ASSETS (A+B)	€3,246,495.94	€4,558,872.78
EQUITY AND LIABILITIES	2014	2013
A) EQUITY	€2,135,825.61	€3,303,452.90
A-1) Foundation Funds	€1,050,210.39	€1,036,610.95
I. Founding Capital	€978,382.24	€978,382.24
1. Founding Capital	€978,382.24	€978,382.24
II. Reserves	€37,782.03	€12,653.17
2. Other reserves	€37,782.03	€12,653.17
III. Surplus from previous financial years	€20,446.68	€25,128.86
1. Surplus	€20,446.68	€25,128.86
IV. Financial year surplus	€13,599.44	€20,446.68
A-3) Grants, donations and bequests received	€1,085,615.22	€2,266,841.95
I. Grants	€1,085,615.22	€2,266,841.95
B) NON-CURRENT LIABILITIES	€295,837.05	€251,871.32
IV. Deferred tax liabilities	€295,837.05	€251,871.32
C) CURRENT LIABILITIES	€814,833.28	€1,003,548.56
I. Short-term provisions	€184,754.00	€130,000.00
II. Short-term debts	€10,856.28	€459,600.71
2. Debts with financial institutions	€1,273.01	€660.89
5. Other financial liabilities	€9,583.27	€458,939.82
IV. Beneficiaries – Creditors	€1,672.47	€2,667.36
V. Commercial creditors and other accounts payable	€617,550.53	€411,280.49
1. Suppliers	€138,184.33	€80,156.34
3. Creditors – miscellaneous	€248,953.62	€103,190.30
6. Other debts with Public Administrations	€202,751.08	€212,074.35
7. Advance payments received for orders	€27,661.50	€15,859.50
TOTAL EQUITY AND LIABILITIES (A+B+C)	€3,246,495.94	€4,558,872.78

VALENCIAPORT FOUNDATION

FINANCIAL STATEMENT

	2014	2013
1. Income from operating activities	€2,215,033.02	€2,211,716.72
b) User contributions	€585,155.27	€523,699.18
d) Grants apportioned to financial year's surplus	€1,629,877.75	€1,688,017.54
2. Spending on aid and other	- €60,466.08	- €67,165.38
a) Monetary aid	- €60,466.08	- €60,885.35
d) Reimbursement of grants, donations and bequests	- €6,280.03	
5. Supplies	- €526,153.30	- €342,151.10
6. Other income from activities	€579,189.81	€676,131.62
7. Staff costs	- €2,752,867.67	- €2,614,346.33
a) Salaries, wages and associated costs	- €2,253,217.59	- €2,132,969.47
b) Social contributions	- €499,650.08	- €481,376.86
8. Other operating expenses	- €1,187,804.57	- €976,940.35
a) External services	- €1,045,018.56	- €838,615.67
b) Taxes	- €142,590.75	- €118,779.54
c) Losses, wear or variation in provisions for commercial operations	- €195.26	- €19,545.14
9. Amortization of Assets	- €57,346.44	- €65,504.14
10 Grants, donations and capital bequests transferred to the financial year surplus	€1,821,218.00	€1,226,402.08
a) Capital grants transferred to the financial year surplus	€1,821,218.00	€1,226,402.08
13. Other results	€472.82	€3,012.52
A.1) OPERATING SURPLUS (1+2+3+4+5+6+7+8+9+10+11+12+13)	€31,275.59	€51,155.64
14. Financial income	€2,346.62	€1,961.09
b) From negotiable assets and other financial instruments	€2,346.62	€1,961.09
b2) From third parties	€2,346.62	€2,347.62
15. Financial expenses	- €13,961.28	- €15,410.56
b) On debts with third parties	- €13,961.28	- €15,410.56
17. Currency exchange differences	- €6,061.49	- €17,259.49
A.2) FINANCIAL OPERATIONS SURPLUS (14+15+16+17+18)	- €17,676.15	- €30,708.96
A.3) PRE-TAX SURPLUS (A.1+A.2)	€13,599.44	€20,446.68
I) FINAL TOTALS	€13,599.44	€20,446.68



11

2013-2014
IN PICTURES



First technical meeting of the European INTE-TRANSIT project. Valencia, January 2013



Representatives from the Port of Piombino (Italy) visit the Port of Valencia. Valencia, February 2013



First Workshop of the European COSTA project. Lisbon (Portugal), February 2013



8th meeting of the European FREIGHT4ALL project. Valencia, March 2013



Kick-off meeting for the European SIDRA project. León, March 2013

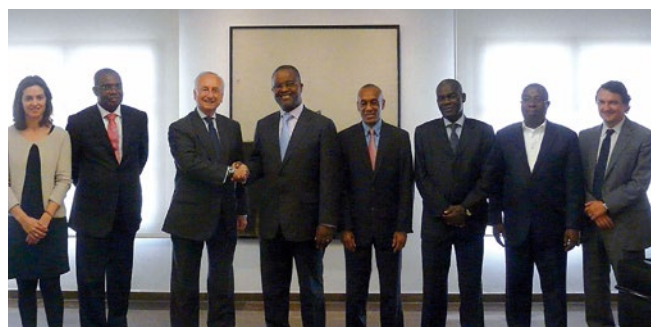


Kick-off meeting for the European CO-EFFICIENT project. Maribor (Slovenia), March 2013

2013-2014 IN PICTURES



Ukrainian delegation taking an interest in the Port of Valencia's know-how. Valencia, April 2013



Visit of a delegation from Angola to the Port of Valencia. Valencia, April 2013



Debate on Spanish railways organized by AAAIPEC. Valencia, April 2013



Valenciaport Foundation takes part in the 2nd Valencian Companies Run. Valencia, April 2013



Official visit of the Valenciaport Foundation to the Brazilian Ports Secretariat. In the photo, Leônidas Cristino, Minister for Brazilian Ports, meeting with Vicente del Río, director of the Valenciaport Foundation. Brasilia (Brazil), May 2013



Presentation of "Improving access procedures and control in the Port of Montevideo" project. Montevideo (Uruguay), May 2013



2nd technical meeting of the European project MEDITA. Valencia, May 2013



Speakers and attendees at the 6th Conference on Innovation in the Port Cluster and Mid-term Conference for the GREENCRANES project. Valencia, May 2013



Students from the Port Seminar for Iberoamerican Technicians organized by the Valenciaport Foundation. Valencia, May 2013



Kick-off meeting for the European project SMILE. Piraeus (Greece), June 2013

2013-2014 IN PICTURES



The president of the Business University of Montevideo (UDE), Uruguay, visits Valenciaport Foundation. Valencia, June 2013



Formal establishment of the "APOTEM - Valencia Solidarity Port" project. Valencia, July 2013



A delegation from the Andean Development Corporation visit the Port of Valencia. Valencia, October 2013



Valenciaport Foundation takes part in the annual Ten-T Days conference. Tallin (Estonia), October 2013



Kick-off meeting for the European project Monalisa 2.0. Brussels, October 2013



Inauguration of the 22nd Master's in Port Management and Intermodal Transport. Valencia, October 2013



Valenciaport Foundation takes part in the Festival of Innovation organized by the Climate-KIC project. Wroclaw (Poland), October 2013



Presentation of the GREENCRANES project in the China Ports and Shipping Development Forum. Shanghai (China), October 2013



Partners of the European project SUSPORTS visit the MSC terminal during a meeting held in Valencia. Valencia, November 2013



Kick-off meeting for the European project B2MoS. Valencia, November 2013

2013-2014 IN PICTURES



Inauguration of the 2nd International Master's in Port Management and Intermodal Transport. Colombia, November 2013



Valenciaport Foundation takes part in the first European Summit on the Maritime Single Window. Lisbon (Portugal), November 2013



First public demonstration of the European project GREENCRANES. Valencia, December 2013



2nd public demonstration of the European project, GREENCRANES. Koper (Slovenia), December 2013



Annual meeting for the European project CONTAIN. Valencia, January 2014



President of MSC Spain, Francisco Lorente, delivers a class for the 22nd Master's in Port Management and Intermodal Transport. Valencia, January 2014



Kick-off meeting for the European project BUNKER LOGIX. Madrid, February 2014

2013-2014 IN PICTURES



Students of the course on ship navigability and operational planning in terminals, specifically tailored to Noatum, Valencia, February 2014



Mid-way conference for the European project, FUTUREMED. Valencia, March 2014



Technical meeting of the European project, MEDNET. Barcelona, April 2014



Students of the 22nd Master's in Port Management and Intermodal Transport on a study tour to London. London (England), April 2014



Students of the 22nd Master's in Port Management and Intermodal Transport visiting Noatum Container Terminal Valencia. Valencia, May 2014



Helicopter evacuation drill organized as part of a conference of the European project, MONALISA 2.0. Valencia, June 2014



Valenciaport Foundation Takes part in the annual conference of the Association of Terminals and Port Operators (ATOP). Veracruz (Mexico), October 2014



Closing ceremony and presentation of diplomas of the 22nd Master's in Port Management and Intermodal Transport. Valencia, June 2014

2013-2014 IN PICTURES



Valenciaport Foundation takes part in the conference "Port Finance International Morocco". Casablanca (Morocco), September 2014



Valenciaport Foundation takes part in the Festival of Innovation organized by Climate-KIC. Valencia, October 2014



Inauguration of the 23rd Master's in Port Management and Intermodal Transport. Valencia, October 2014



International conference of the European project, MEDNET. Malta, October 2014



Valenciaport Foundation takes part in the First Meeting of Capacity Building Leaders of Latin American Commercial Entities. Miami, November 2014



Presentation in Valencia of the messenger tricycles developed as part of a pilot project for the European project, SMILE. Valencia, December 2014



Participants in the kick-off meeting for the European project, SEA TERMINALS. Valencia, December 2014



Valenciaport Foundation's Board. Valencia, December 2014



Valenciaport Foundation
New Building Port Authority of Valencia
APV Headquarters - Phast III - 46024 Valencia

Coordination: Marina Sáez Prado
Publisher: Valenciaport Foundation

Printer: Grupo Diario Imprenta, S.L.
Legal Deposit V-3073-2009



2013 - 2014 ANNUAL REPORT

VALENCIAPORT FOUNDATION OF THE VALENCIAN REGION
FOR RESEARCH PROMOTION AND COMMERCIAL STUDIES
OF VALENCIAPORT