Fundación Valenciaport

Leader in Cluster & Port-Logistics Knowledge in the Mediterranean
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The Valenciaport Foundation for Research, Promotion and Commercial Studies of the Valencian region (Valenciaport Foundation) is a non-profit private entity. It has been conceived to further expand the reach of the logistics-ports community by serving as a research, training and cooperation centre of excellence.

The Valenciaport Foundation manifests an initiative of the Port Authority of Valencia (PAV), in collaboration with various other associations, companies and institutions.
The Fundación Valenciaport

**FUNDACIÓN VALENCIAPORT IN NUMBERS:**

- **242** Projects
- **15** Industrial Prototypes
- **87** Software Solutions for Planning and Management
- **19** Hardware Solutions
- **8** Databases and Simulators
- **450** Members
- **408** Courses
- **39,337** Hours of Online and Classroom-Based Training
- **10,782** Students
- **171** Workshops

***60*** Countries
The Fundación Valenciaport

**OUR CLIENTS**

- International Institutions
- Government and Governmental institutions
- Exporters and Importers
- Logistics Zone
- Freight Forwarders, Logistics Operators and Hauliers
- Inland Terminals and Dry Ports
- Maritime and Port Authorities
- Rail Operators and Services
- Customs and Border Inspection Services
- Ro-Ro Terminals
- Container Terminals
- Shipping Companies and Maritime Agents
- Technical-Nautical Services
- Cruises
- Fundación Valenciaport has collaborated with companies and organizations from all stages of the transport chain

**Bulk and Multipurpose Terminals**
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Relevant Projects
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Proyectos POR Programa

- CEF programme
- TEN-T programme 2007-2013
- Marco Polo programme 2007-2013

Logística
Tecnologías de la Información
Seguridad
Medio Ambiente
Economía del Transporte

STM Validation
Gainn4Mos Cohesion
Gainn4Mos

Connect Valenciaport
Core LNGas Hive
Picasso
Gainn4Ship

Sea Terminals
Bunker Logix
b2Mos
GreenCranes
Monalisa 2.0

LNG HIVE2 Infrastructure
LNG HIVE2 Vessels demand

Relevant Projects
Relevant Projects

**COREALIS** proposes a strategic, innovative framework, supported by disruptive technologies, for cargo ports to **handle upcoming and future capacity, traffic, efficiency** and **environmental** challenges.

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Solutions for optimal utilization of port assets  
and  
Solutions to organize and optimize inland freight traffics  
through  
- Better information sharing  
  - Simulation  
- New collaborative approaches and business models  
- Improved predictive maintenance  
- Improved predictive traffic forecasts
Relevant Projects

Sea Traffic Management (STM) connects and updates the maritime world in real time, with efficient information exchange, creating a safer, more efficient and environmentally friendly maritime sector.

**Stakeholders**
- Authorities and Governments
- Ship owners and operators
- Port Operators
- Service providers
- Cargo owners

**Goals**
- **Environment**: 7% lower fuel consumption and 7% lower green house gas emissions.
- **Safety**: 50% reduction of accidents.
- **Efficiency**: 10% reduction in voyage costs and 30% reduction in waiting time for berthing.

Goals for full deployment of STM by year 2030 in relation to year 2015.
Relevant Projects

Secure information exchange

SeaSWIM (system-wide-information-management) ensures secure information exchange among authorized parties.
Relevant Projects

STM Validation Project
The STM Validation Project will demonstrate the STM concept in large-scale test beds in both the Nordic and Mediterranean Seas, encompassing around 300 vessels, 14 ports and 6 shore based service centres as well as using the European Maritime Simulator Network.
Relevant Projects
The overall goal of PICASSO is to achieve a modern and developed maritime sector, with a capable and up-to-date work force that enables the sector to become greener, safer and more efficient and sustainable.
Relevant Projects
Relevant Projects

Scalable multidimensional situational awareness solution for protecting European ports

The vision of SAURON is to provide a multidimensional yet installation-specific Situational Awareness platform to help port operators anticipate and withstand potential cyber, physical or combined threats to their freight and cargo business and to the safety of their employees, visitors, passengers and citizens in the vicinity (European critical infrastructures).
Relevant Projects
A NEW TRANSPORT PARADIGM

Transforming transport is an EU-funded project that represents a strong consortium of 48 leading transport, logistics and information technology stakeholders in Europe. With a budget of EUR 18.7 million and the participation of 48 organisations from 9 countries, the Horizon 2020 Big Data Value Lighthouse project is working on finding a more efficient and more sustainable transport paradigm. It aims to show concrete, measurable and verifiable evidence of data value that can be achieved in mobility and logistics.

TT validates the technical and economic viability of Big Data to reshape transport processes and services to significantly increase operational efficiency, deliver improved customer experience, and foster new business models. It addresses 7 pilot domains of major importance for the mobility and logistics sector:

- Smart High-ways
- Sustainable Vehicle Fleets
- Multi-modal Urban Mobility
- **Ports as Intelligent Logistics Hubs**
- Efficient Air Transport
- Proactive Rail Infrastructures
- Dynamic Supply Chains
Relevant Projects

**Integrating Big Data and applying data analytics for prediction, early anomaly detection, and optimization of logistics operations**

The **optimization of container handling operations** by creating the best schedule for import traffic at the gate.

The massive monitoring of data related with the **spreader** operation to apply a **predictive maintenance strategy**

A user-friendly **cockpit** that provides port-related KPIs integrating external context and **predicts** their future trend.

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**Initial**

- cassandra
- Data Analytics Server
- KNIME
- A²
- AMCHARTS

**Integrate Big Data (PLC & TOS)**

- SAP HANA
- APAMA

**Data Streaming Processing**

- PMML

**Analytics (ML engine)**

- MASHZONE NEXTGEN

**Dashboard**

- Transforming Transport
- Horizon 2020

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Relevant Projects

Its main objective is the improvement of sustainable mobility in MED port cities, by fostering the uptake of Sustainable Urban Mobility Plans in the MED area, with a specific focus on integrating city- and port-related traffic flows in the sustainable public transport planning.

- **Priority axe 2**: Specific objective 2.3: To increase capacity to use existing low carbon transport systems and multimodal connections among them.
- **€2,358,759**
- **Leader**: Central Europe Initiative
- **February 2017 - July 2019**

Initiatives in Valencia:

- **Carpooling for port workers**
- **E-bikes for cruise passengers**

Updated version of the Sustainable Urban Plan of the Authority Port of Valencia
GAINN4MOS aims to improve the Motorways of the Sea network in 6 Member States (Spain, France, Croatia, Italy, Portugal and Slovenia) by carrying out engineering studies on ship retrofitting and/or newbuildings, port LNG infrastructures, bunkering stations and a large set of pilot projects.

**Ships**

**SPARUNKER CUARENTA (Valencia)**
- Phases: Engineering studies
- Type of Vessel: Bunkering Barge
- Overall Length: 73.79 m
- DWT: 4,200 Tn
- Total Capacity of LNG Tanks: 800 m³
- Challenge: Maintaining capacity to supply conventional fuels whilst ensuring safety of operations with different fuels.

**DOUBLE-END FERRY (Canarie and Tourist - Italy)**
- Phases: Engineering - studies and prototype
- Type of vessel: Ro-pax
- Overall Length: 133.6 m
- DWT: 2,000 Tn
- Total Cargo Capacity approx.: 1,500 pax + 600 line meters
- LNG storage tanks: 150 m³
- Challenge: First ever LNG Ro-pax in the Mediterranean. Lack of LNG Bunkering services in Southern Italy and Sicily.

**CARNIVAL XL PROJECT (Costa Crociere - Italy)**
- Phases: Maintenance strategy updated
- Type of vessel: Cruise Ship
- Overall Length: 337 m
- GT: 100,000 Tn
- Total Pax Capacity: 6,000 pax
- LNG storage tanks: 3,000 m³
- Challenge: The LNG upgrade of MEDITER's software platform in order to meet safety and efficiency criteria, that will be implemented on all Carnival Martime's vessels.

**Ports**

LNG Bunkering Stations at Core Ports
- Nantes-St.Nazaire
- Genoa
- Livorno
- Civitavecchia
- Algeciras
- Abou Dhabi
- Other Antics Listed in GAINN4MOS are GAINN4MOS:
  - Engineering Study of LNG Infrastructures at Port
  - LNG Mini Bunkering Stations at Core Ports
  - Construction of LNG Bunkering Stations

**Co-financed by the European Union**
- European Union, Connecting Europe Facility
- Transport Call for Proposals, 2014
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Challenges of the Port Industry

- ↑competition economies of scale
- Fast development ICT
- complex & global SC
- climate change
- global economics / geopolitics uncertainty
- ↑societal expectations (health, safety, security)
Challenges of the Port Industry

- DIGITAL TRANSFORMATION
- AUTOMATIZATION / ROBOTIZATION
- PI – SELF ORGANISING LOGISTICS – PORT CENTRIC LOGISTICS
- ZERO EMISSIONS – ZERO WASTE
- CLIMATE CHANGE
- PORT-CITY INTEGRATION
- BLUE ECONOMY
Thank You!