



I-PORT



**LEONARDO**  
SECURITY & INFORMATION SYSTEMS

# I-PORT



## I-PORT

I-PORT is a model of efficient, cooperative, secure, safe, and reliable port, thanks to intelligent interoperability of technology systems and solutions to encourage fast transit of goods, increased traffic flow, improved safety and security and optimized processes and infrastructures.

In a port context the main information and communication technology requirements are:

- Port security
- Vessel traffic monitoring and control
- Port operation and process optimization
- Environment protection

I-PORT proposes an efficient, interoperable port through the integration of systems, technologies and experience in port processes and procedures.

This enables us to:

- Propose the right technologies for the specific needs of the context
- Offer resilient, interoperable IT platforms to create an integrated view and bring the following benefits
  - Improved port KPIs
  - Increased port speed and efficiency
  - Optimized management of facilities and infrastructures
  - Simplified stakeholder communication and operation



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## SECURITY INFORMATION MANAGEMENT SYSTEM (SIMS)

SIMS is a platform designed to provide a Common Operational Picture for Command & Control for the Security, Situation Awareness and Resilience for Operators, creating an handling center for safety and security operations.

### Integration of heterogeneous systems

Physical safety and security, port operation systems and TETRA/LTE communication for direct coordination of field operators.

### Federation architecture

For distributed control rooms monitoring and cooperation. GIS web APP for field operators operation.

### Models and Decision Support Tools

With automatic proposition of relevant information and workflow of operative procedures (SOP) execution.

### Events acquisition and correlation

For improved situation awareness.

### Cartography

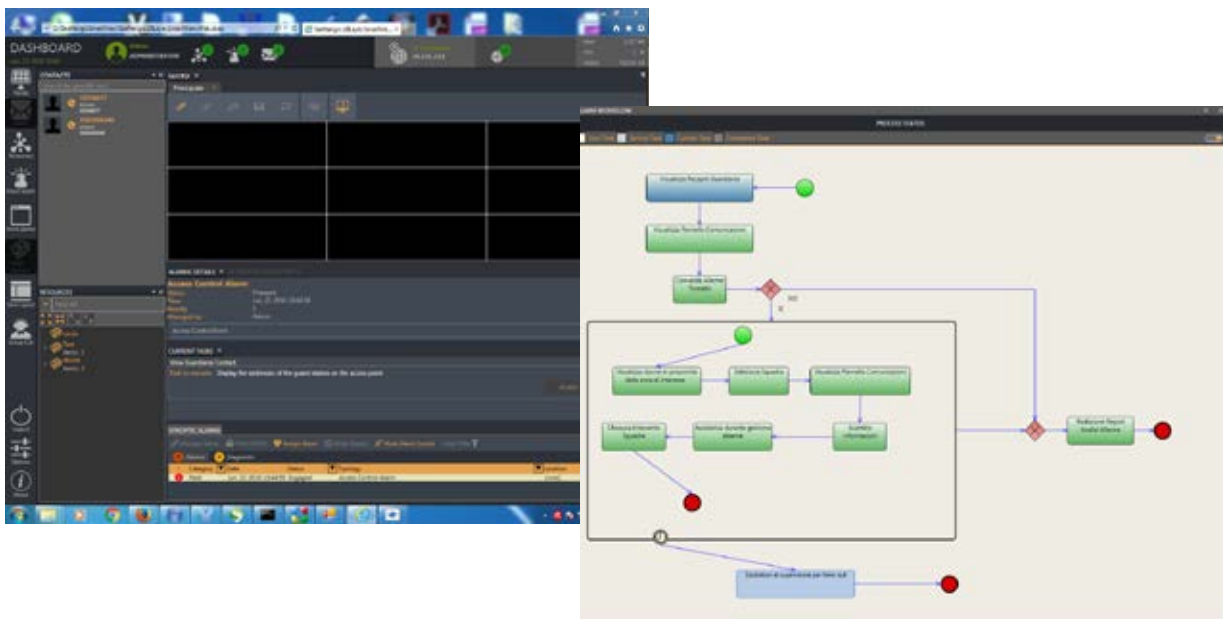
With 2D/3D representation and satellite mapping

### ESB framework

Allowing the integration of third parties systems and data exchange.

Security and Safety is a relevant, essential and complicated issue in the port environment. Port Security requires the combined efforts of many different agencies and private companies (i.e. Police, Private Security Companies, PFSO's, Customs and Border Agencies), without effecting port efficiency.

The company offers skills, products and capabilities for the risk assessment, provisioning and realisation phases. We can propose optimal solution design, complete supply and integration in SIMS of Perimeter Protection, Access Control and Vehicle & Pedestrian Gates, X-Ray Scanner, CCTV, Public Address and Emergency Voice Alarm Communications, Fire Alarm and Smoke Detection System, external operating systems, specific of the port context.



## PORT COMMUNITY SYSTEM (PCS)

The PCS solution is a neutral and open electronic platform enabling intelligent and secure exchange of information and messages between public and private stakeholders in order to improve the competitive position of the ports' communities.

EDI management of all information regarding import and export of cargo with contextual elimination (or at least a drastic reduction) of manually handled paper documents.

Cargo management and dangerous goods authorizations (CARGO MODULE), Customs declarations (CUSTOMS MODULE), vessel arrival and departure documents (VESSEL MODULE).

B2B interoperability layer for message exchange with external systems (Terminals, Gates Access Control, Port Management Information Systems, National Customs Electronic System) according different protocol (i.e. SOAP, FTP, SMTP).  
Implementation of process automation using a configurable workflow.



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## MARITIME INFORMATION MANAGEMENT SYSTEM (MIMS)

The Maritime Information Management System (MIMS) is composed of different components that can run autonomously, or in an integrated view to improve efficiency.

### Vessel Traffic Management System (VTMS)

The Vessel Traffic Management System (VTMS) is a shore-side solution to ensure vessel traffic management and navigation safety. In addition, it also provides maritime security surveillance and protection within a port or marine environment.

The key concepts at the basis of VTMS are the integration, correlation and processing of heterogeneous information sources, consisting of sensors and external systems relevant to a safe and secure management of Maritime Operations.

VTMS integrates radar, Automatic Identification System (AIS), marine radio and direction finders, meteorological and hydrographical systems, electro-optical (EO) systems, underwater CCTV, buoys, marine Bbarriers, sonar.

### VTMS key capabilities

- Remote sensors monitoring and control
- Real-time and off-line data archiving
- Global picture creation and management
- Support to operators' decisions in critical situations
- Presentation of traffic navigation and vessel information
- Operational alarms and events correlation
- Communications with vessels and external systems
- Integration of VTS and marine safety and security sensors

### Port Management Information System (PMIS)

The I-Port Port Management Information System (PMIS) is a platform designed to manage the administrative procedures related to a ship's arrival and departure, and for traffic supervision within the port basin.

PMIS is accessible to port community operators (harbour masters, coastal guard, agents, terminal operators) and is compliant to international standards and regulations (i.e. IMO, SOLAS, ISPS).

### Main document

Berthing Request, ISPS Pre-Arrival, Waste notification, Water Ballast, Bunkering, Arrival/Departure Information Notice, IMO FAL Forms.

### Workflow management

For authorization cycle.

### Ships movements management

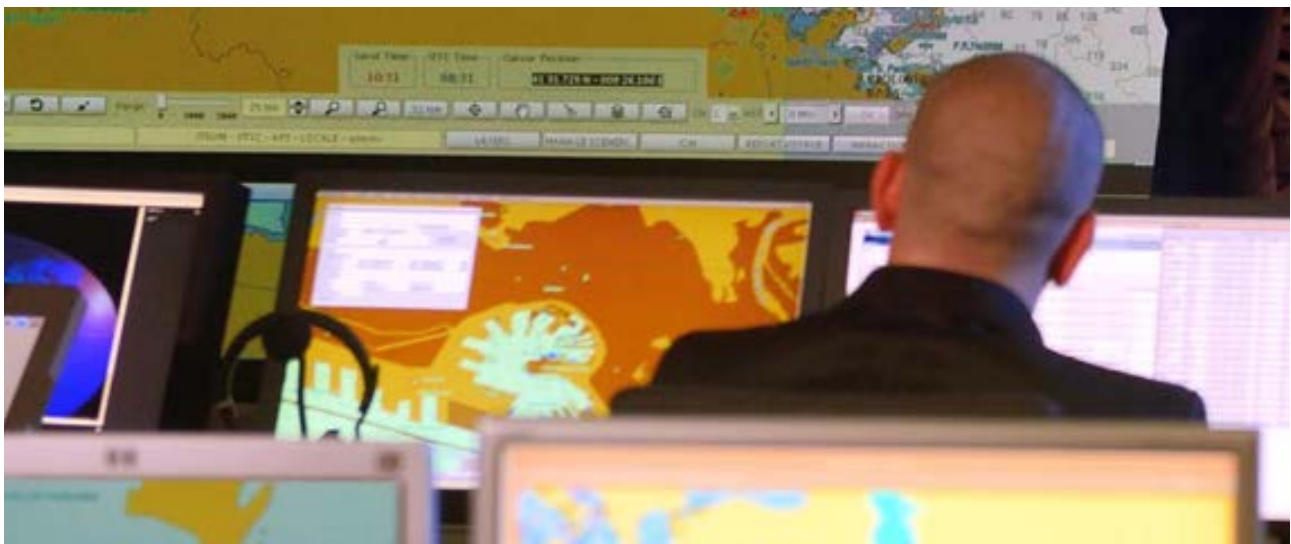
From sighting to departed status, Real-time graphical representation of the ships positions, Berthing Plan Management and ancillary Port Services indications.

### Multi-port solution

With single ports configurations

### Enterprise Service Bus

with interfaces for VTMS and/or PCS.





## ICT SECURE INFRASTRUCTURE

We develop and supply secure, integrated and interoperable turnkey communication solutions to provide multi-technology network.

Network design and Wired and Wireless infrastructures, Network Operational Center, supporting logical security with a complete portfolio that cover the whole solution lifecycle.



## COMMUNICATION SYSTEMS

Field operators have to communicate in an effective and secure way inside a port. We develop and supply secure, integrated and interoperable turnkey communication solutions for voice and data transmission.

Our solutions combine different enabling technologies including TETRA and DMR open digital radio standards and the latest generation of wireless broadband radio to provide multi-technology network solutions.



## CYBER SECURITY

We support our customers for safety evaluations, impact analysis and robust solutions to securize platforms and CNS networks from Identity and Authorization management to Open Source Intelligence to prevent internal and external threats.

The company offers expertise, tools, infrastructure and managed service solutions through a team of highly qualified certified specialists.



leonardocompany.com

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SIS MM08714 1-17