A Data Platform for the Cognitive Ports of the Future

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DataPorts
Data Platform for the Connection of Cognitive Ports

28 April 2021
European Seaports

- Stakeholders
  - Port authority
  - Shipping agency
  - Terminal Operator
  - Freight Forwarder
  - ...

- Assets
  - IIoT
  - Platforms
  - Cloud
  - Mobile and handled devices
  - ...

Port of Valencia, Spain
What is DataPorts?

- Take advantage of the huge amount of data generated around highly digitalized & connected seaports
- **Industrial data platform** where data coming from different sources can be combined to improve existing processes
- Establish novel cognitive and **AI-based applications**
- Enable **new business models**
What is DataPorts?

DataPorts
Data Platform for the Connection of Cognitive Ports

3 Years
+6M Budget
+900 PMs
13 Partners

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Where we are?

YEAR 1
- Design and Specifications
- Platform Implementation v1

YEAR 2
- Platform Implementation v2
- Piloting and evaluation
- Impact Creation

YEAR 3
- Exploitation and Business Opportunities
Who is DataPorts?
What is DataPorts?

Semantic Approach for Data Sharing

Data Governance Framework

Impact Creation for Seaports

Two Relevant Use Cases at Seaports

Novel AI-Based Services

Engineering Methodology, Architecture and Tools

New Cooperation and Business Framework

DataPorts Objectives

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What is the DataPorts Platform?

DataPorts Dataspace

Terminal Operator

Data Provider

Data Provider

Data Governance

Secure Environment

Analytics

Cognitive Services

Data Consumer

Port Authority

IT Provider

Container Carrier
Use Cases

Valencia Port
- Tracking of containers and transport operations
- Data Analytics Sharing Platform with the Port Authority

Thessaloniki port
- Data driven app for strategic and real time decisions
- Mobile app for port users (passengers)

Global Scenario
- Smart Container
- Port management

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Data Challenges

**Data Heterogeneity**
A wide array of information systems and data infrastructures are used in Ports for regular business processes.

**Trust & Security in Data Sharing**
To boost adoption we must guarantee a secure information flow between port stakeholders.

**Data trading using Blockchain**
Technology emerging in the transports and ports domain but still evolving.

**Accurate Cognitive Services**
AI requires high amounts of quality data to provide precise predictions.
Main Achievements

- Industrial Platform specification based on seaport community requirements and challenges (M12)
- Use Cases specification (M15)
- Definition of DataPorts Architecture (Ongoing)
- Dissemination and clustering activities (ongoing)
- Business, innovation and exploitation strategies (M12)
Next Project Milestones

- Publication of DataPorts Architecture (M18-M24)
- First version of Platform components (M18)
- Running pilots at Valencia and Thessaloniki (M24)
Thank You For Your Attention

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This project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No 871493

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