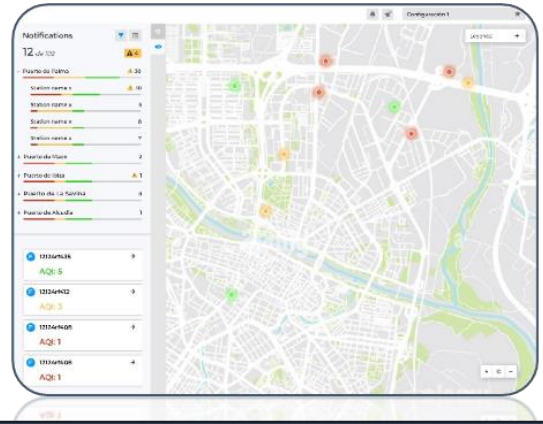


## MULTIMODAL NODE DIGITAL TWIN

### What is the ambition?

Demonstrator **Multimodal Node Digital Twin**, aims the development of a Digital Twin platform of a port (Logistic multimodal hub) as a central visualisation and control point for data and notifications/alerts from diverse data sources and port services. The main functionalities are:

- Central data repository. Able to collect data from a variety of sources (sensors, port Information systems) and services.
- Digital representation (map and tabular view) of the port situation in real time and historically
- Application of Big Data analytics “AI” (Simulations and prediction) to improve decision-making



### What are the strategic objectives of the demo?

Thanks to the flexibility (modularity and extensibility) of the solution and the use of standardized data, it is prepared to be **easily deployed in any port, independently of the size and type of port.**

Provide a **unique solution to improve decision making considering real time data and predictions.** It intends to achieve this in the following way:

- Development of an **open source** and extensible **digital twin platform**
- Scenario-simulation based on **AI** to optimise port and terminal operations and **reduce environmental impact.**
- Use and definition of international **Port Data Standards (Semantic)** and interfaces for data Exchange between port stakeholders
- Prepared to run different smart services: port operations optimizations, port environmental monitoring, security services, etc.

### Target groups and potential benefits



#### Target groups

- Port Authorities
- Terminals
- City Councils
- Freight forwarders



#### Potential benefits

- Monitoring air and water quality (Port, City, Marine reserve)
- Berth allocation optimisation
- Shift multi-modal optimisation
- Monitoring real emissions from ships

### Learn more



#### Demo locations:

Port of Duisburg



& Port of Basel



#### Partners involved:



**Contact us:** Jose Antonio Clemente [jclemente@prodevelop.es](mailto:jclemente@prodevelop.es)



**Visit our website:** [www.multireload.eu](http://www.multireload.eu)



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