

Main Objectives



Smart Port Solutions

Employing ICT solutions to improve information flows between ports and port communities.



Green Port Solutions

Adopting green technologies to reduce the environmental impacts of port operations and save resources.



Interconnected Port Solutions

Combining different modes of transport and integrating different technologies to better monitor and control freight flows.

Consortium



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 769267.

Project Coordinator

Christian Blobner, Fraunhofer Institute for Factory Operation and Automation IFF
Email: Christian.Blobner@iff.fraunhofer.de

DEC Manager

Stefanos Kokkorikos, Core Innovation
Email: skokkorikos@core-innovation.com



PortForward

Towards a green and sustainable ecosystem for the EU Port of the Future



1. We are addressing real industrial needs

- Lack of **efficiency in operations** with heterogeneous freights (roll-on/roll-off cargo, containers)
- Need for **real time monitoring** of freight flows with end-to-end track-and-trace solutions to optimize port activities
- Need for **remote monitoring and management** of important port operations, such as maintenance scheduling, cargo and passenger traffic, especially for **short sea shipping** cases
- Interconnection with **hinterland transportation** with special focus on inland waterways
- Interface with the surrounding **urban environment**
- Experience sharing and **transferability** to other intermodal transport hubs
- **Environmental impact** reduction using green technologies and energy solutions saving



PortForward

2. We are using State of the Art technologies

- An **IoT** concept for port assets
- **Sensor** deployment using e.g. cameras and multi-modal tracking devices
- Interconnection into one seamless, versatile and secure **IoT network**
- **Remote management and intelligent maintenance tool**
- **Virtual Port** tool providing centralized control and alternative visualisations
- Novel **smart logistics** platform with a decision support system (DSS)
- Environmental and energy monitoring/ optimisation system using the novel concept of **Green Yard Scheduling**
- **Augmented reality (AR)** for pilot assistance and remote assistance to workers/operators
- The socio-economic analysis of the **port interface with its surrounding area and the port-city**, as well as the rest of the **logistics value chain**

3. We are testing in real port environments

Port Forward Technologies

