

PIXEL: Port IoT for Environmental Leverage



Vision: A Port of Future in which **small and medium ports** are also **innovators** in terms of **environmental sustainability**

Mission: To bring the **Sustainable Ports** of the Future paradigm to the **complete spectrum** of ports

PIXEL: Port IoT for Environmental Leverage

TOPIC: MG-7-3 – The Port of the future

Duration: May 2018 – April 2021 (36 months)

15 partners from 7 countries



PIXEL: Port IoT for Environmental Leverage

PIXEL – Where IoT meets the Port of the Future

Secure IoT solutions for
port ecosystem operations

Business intelligence w/
predictive analytics

Environmental awareness
with actionable tool: PEI

Addressing **medium and
small ports with scalability**
to big ports

Focusing on **port-city
ecosystem challenges**



Measure
Green Policy
PEI

Existing
sensors
connected

Integrations
with PCS

Open IoT
Platform

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Diffusion

Bring the relevant information to the subscriber through the relevant channel

Monitoring & Modelling

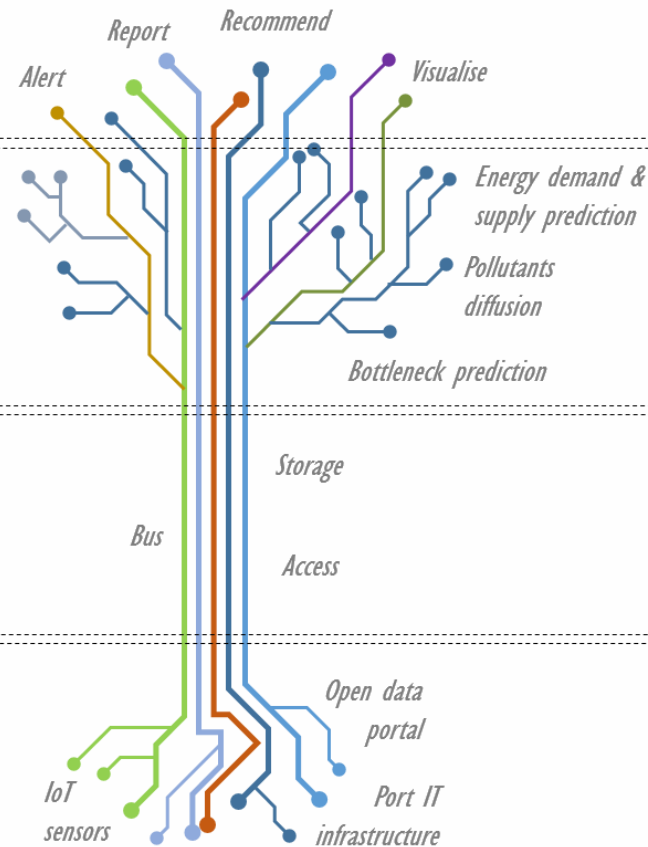
Convert raw data to useful information about today and model port activities to predict future impact

Management

Support data processing through an open, robust and modular platform

Acquisition

Collect heterogeneous data from multiple sources through live data stream connectors



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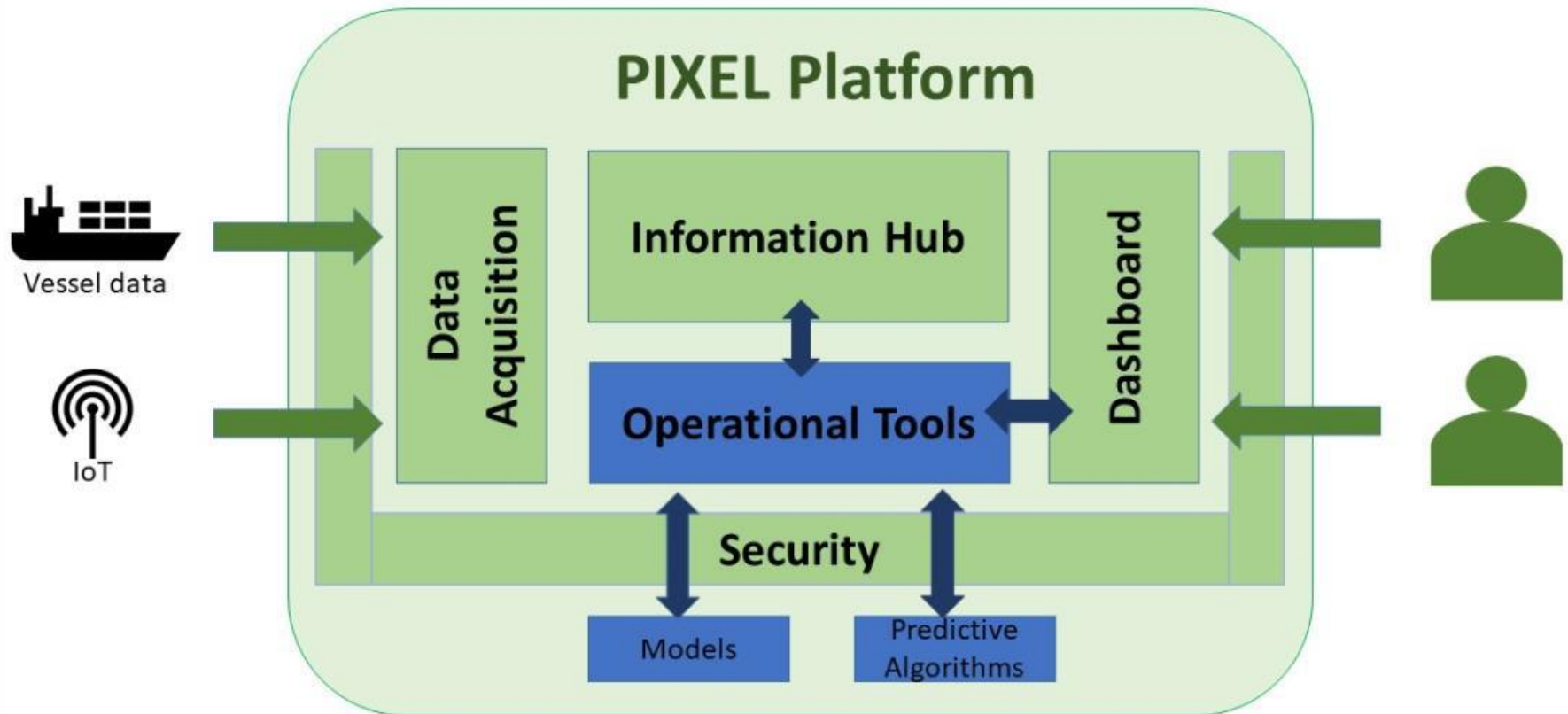


CATIE



Business Support on Your Doorstep

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Why do you need a **Port Environmental Index**?

Today's environmental challenges are rising to fit the real global needs, enhanced by legislation and standards. Ports need clear understanding of their **overall environmental performance**

Ports can **optimise their use of resources** to include the appropriate monitor of environmental-related activity and act on it

PEI is a global indicator of the impact in ports that permits the ports to have a **real-time measure of their environmental footprint and to plan actions** to reduce it to desired levels



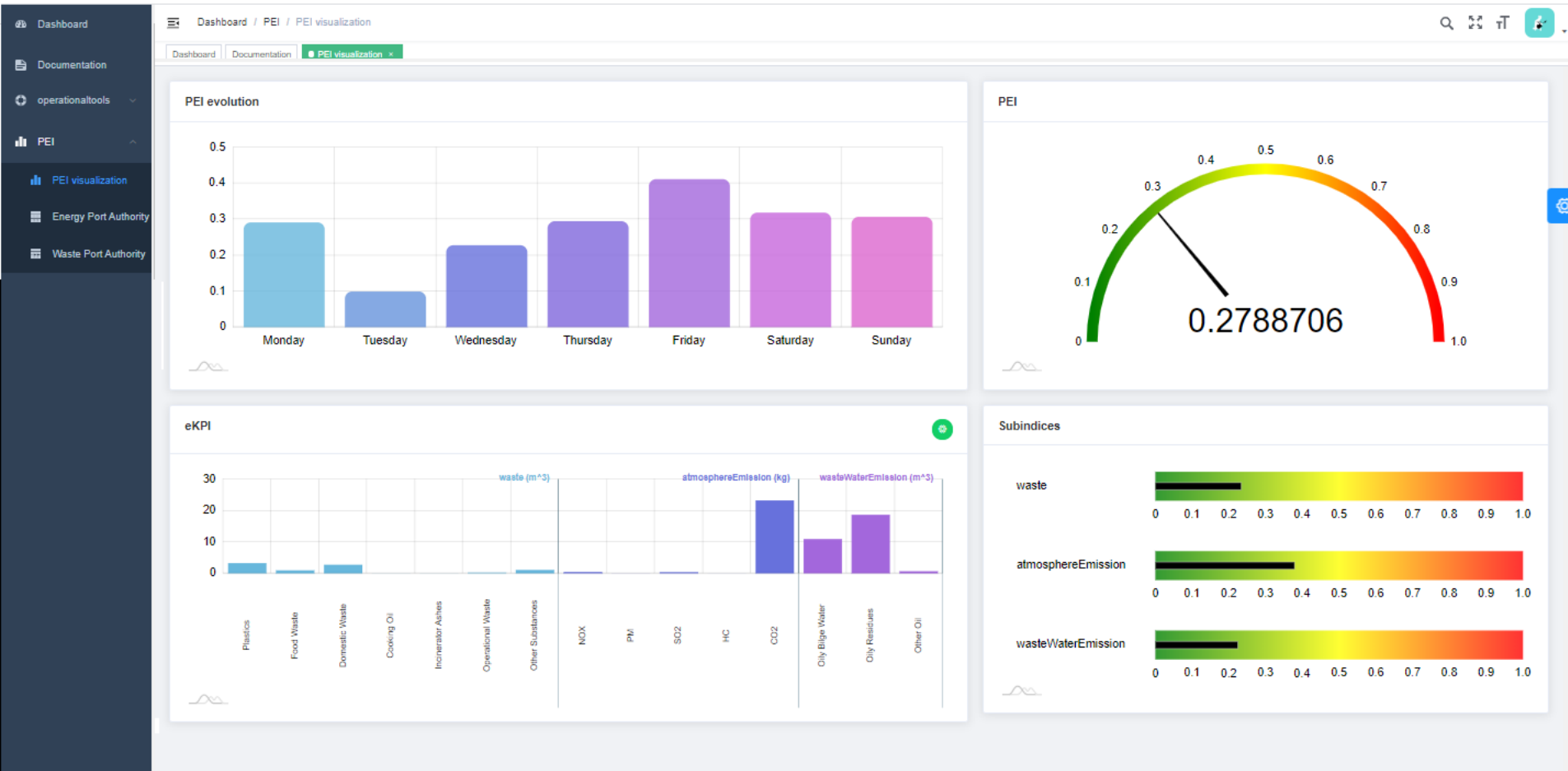
What is this Port Environmental Index?

PEI relies on a **baseline of IoT data sources** that enable the interoperable data collection with needed frequency (some of it real-time)

It is a **composite environmental index**, i.e., a mathematical aggregation of a set of indicators.

Combines different environmental indices - **environmental Key Performance Indicators** (eKPIs) - into a single metric using a specific mathematical algorithm.





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First **IoT integrated platform** focused on optimization of operations w/ reduction of **environmental impact**



Port Environmental Index (PEI) as a quantitative composite indicator of the overall environmental performance of a port



Secured dashboard with **operational tools** for decision support (real time monitoring and predictive analysis)



Information hub and optimization operations through **smart models** (energy, transportation, pollution and port-city integration)

Where IoT meets the Port of The Future

Get to know us at pixel-ports.eu