



INEA

**Innovation and Networks
Executive Agency**

**Horizon 2020
The Port of the Future**

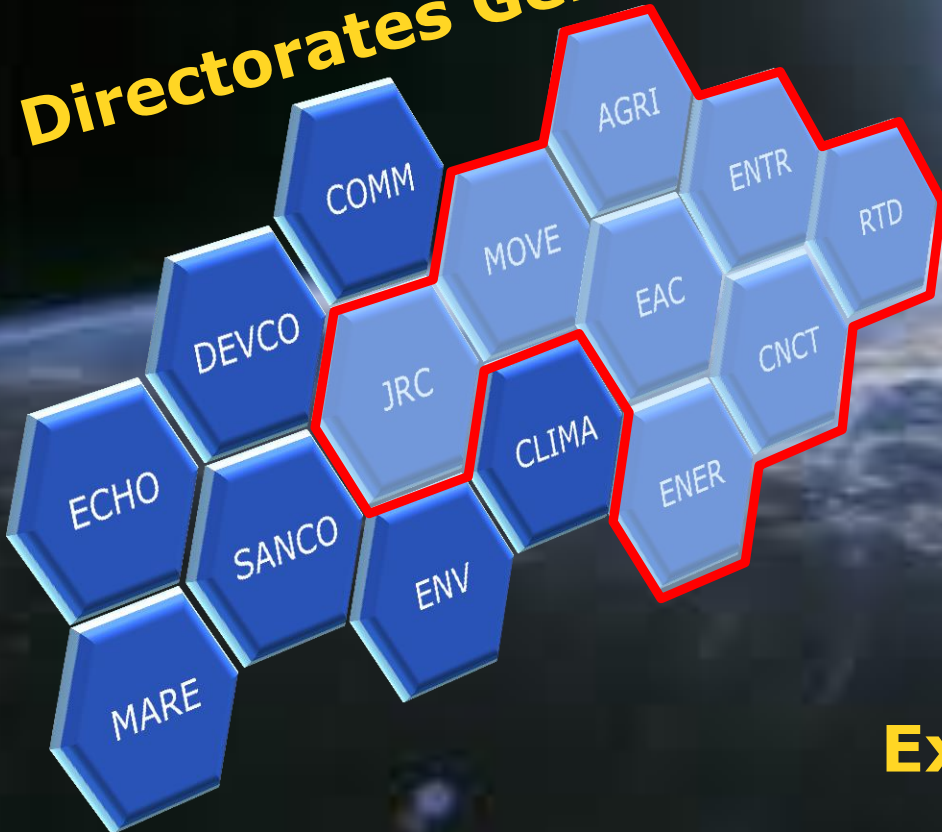


**Sergio Escriba
Project Manager
Horizon 2020 Transport Research
EU Commission – INEA**

**European Ports Forum
11 June 2018**

EU Commission - Overview

Directorates General



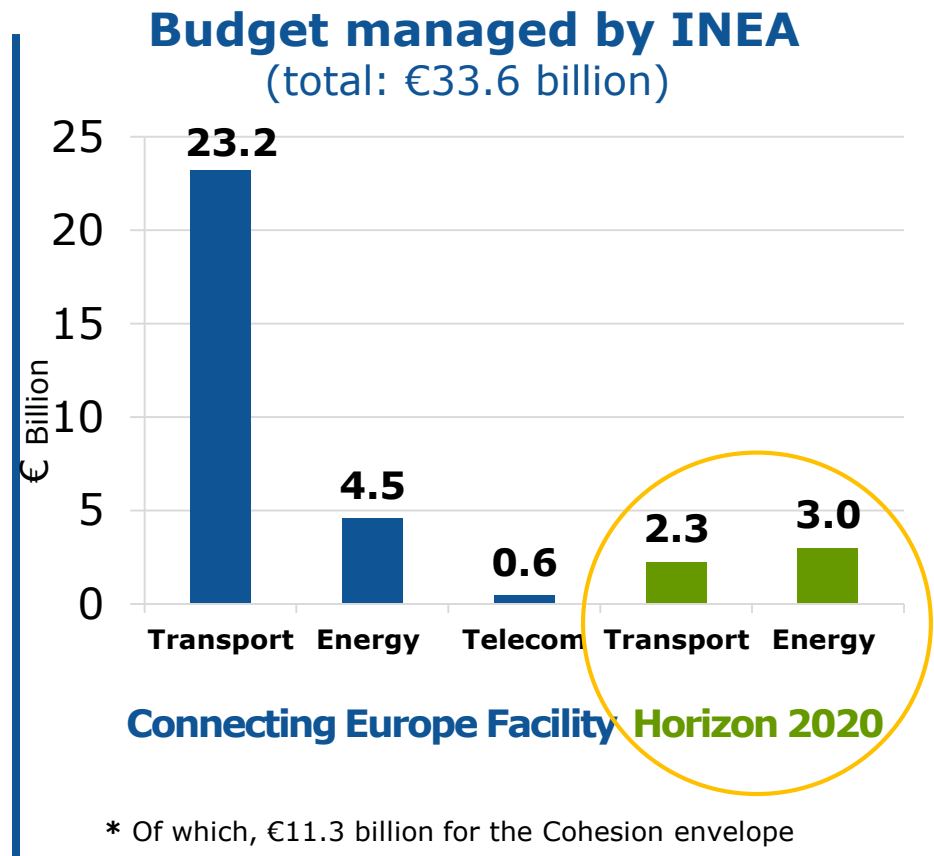
Executive Agencies

INEA's programmes and budget



**>1500 INEA
ongoing
actions**

**442 H2020
ongoing
actions**



Partnership with the Commission

European Commission

Defines the policy

- Defines strategy, objectives and priority areas/work programmes
- Selects actions for co-financing
- Makes programme decisions
- Evaluates the programme and the Agency's performance

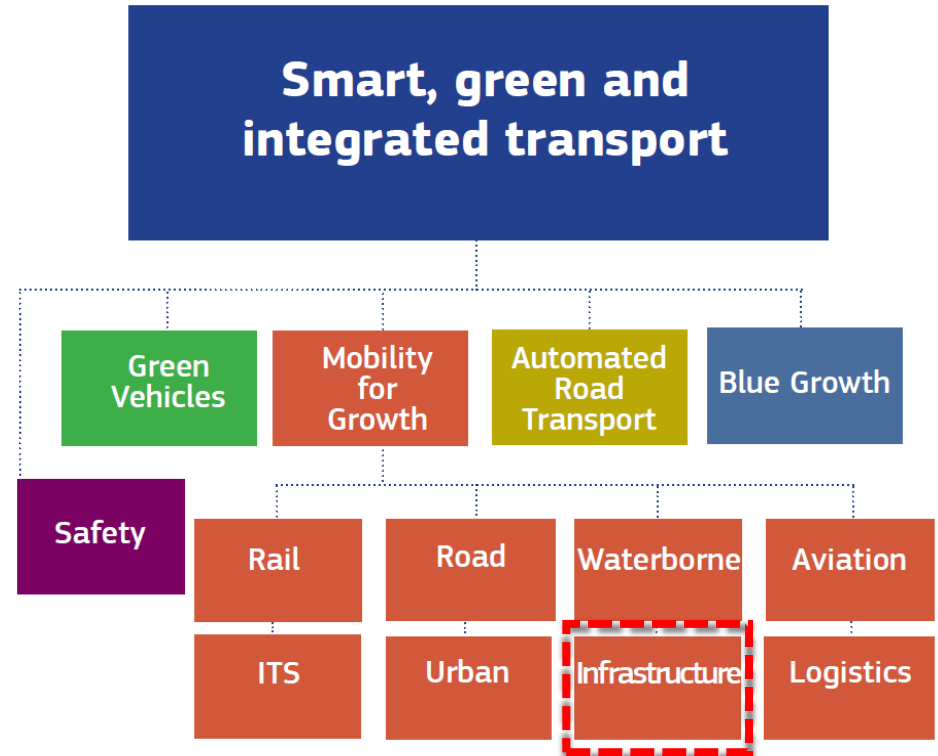


INEA (Executive Agency)

Turns policy into action

- Manages the project lifecycle:
 - Organises Calls for Proposals and external evaluations
 - Monitors technical/financial implementation of projects
 - Manages communication actions (Info Days, website, publications)
 - Provides feedback to policy making

The Port of the Future in H2020



Topic MG-7.3-2017

The Port of the Future

Challenge

- Ensure that port operations will not affect negatively the surrounding territory.
- Improve port-city relations.

Scope

- New port concepts.
- New management models.
- Innovative design, engineering, construction and operation technologies solutions.
- Solutions for full customer, stakeholder and citizen satisfaction.

Topic MG-7.3-2017

The Port of the Future

Objectives of the Research and Innovation Actions (RIA)

- Multimodal optimised, cost-effective and flexible operations
- Sustainable maintenance, repair and reconfiguration
- Better capacity management / Improved QoS
- Low environmental impact / climate change adaptation
- Integration in the socio-economic industrial and urban area
- Efficient connections with the hinterland transport network

ICT
solutions

Topic MG-7.3-2017

The Port of the Future

Objectives of the Coordination and Support Action (CSA)

- Clustering RIAs and other related projects
- Identifying appropriate KPIs, monitoring and evaluating results
- Analysis of the port-city relation
- Recommendations for guiding city authorities in urban planning towards Smart Port Cities
- Dedicated dissemination activities

Topic MG-7.3-2017

The Port of the Future

Expected Impact

- Reduction of environmental impact of port activities
- Reduction of operational and infrastructural costs
- Improvement of logistics efficiency
- Better integration of the port in the surrounding socio-economic area

Transferability

Projects selected

- 3 Research and Innovation Actions – EU Funding 15.0 M€
- 1 Coordination and Support Action – EU Funding 1.2 M€
- Overall implementation period: 2018-2021

RIA

COREALIS Main Goal

Innovative framework supported by disruptive technologies for cargo ports to face:

- *Limited port capacity*
- *Reduction of environmental footprint*
- *Increase of efficiency*
- *Reduction of traffic within and around ports*



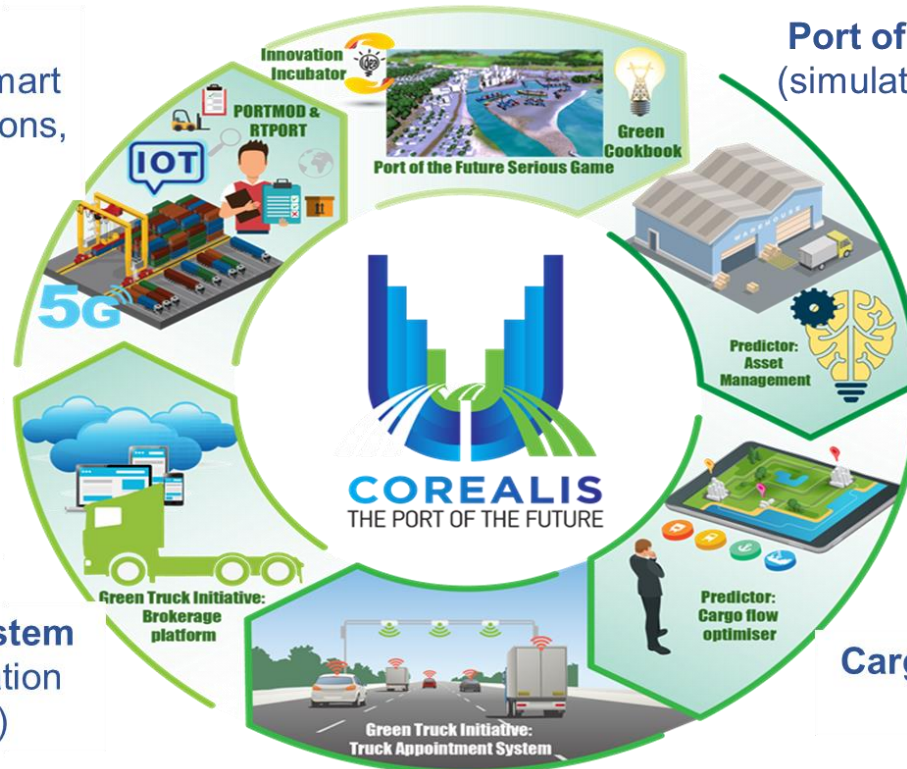


European Commission



RIA

COREALIS Technologies



RTPORT
(5G-enabled smart terminal operations, IoT)

PORTMOD
(optimization tool for CT operations)

Brokerage Platform
(cloud based marketplace)

Truck Appointment System
(real time traffic information and positioning data)

Port of the Future Serious Game
(simulation tool for decision making)

Just-In-Time Rail Shuttle Service
(feasibility study for key port-hinterland corridors)

Asset Management
(optimisation, machine learning)

Cargo Flow Optimiser
(optimisation)

RIA

COREALIS Demonstrators

Port of Antwerp

Port of Livorno

Port of Valencia

Port of Haminakotka

Port of Piraeus



RIA

PIXEL

Main Goal

- To facilitate data exchange among port stakeholders.*
- *Open source platform for operational data interchange.*
 - *Migrate from document-centric management systems to data-centric interoperable systems.*
 - *Improve knowledge and control of environmental impact from port operations.*
 - *Improve the energy efficiency of the ports.*

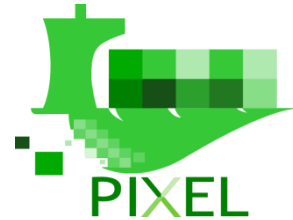


RIA

PIXEL Technologies

- *IoT-based communication*
- *Data management*
- *Operational management dashboard*
- *Modelling and simulation*
- *Predictive algorithms*
- *Port Environmental Index (PEI).*





RIA

PIXEL Demonstrators



RIA

PortForward Main Goals

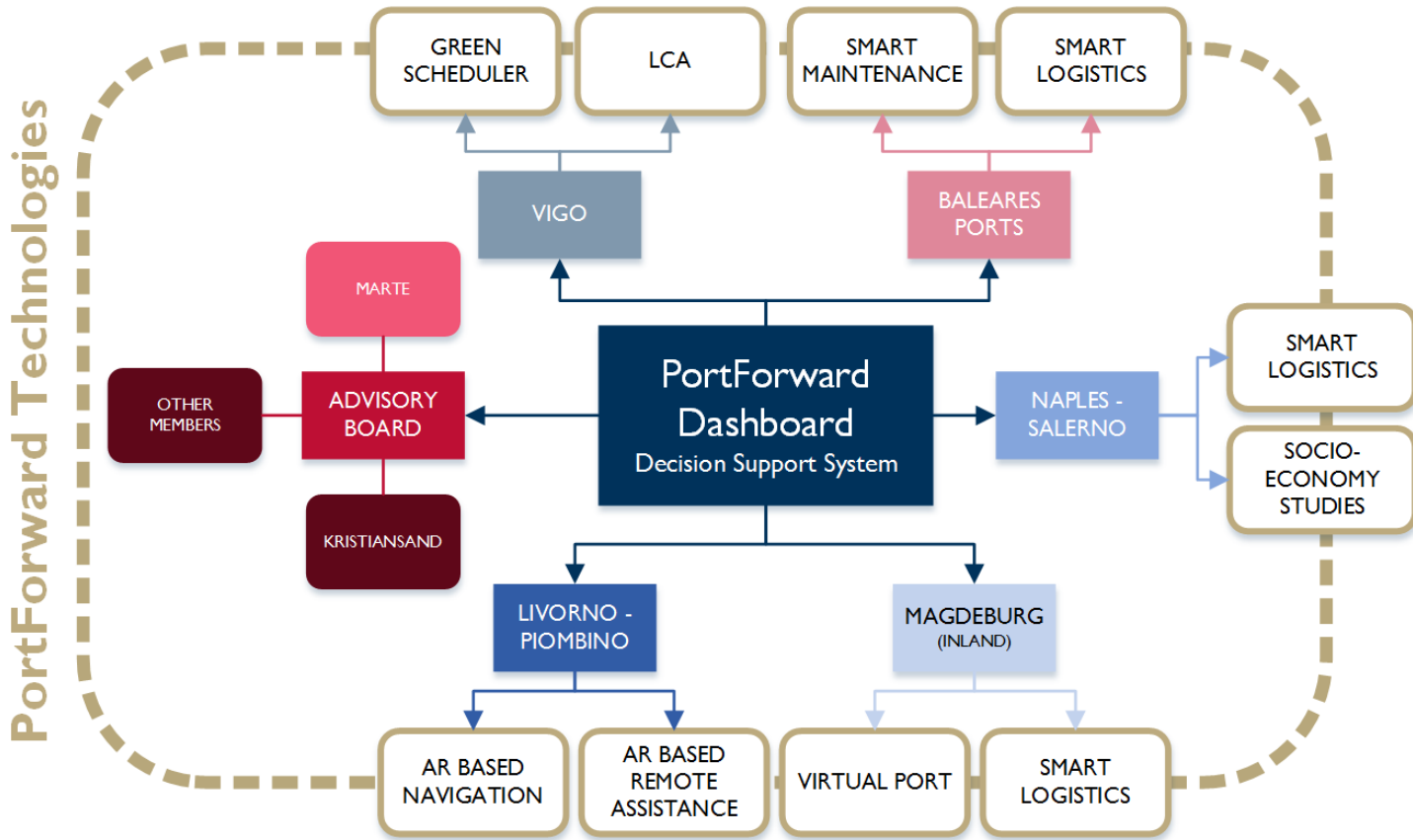
PortF^orward

- *ICT solutions to improve information flows between ports and port communities.*
- *Adopting green technologies to reduce the environmental impacts of port operations and save resources.*
- *Better monitoring and control of freight flows among different transport modes.*

RIA

PortForward Technologies

PortForward



RIA

PortForward Demonstrators

PortF^orward

Port of Kristiansand

Port of Magdeburg

Port of Livorno

Port of Vigo

Port of Naples

Port of Salerno

Port of Baleares



CSA

DocksTheFuture Main Goals



- *To define the 'Port of the Future' concept(s)*
- *To define technology targets for 2030*
- *To cluster research projects related to PoF*
- *To identify and collect KPIs relevant for PoF*
- *To monitor and evaluate results of actions*

CSA

DocksTheFuture

Expected outcomes

>>>
DOCKSTHEFUTURE

- *Port of the Future Roadmap for 2030.*
- *IT tool for evaluation and transferability of PoF solutions.*
- *R&D and policy recommendations.*
- *Training packages.*
- *Port of the Future Network of Excellence.*

Want to participate? More information

- *Join the Advisory Board*
- *Participate in workshops, interviews, surveys*
- *Follow the project websites and social media*

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H2020 evaluation experts



Interested?

Contact INEA or
visit the [EC website](#)

For more information



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<http://ec.europa.eu/inea/en>



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Look for INEA!

Thank you!