COREALIS
THE PORT OF THE FUTURE

COREALIS

Towards a sustainable and technology driven Port of the Future

Baltic Ports Conference, September 6th 2019, Stockholm

COREALIS vision-main goals

COREALIS proposes a **strategic, innovative framework**, supported by **disruptive technologies**, including Internet of Things (IoT), data analytics, next generation traffic management and emerging 5G networks, for cargo ports to face current and future challenges regarding:

- ***Limited port capacity*** (towards embracing circular economy models)
- ***Reduction of environmental footprint*** (associated with intermodal connections for three major transport modes, road/truck, rail and inland waterways)
- ***Increase of efficiency & reduction of traffic within and around ports*** (by optimising yard capacity and streamline cargo flows without additional infrastructural investments)
- ***Sustainability of the socioeconomic development of the port and its surrounding area*** (by Enabling the port to become an innovation hub of the local urban space)

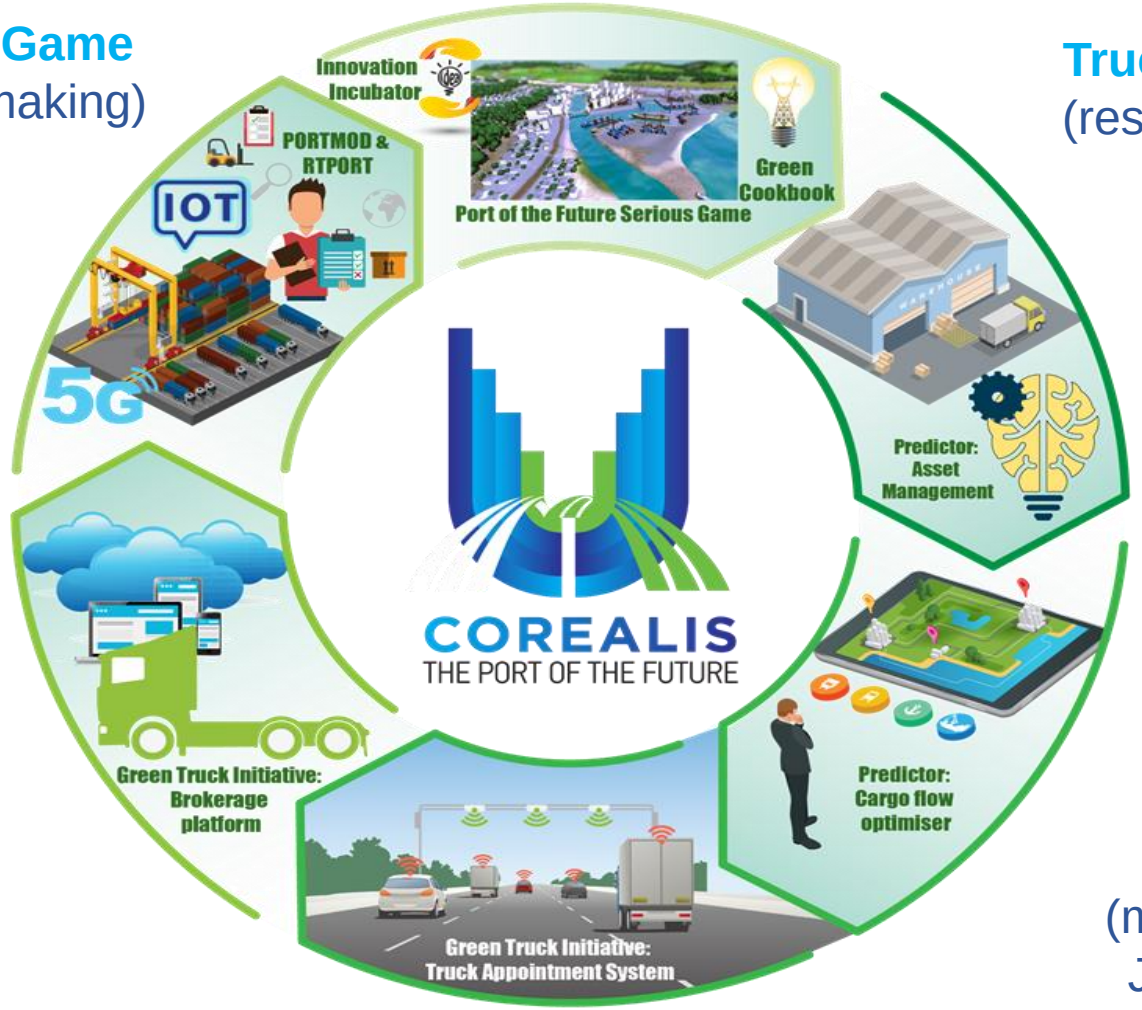
COREALIS Technologies

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

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

Brokerage Platform
(cloud based marketplace for leasing intra-CT trucks)

PORTMOD
(optimization planning tool for CT operations)



Truck Appointment System
(reservation system including real-time traffic data)

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

Cargo Flow Optimiser
(optimization of cargo flows ocean/rail/inland-waterway)

Predictor for Asset Management
(machine learning based Just in Time inventory)

Matrix of COREALIS Demonstrations vs Innovations

	Hinterland connectivity			Intra-Terminal operations				Decision making/ Innovation		
	TAS	Brokerage platform	JIT Rail Shuttle Service	Cargo Flow Optimiser	Predictor / Asset Mgmt	PORTMOD	RTPORT	Energy assessment & Green cookbook	PoF Serious Game	Innovation Incubator
 Valencia	X		X							X
 Piraeus					X			X	X	
 Livorno						X	X		X	
 Antwerp		X		X						
 Haminakotka	X					X			X	

COREALIS Stakeholder-driven Methodology

Stakeholder driven approach

- Identification of the smart port-city stakeholders and
- Port of the future needs and requirements

Phase 1

Scenarios & Requirements (M1-M7)

Phase 2

Technical Design and Development (M8-M24)

- Full-scale deployment
- Integration to port infrastructure

- Impact Assessment

Phase 3

Full-scale implementation and Impact Assessment (M25-M32)

COREALIS Facts

- ✓ Call identifier: **H2020-MG-7.3-2017**
- ✓ Topic: "**The Port of the future**"
- ✓ Duration: 01.05.2018 - 30.04.2021 (**36** months)
- ✓ **17** partners from **9** European and associated countries
- ✓ 4 Research Institutes, 5 Port operators/ Port Institute/ Port Authority, 4 Industries, 3 SMEs, 1 ITS Association
- ✓ Demonstrations in **Five European Port-Cities**

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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. 768994