

Port of the Future Serious Game (PoFSG)

TRA2020: Preparing for the Port of the Future

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Rethinking transport
traconference.eu
#TRA2020

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COREALIS

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

RTPORT

(5G-enabled smart terminal operations, IoT)

Brokerage Platform

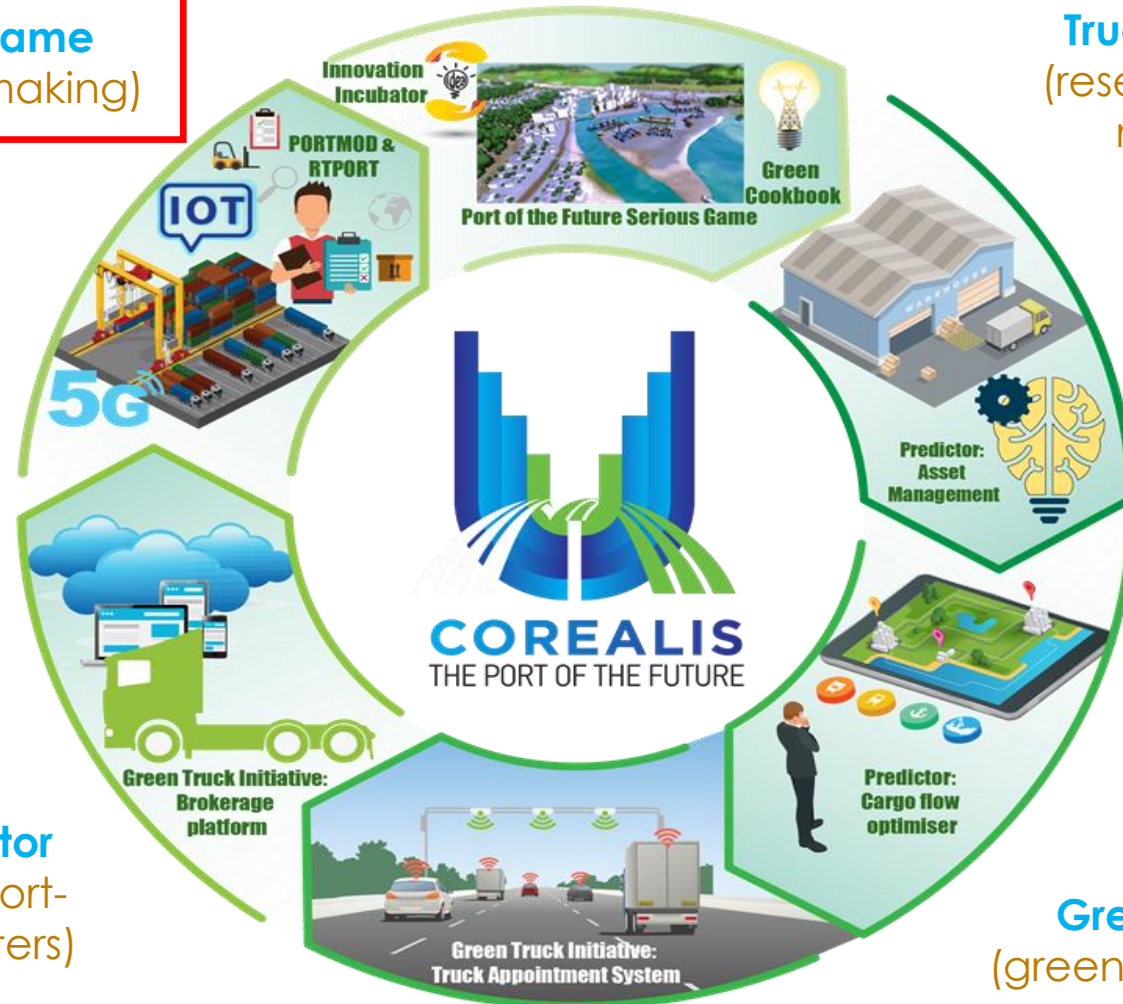
(cloud based marketplace for leasing intra-CT trucks)

PORTMOD

(optimization planning tool for CT operations)

Innovation Incubator

(development of port-city innovation clusters)



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)

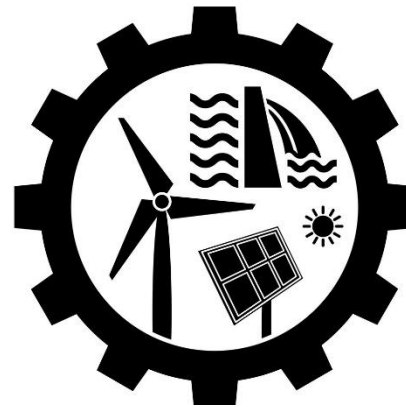
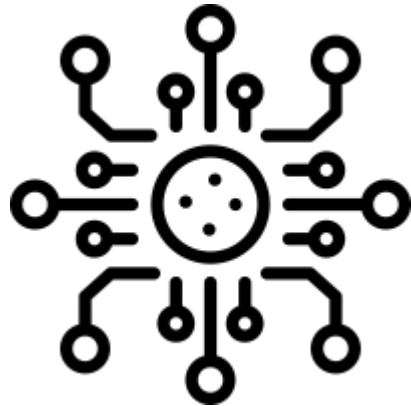
Predictor for Asset Management
(machine learning based Just in Time inventory)

Green Cookbook
(green energy solutions)

Why the Port of the Future Serious Game?

Motivation:

- Ongoing port developments to accommodate economic and population growth
- “Inclusive green growth” – more attention for environmental and social aspects
- New challenges: emerging technologies, energy transition, climate change



Why the Port of the Future Serious Game?

Objectives:

- Raise awareness – simulating real-world events
- Stakeholder involvement - together explore and discuss port development aspects
- Education – multi-disciplinary thinking and different stakeholder perspectives



What is the Port of the Future Serious Game?

- Setting: **fictitious port**
- Multiple **stakeholder** groups
- Each round select **2 measures**
- Measures have **scores**:
 - People-Planet-Profit (PPP)
 - Costs and benefits
- **Negotiate** about measures
- Together **balance PPP** – inclusive green growth

Government Financial investor

Port authority



NGO

Terminal operator



People



Employment

Recreation/culture

Safety

Planet



Ecosystems

Emissions

Climate vulnerability

Profit



Port profit

City-port benefits

Port operational efficiency

Scenarios and events

- Different scenarios for different learning goals (tailored to port needs/context)
- (News) Events trigger additional debate and conflict amongst stakeholders

Scenario	Learning goal
Climate change adaptation	Awareness of potential consequences of climate change and adaptation measures
Energy transition	Awareness of measures for energy transition and its potential consequences
Economic stagnation	Anticipate to economic decline and its consequences for port-city relations
Innovation (emerging technologies)	Awareness for emerging technologies and their potential consequences
Sustainable port-city development	Stressing importance of stakeholder inclusion and livable port-city environment
Neutral	Fit-for-purpose scenario based on selected events

SPECIAL NEWS

Jobless rate at highest since 1990



The unemployment rate is sky high. There are big demonstrations in the city and politicians put increasing pressure on the port to take action.

SPECIAL NEWS

Hurricane Corealis hits port



A huge hurricane has hit the port and shut down port activities for days. Companies ask for better protection, else they will relocate their activities.

Fly through the game

- PORT OF THE FUTURE -

PLAY SCENARIO

LANGUAGE

SETTINGS

ABOUT

EXIT



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 768994



Concluding remarks

- Focus is on raising awareness/exploration, not decision-making tool
- Qualitative rather than quantitative character
- Feedback from past experiences:
 - Nice, interactive way of learning about port developments and challenges
 - Game helped to:
 - Better understand port sustainability
 - Better understand different stakeholder viewpoints
 - Think differently
- More information:
 - <https://www.corealis.eu/>
 - <https://www.deltares.nl/en/software/port-of-the-future-serious-game/>

Thank you for your attention!

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COREALIS EU Project



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