



COREALIS Conference

Port of the Future Serious Game (PoFSG)

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Outline

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- Motivation: why PoFSG?
- What is it?
- Benchmarking tests & TRL
- Concluding remarks

Piraeus Port, Greece



Haminakotka Port, Finland



Livorno Port, Italy

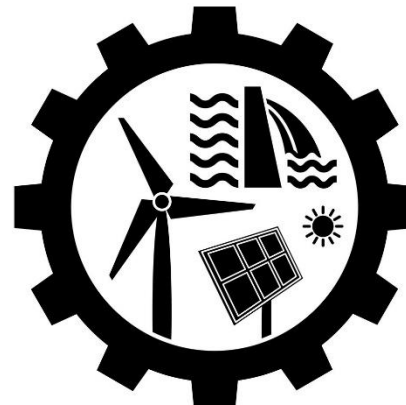
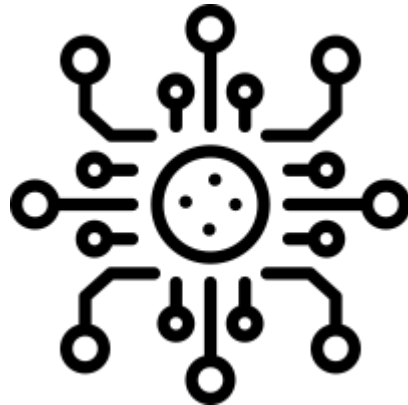
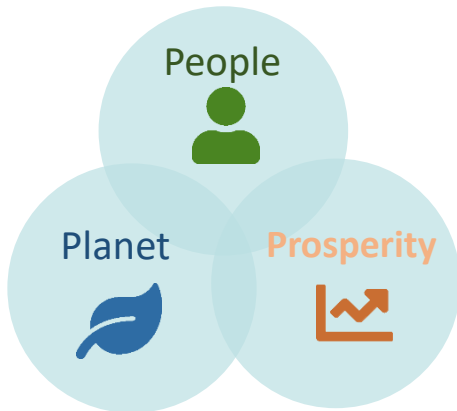




Why Port of the Future Serious Game?

Motivation:

- Ongoing port developments to accommodate economic and population growth
- “Inclusive green growth” – more attention for environmental and social aspects
- New challenges: emerging technologies (e.g. 5G), energy transition, climate change





Why Port of the Future Serious Game?

Importance of stakeholder and community engagement:

“[The first World Ports Sustainability Report] ... shows that community outreach and port-city dialogue are on top of ports’ agendas worldwide. This is hardly surprising, given that ports are **granted and maintain their license to operate and grow** by their local communities.”

<https://sustainableworldports.org/wp-content/uploads/WORLD-PORTS-SUSTAINABILITY-REPORT-2020-FIN.pdf>





Why Port of the Future Serious Game?

Objectives:

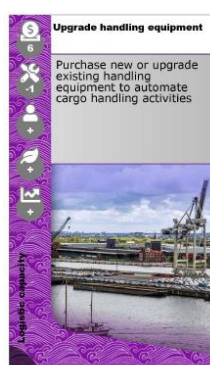
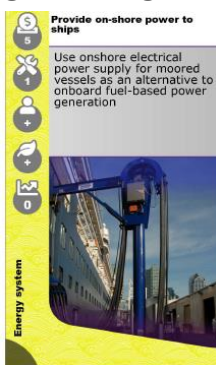
- Raise awareness – simulating real-world events
- Stakeholder engagement – together explore and discuss port development aspects
- Education – multi-disciplinary thinking and different stakeholder perspectives





What is the Port of the Future Serious Game?

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





Fly through the game

- PORT OF THE FUTURE -

PLAY SCENARIO

LANGUAGE

SETTINGS

ABOUT

EXIT



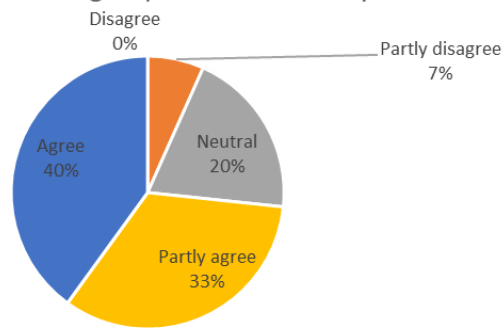
This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 768994



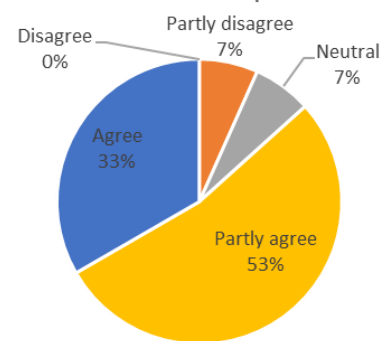
Benchmarking tests & TRL

- 1st iteration: Test session alpha-version in Athens, June 2019
- 2nd iteration: Test session beta-version in Valencia, October 2019 (results below)
- ~~3rd iteration: Live sessions with stakeholders in Living Labs (cancelled due to COVID)~~
- **Start TRL 4** (technology validated in lab), **intended TRL 7** (prototype demonstration in operational environment), **achieved TRL 6** (demonstrated in relevant environment)

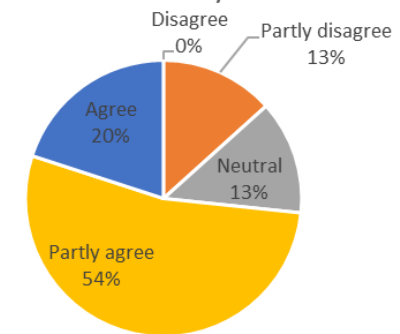
The PoFSG helped me to get a better understanding of port sustainability



The PoFSG helped me to better understand different stakeholder viewpoints on the port



The events in the game helped me to think differently





Concluding remarks

- Focus is on raising awareness/exploration, not decision-making tool
- Qualitative rather than quantitative character
- Interactive way of to explore port developments and challenges together
- Game helps 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/>



www.corealis.eu



[corealis_eu](https://twitter.com/corealis_eu)



[COREALIS EU Project](https://www.youtube.com/COREALIS_EU_Project)



[Corealis_eu](https://www.linkedin.com/company/Corealis_eu)



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THANK YOU FOR YOUR ATTENTION



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