



NEW ENERGIES
The energies coalition for transport & logistics



NEW SEANERGYPORTS - PORTS AS ENERGY HUBS INNOVATION GAME

HOW CAN PORTS BECOME EFFICIENT ENERGY PLANTS? SYNERGIES WITH CITIES?



The strategic challenge #1: How to manage efficient port electrification while ensuring *resilience* and *affordability*?

Ports as Energy Hubs

Ports evolve into critical energy hubs integrating collection, storage, and distribution within energy systems. It is key to orchestrate the energy transition.

From a pure electricity consumer, the Port becomes more and more Clean Energy Maritime hubs..

Rising Energy Demand

Based on NEC analysis, **port energy demand will increase up to 4 - 6 times by 2030**, stressing existing grid infrastructures. ([Link](#)) without taking in consideration other energy consumer in development in port areas (Datacenter, industries decarbonization programs...)

Infrastructure and Integration Challenges

Ports face **grid limitations** and integration of **renewable sources**, requiring upgrade of grids and real-time energy management to balance the different needs inside their areas.

Economic and Regulatory Barriers

High costs and regulatory delays complicate infrastructure upgrades, requiring scalable and affordable solutions.

Port link with the City

There is **limited connection between Port and City** to optimize the energy needs. Explore alternatives for energy sharing, green **new energies and AI platforms**.

A unifying challenge: orchestrating a scalable, data-driven energy management for ports as for the cities



INNOVATION DIMENSION	CURRENT SITUATION	INNOVATION FOCUS NEW "SEANERGY-PORT"
Energy Demand	Rapid growth, fragmented loads	Forecasting, real-time data visibility, peak management, scalable design, monitoring.
Grid Infrastructure	Limited capacity, slow upgrades	Grid expansion, smart grids, standardization, faster upgrades, new model & collaboration.
Energy Storage Energy Flexibility	Insufficient, absent or underused	BESS for resilience and flexibility, other new alternatives, flexible energy sharing, etc.
Data & Digital	Limited visibility	Energy profile data, real-time monitoring. More transparency and pro-activity.
Costs & Governance	High CAPEX, complex regulations	Broaden EU legislation, smooth processes, new business models, partnerships, funding.



Reinvent Port Energy Business Models



NEW SEANERGY PORTS: Partners of Innovation Game #1



During the Design Sprint, the challenger will have access to the following partners' experts & young talents to leverage its solutions to real product :



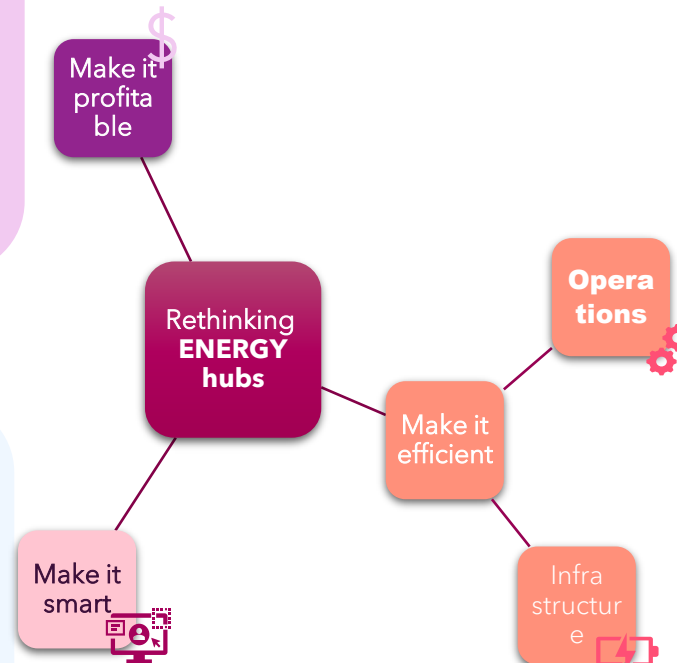
By combining & orchestrating our worlds

NEW SEANERGYPORTS - Battle Grounds

\$ Make it PROFITABLE – How do we make electrification profitable and scalable?

Covers:

- Business models (CAPEX vs OPEX, ROI optimization)
- Private-Public partnerships
- Infrastructure sharing & cost pooling
- New revenue streams?
- Market adoption & incentives



⚙️ Make it OPTIMIZED – How do we maximize utilization and operational efficiency?

Covers:

- Grid capacities upgrade education
- Long-term contracts energy providers
- Collaboration stakeholders

🖥️ Make it SMART – How do we manage a complex system at scale using data?

Covers:

- Energy optimization tools
- Digital twins?
- New management systems
- Collaborative platforms
- New network strategy...

⚡ Make it EFFICIENT – How do we design flexible, high-value energy hubs?

Covers:

- Energy flexibility (day/night charging, variable speed)
- New use cases (E-barges, E-trains, energy storage)

NEW SEANERGYPORTS - Data Set

Examples of public information



Average shore power demand across EU ports is estimated at **6 to 13 TWh per year from 2030** onwards. Additional energy power is needed for charging infrastructure for E-trucks and E- barges. F.e. Port of Antwerp Bruges: 20.000 seagoing vessels, 50.000 inland vessels per year, 1.400 companies. Chemical cluster and data centre's projects in the port area require additional energy. Ports with the highest energy needs in Europe are Antwerp Bruges, Rotterdam and Hamburg.



Grid capacity in Europe: Shorepower - Jeco Energies

Major energy providers in Belgium are ENGIE, Total Energies, Luminus, offering a variety of gas and electricity services.

There are 10 battery energy storage systems (BESS) in Port of Antwerp Bruges.

[Climate and energy transition | Port of Antwerp-Bruges Energy transition |](#)

To access Port of Antwerp Bruges projects, click here



Regulations:

[AFIR](#) and [FuelEU Maritime](#). AFIR mandates that by 2030, 90% of all port calls by container and passenger ships at TEN-T ports must use shore-side electricity.

Green energy sources: please see attachments.

The challenger will have access to a set of data to support the innovation go to market, f.e.: port consumption to date, projections 2030 - 2040 - 2050, number of vessels and assets operating in the port areas...

WHY TO APPLY?

Do you want to:

- Tackle high impact decarbonization challenges in transport and logistics?
- Test, validate, and co-develop innovative low-carbon solutions?
- Benefit from tailored support and collaborative synergies with industry leaders?
- Increase the visibility and impact of your innovation?

Then this Innovation Game is for you. Join a dynamic ecosystem of corporates, startups, public and private stakeholders, mobility & logistics experts committed to accelerating the decarbonization of transport. Together, let's imagine, experiment, and scale the next generation of sustainable mobility solutions.

Your solutions for SEANERGY PORTS will have to:

- Support Clean Energy Hub Development
- Decrease cost of energy used at port system
- Integrate better the whole Port Grids and Needs

3 squads will be created and will compete to design Go to Market Solutions. The finale will be held in front of the investors, procurement teams, sector leaders and the winner will receive an award of € 30.000 to develop the solution!

Apply now to become part of the innovative ecosystem shaping the future of low-carbon transport!



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APPLY HERE