

Offshore wind potential of Latvia

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29.10.2024

Offshore wind potential of Latvia (1)

3rd

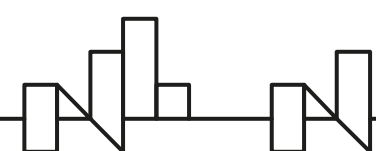
Among EU countries with the highest renewable energy use and one of the seven that achieved the EU's target

>50%

Of Latvia's energy consumption is sourced from renewable energy

~62%

Of Latvia's final energy consumption is targeted to come from renewable energy by 2030



Offshore wind potential of Latvia (2)



~500 km coastline

Favourable wind conditions in sea
> 9 m/s



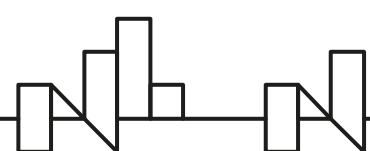
~15 GW potential

1/6th of the 90GW Baltic Sea
region



Seabed

Shallow and stable conditions



Offshore wind potential of Latvia (3)

Latvia - Hub for Baltic offshore wind

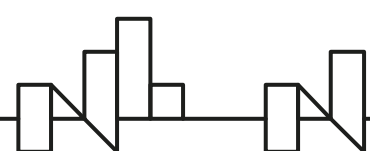
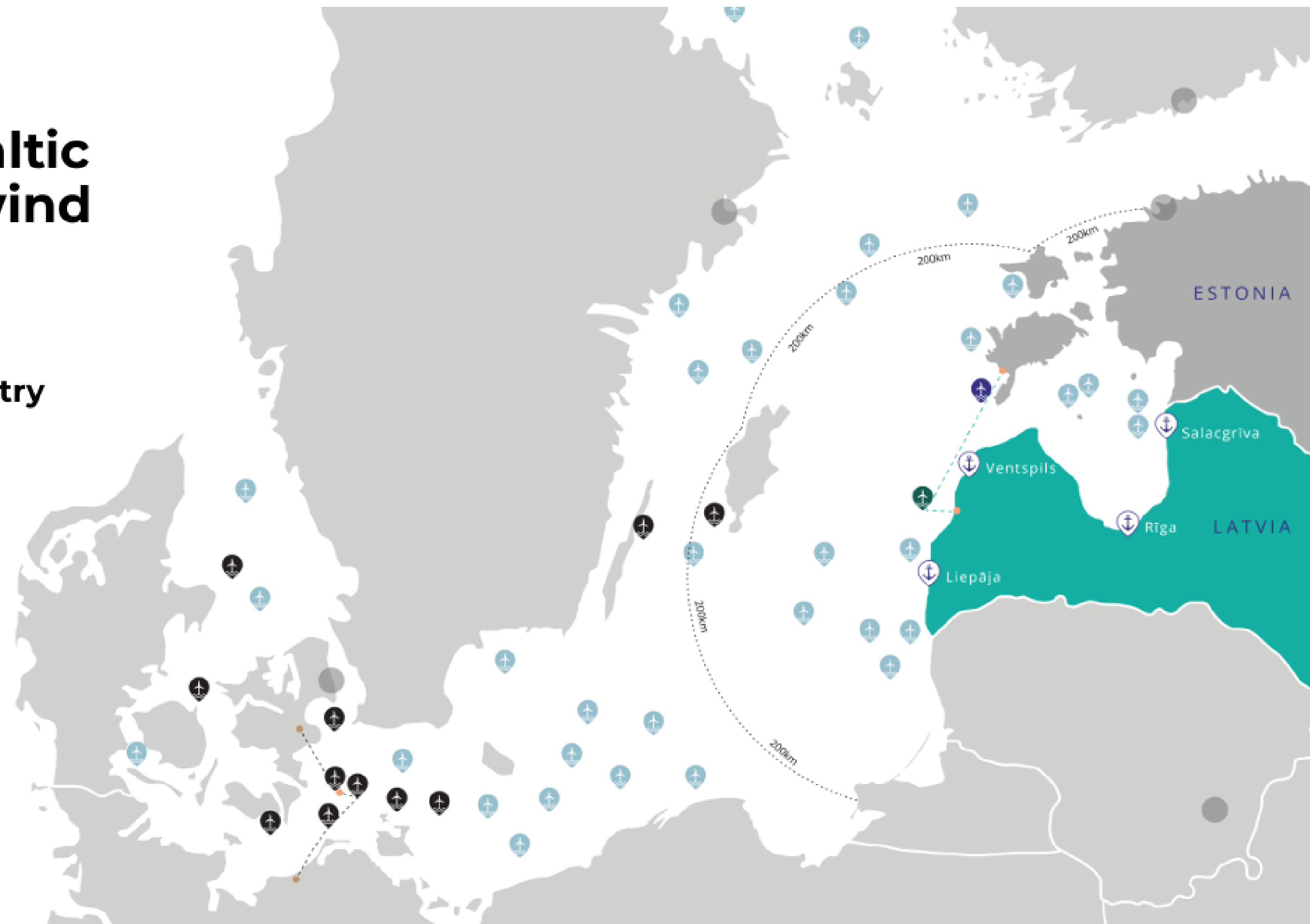
**5,8 billion EUR
Projects in
renewable industry**

Ports:

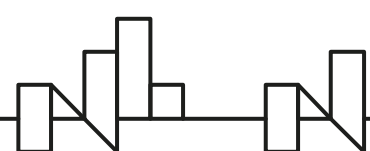
Liepāja
Ventspils
Rīga
Salacgrīva

source:

<https://www.4coffshore.com/offshorewind>

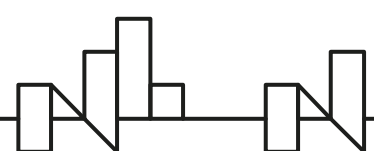


Offshore wind potential of Latvia (4)



Ventspils Port Development Projects

The future development plans of Ventspils port include the construction of a new terminal for assembling and production of offshore wind turbines



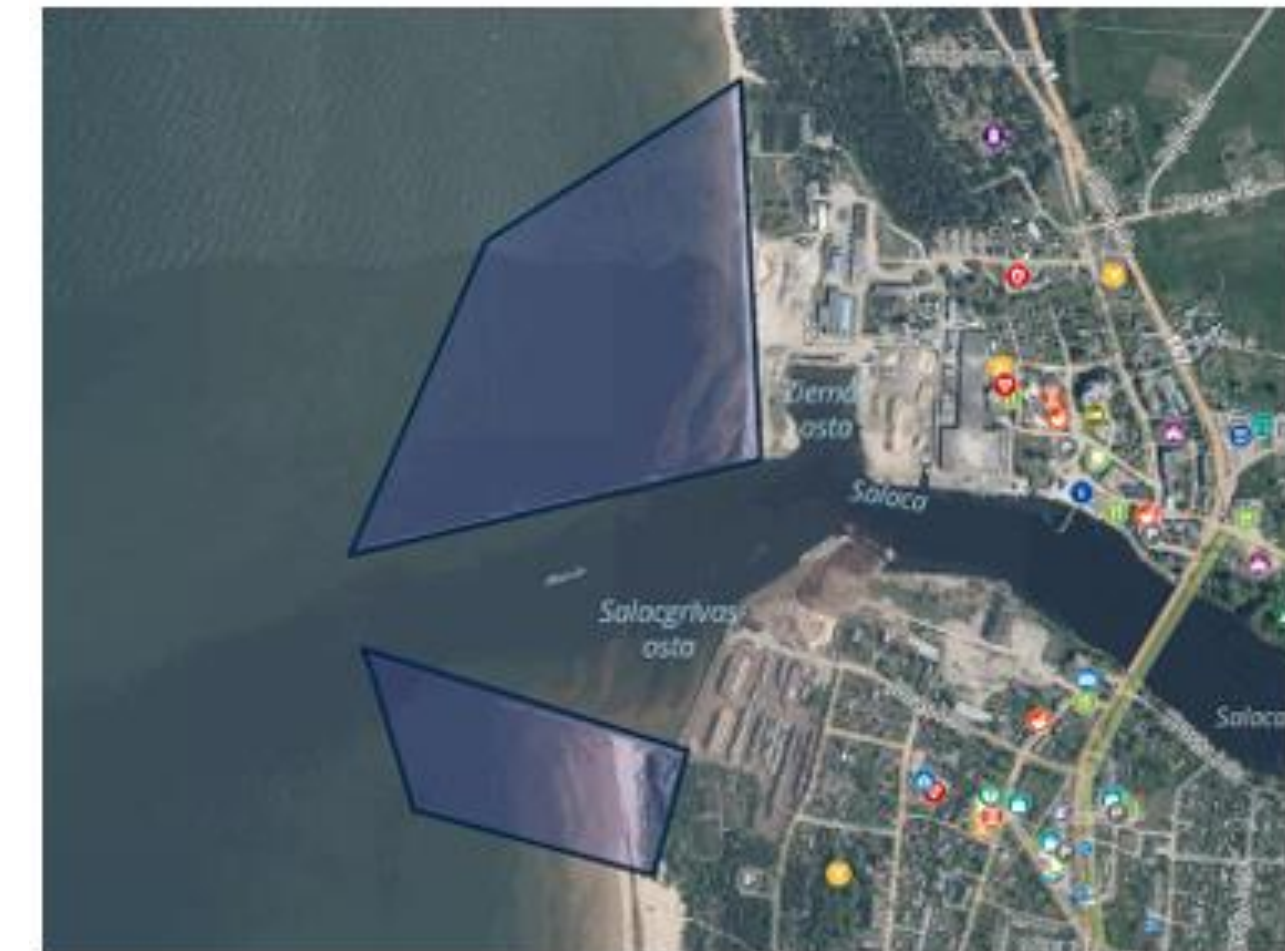
Development plan of Salacgriva port

Up to 80 ha to be created

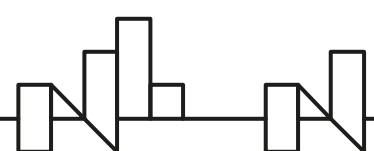
EIA procedures have been completed.

Future depths possible 10-11 m

Future width of the channel possible 120 m



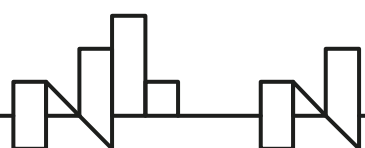
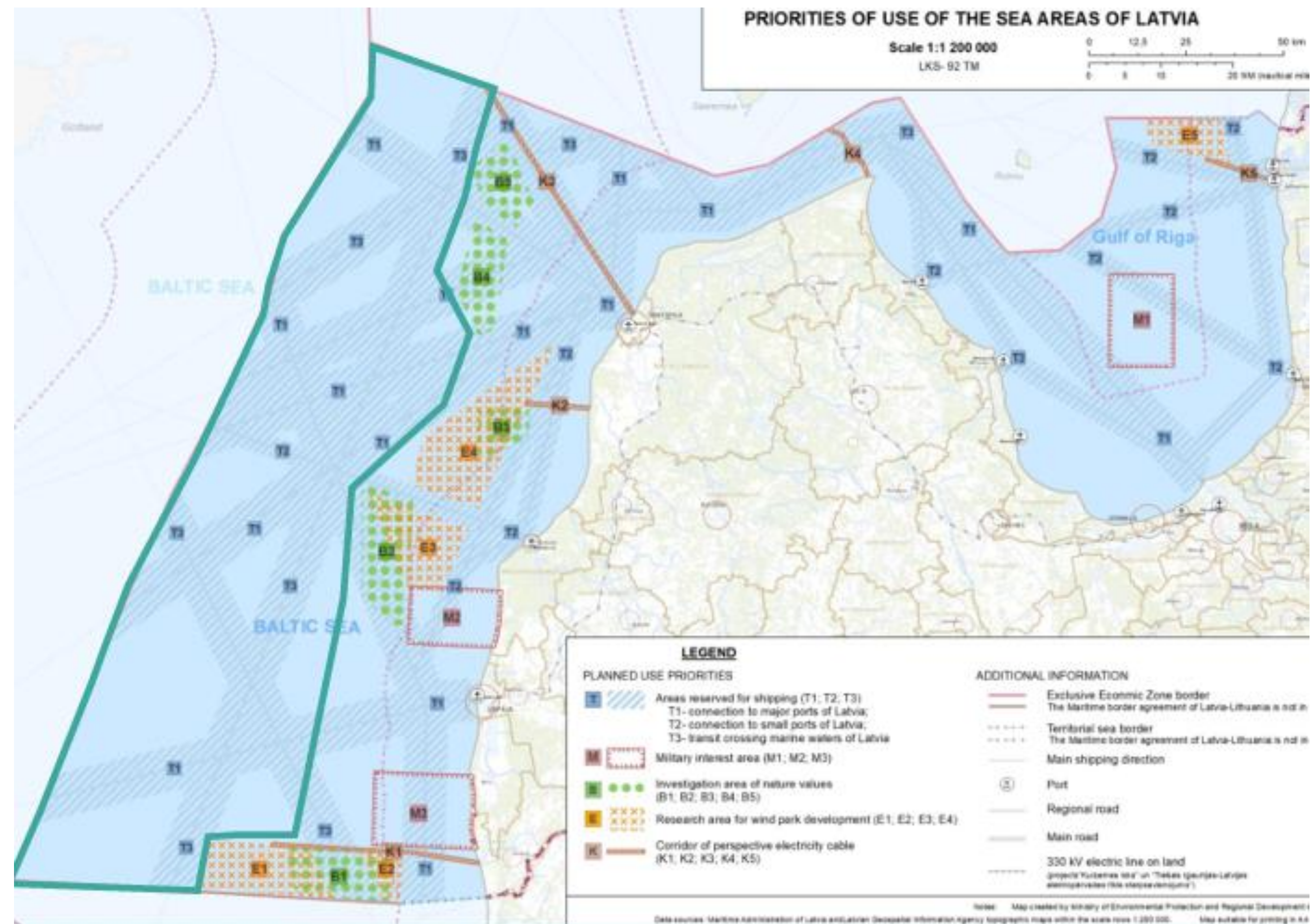
port@salacgrivaport.lv



Maritime spatial planning

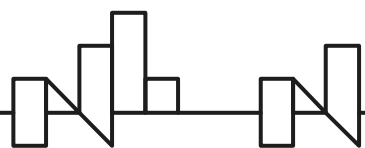
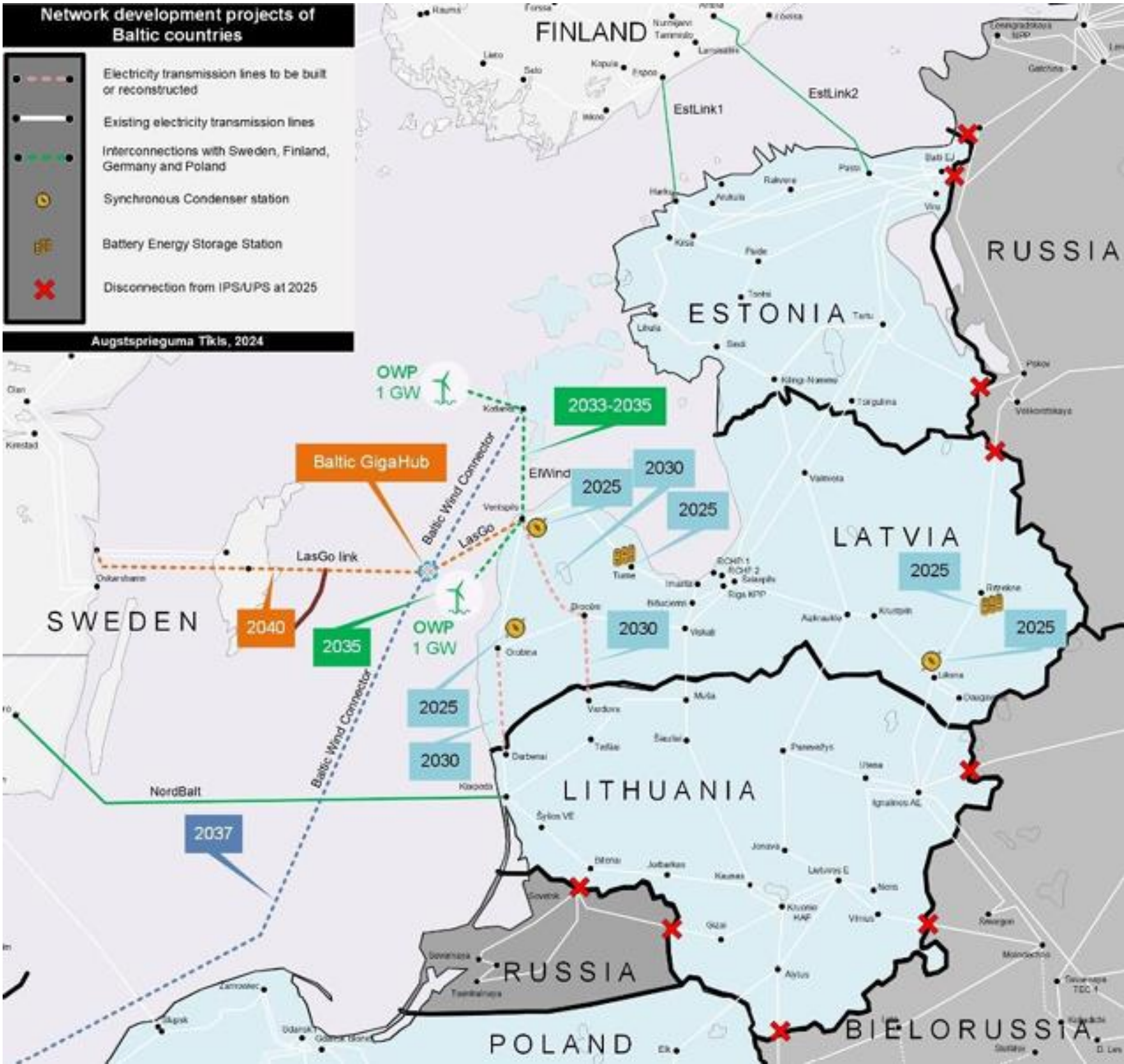
In May 2019 the Latvian Maritime Spatial Planning document has been approved
5 potential wind areas in Latvia, each can accommodate at least 800 MW.
Currently MSP is under revision to add new and extend current Offshore wind development areas

Baltic sea: 377 000 km²
LV maritime area: 28 347,87 km², ~ 7,5%
Offshore areas: 1648,76 km², ~ 5,8%
5 MW/km² ---> 8243 MW



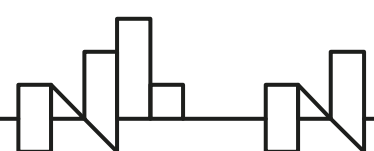
Electricity transmission System in Baltics

New interconnection is needed if Latvia is going to tap into the offshore potential.
Grid development has to go hand in hand with new generating capacities

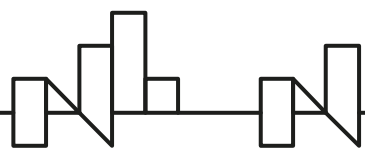


Our focus: ELWIND

A joint Estonian-Latvian cross-border offshore wind farm project.
Potential to harvest over 3,5 terawatt hours worth of clean wind energy for the Baltic region every year, while ensuring minimal environmental impact.



Offshore wind potential of Latvia (5)

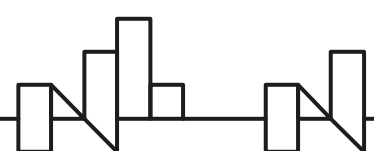


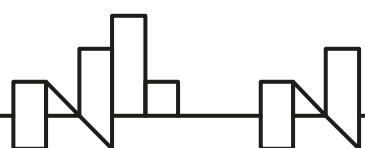
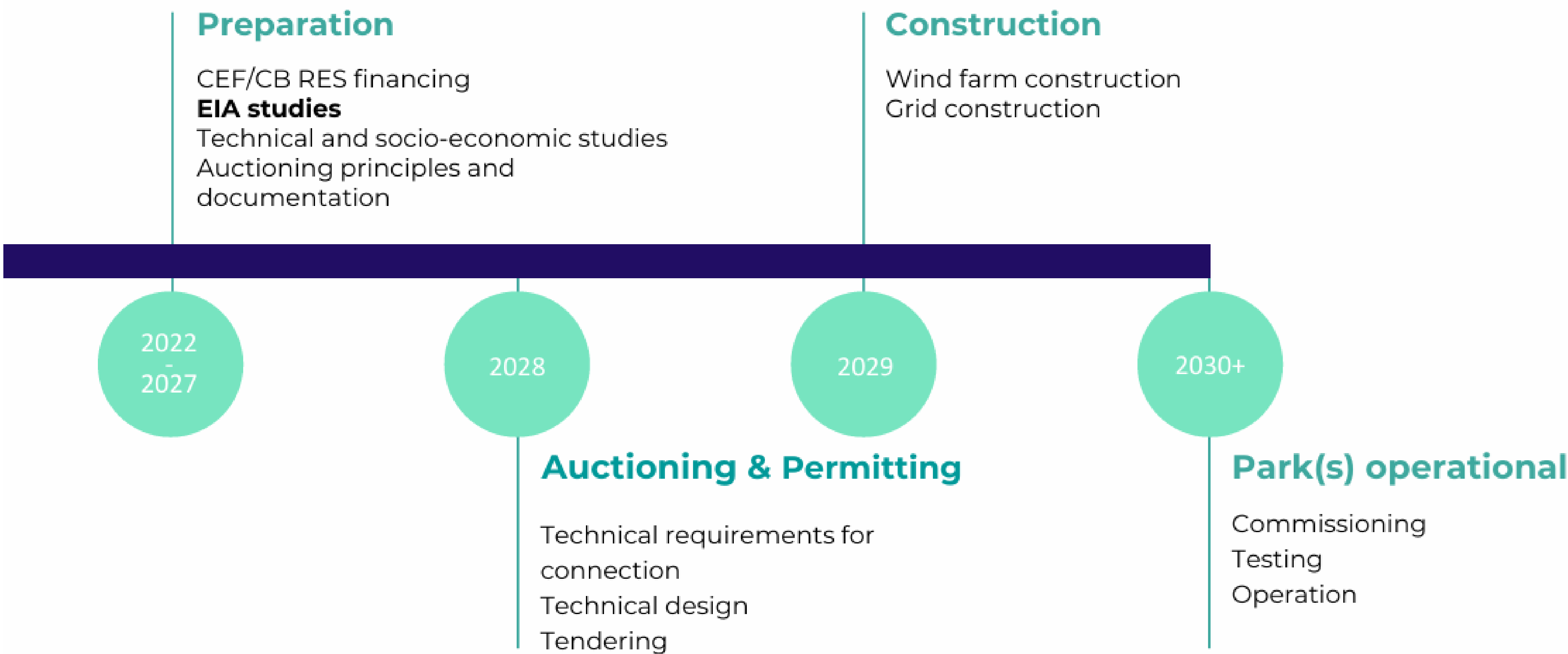
Why this way?

Providing regulatory and business predictability to market participants, by taking care of the permits and conducting technical and EIA studies.

Meaning Estonia and Latvia predeveloping two offshore areas and auctioning these out with certainty of grid connection.

This will mitigate the risks and insecurities of the development for the interested parties.





Offshore wind potential of Latvia (6)

Security

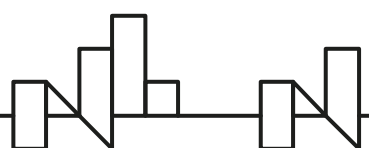
Contributing into energy security and energy independence in the region. Helping to lower and stabilize energy prices. Phasing out fossil fuel-based energy production.

Investment

States become better partners to the whole sector. Development of a regional supply chain. 4000 jobs Design, Engineering, Construction. Renaissance of Ports.

R&D

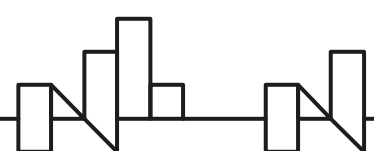
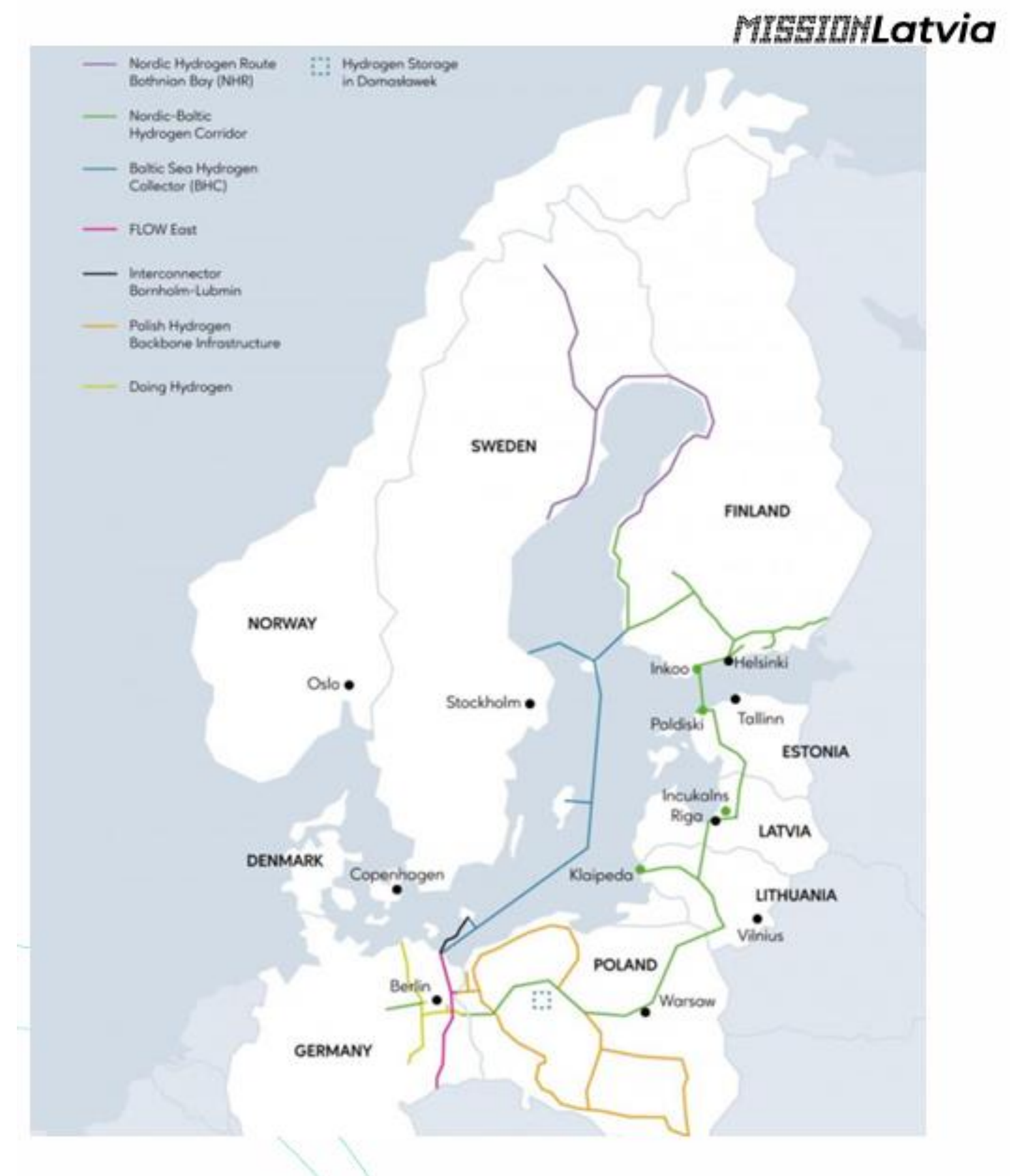
100 startups (energy accelerators). Testbeds. Knowledge & education. Power to X Increase in biodiversity at sea.



Nordic – Baltic hydrogen corridor

Nordic – Baltic Hydrogen Corridor connects different hydrogen supply, demand and storage points along the corridor route, creating a regional hydrogen system and market.

Inčukalns underground gas storage facility max capacity is 4.47 billion m³.

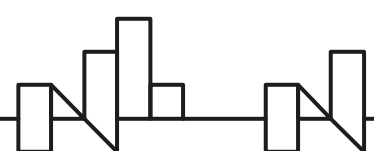
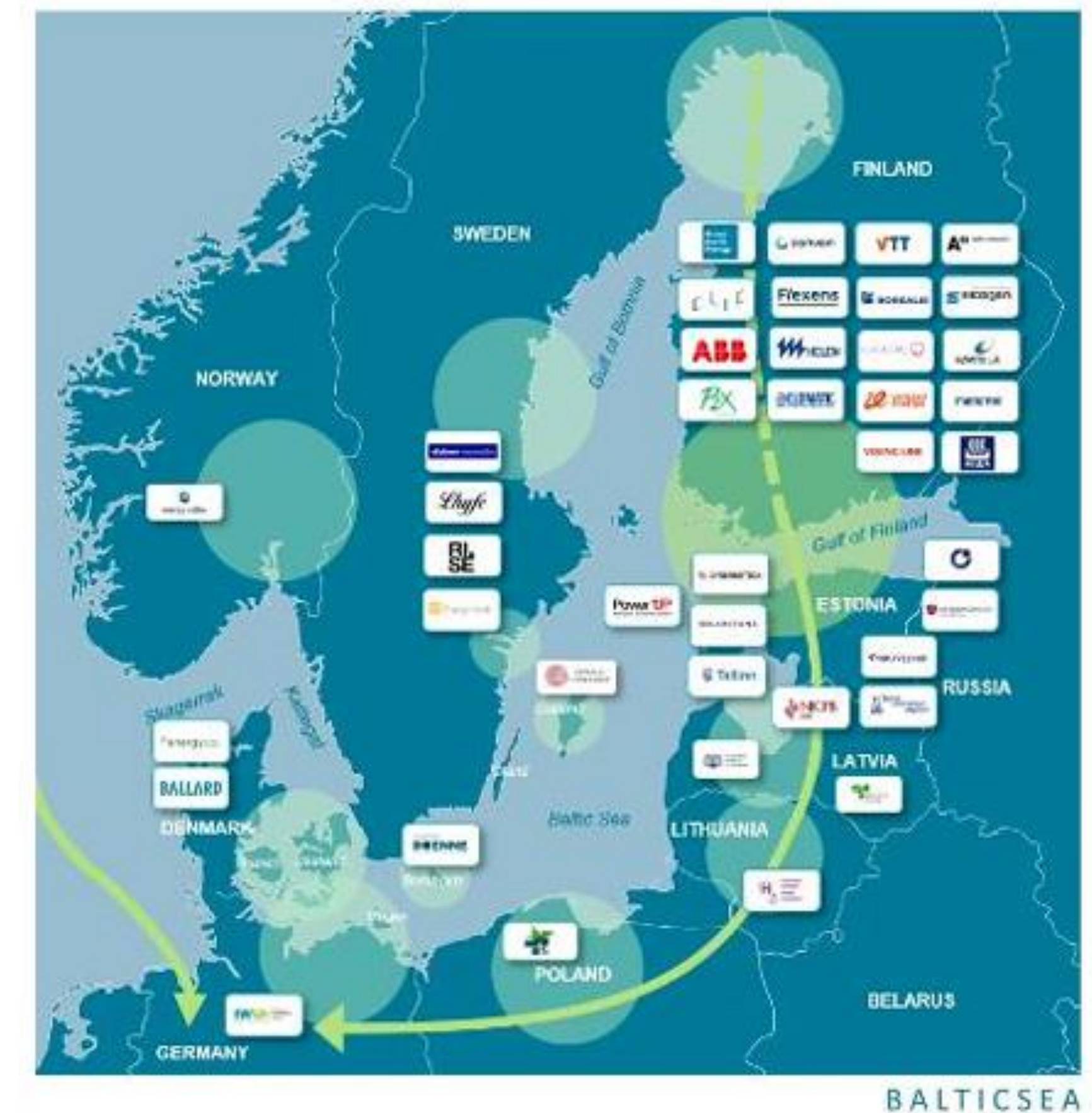


BalticSeaH2 – Baltic-Nordic Hydrogen Valley

Project objective: to develop a unified hydrogen valley around the Baltic Sea, involving leading equipment manufacturers, infrastructure managers and H2 consumers. The project involves 40 partners from 9 countries. "BalticSeaH2 is the first project to contribute to the development of a hydrogen ecosystem.

The first tasks :

- testing of various hydrogen technology solutions, research and practical implementation of H2 production potential,
- prototyping of technologies and their applications,
- establishment of a base infrastructure and promotion of systematic cross-sectoral cooperation to replicate the results elsewhere.

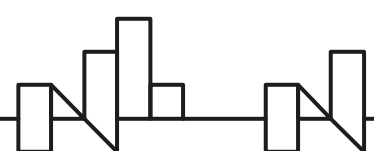


Naco Technologies

Development of nano-coatings and new materials that replace the need for platinum and other expensive materials in the large-scale production and use of H₂.

(can reduce the amount of precious metals used in conventional catalytic coatings up to 10 times)

naco



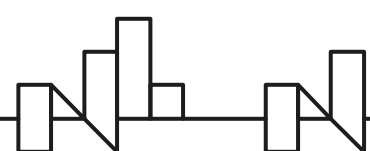
CIS Liepaja

Clean Industrial Solutions Holding plans green hydrogen plant: 1000 MW ~ 140 000 t/year

Planned investment: 1 billion EUR

Operational by 2029

80- 100 new jobs



Fokker Next Gen

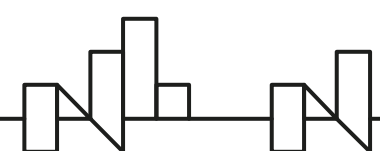
2023's most ambitious new project:

Hydrogen Centre of Excellence - 2024 in collaboration with RTU

Starting production of passenger aeroplanes by 2035

~ 100 new jobs to be created over the next 3 years

Planned investment: 2 billion EUR



Purple Green

Managing partner - PurpleGreen Energy C

EUR 1.5 billion total investment to build the production plant

(EUR 300 million in the first phase)

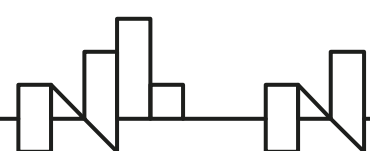
550 MW capacity to produce green ammonia using H₂ as feedstock

200 new jobs

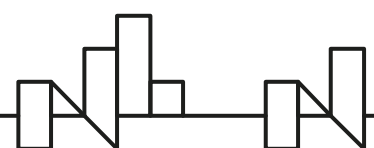
We see great potential for Latvia to become a renewable energy exporter.

One of the best ways to export renewable energy is to convert it into renewable electricity in the form of molecules and export it further using the existing infrastructure of the Freeport of Ventspils.

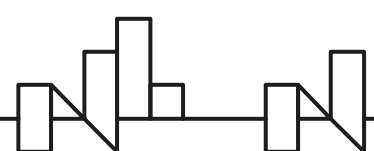
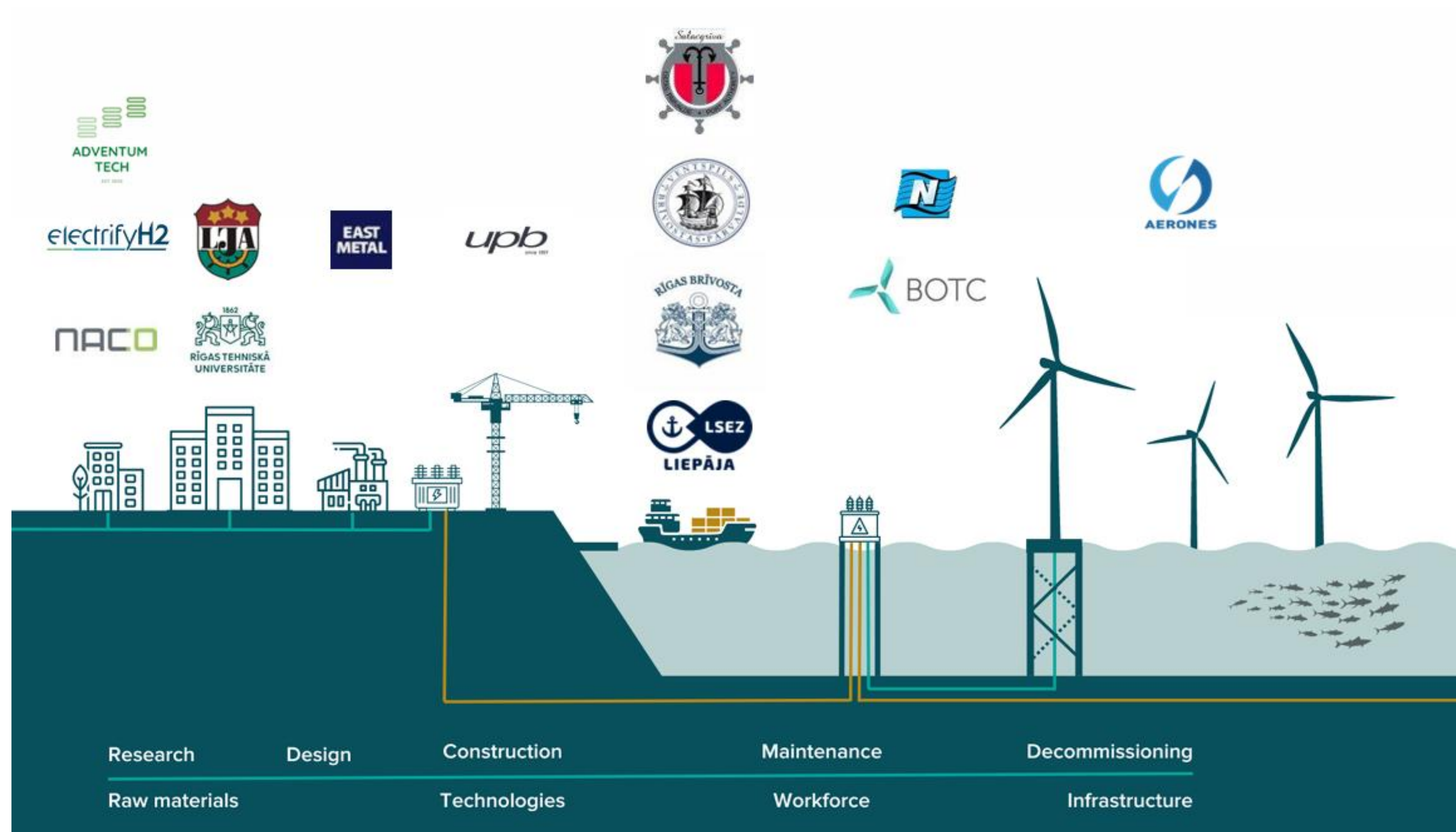
Māris Daniševskis SIA “PurpleGreen Energy C” PtX



They have chosen Latvia (1)



They have chosen Latvia (2)



Thank you!

