

The logo for SETS II features a stylized green and black icon above the text "SETS II" in a bold, black, sans-serif font.

Skandinavisk Elektrisk Transport System



AARHUS UNIVERSITY

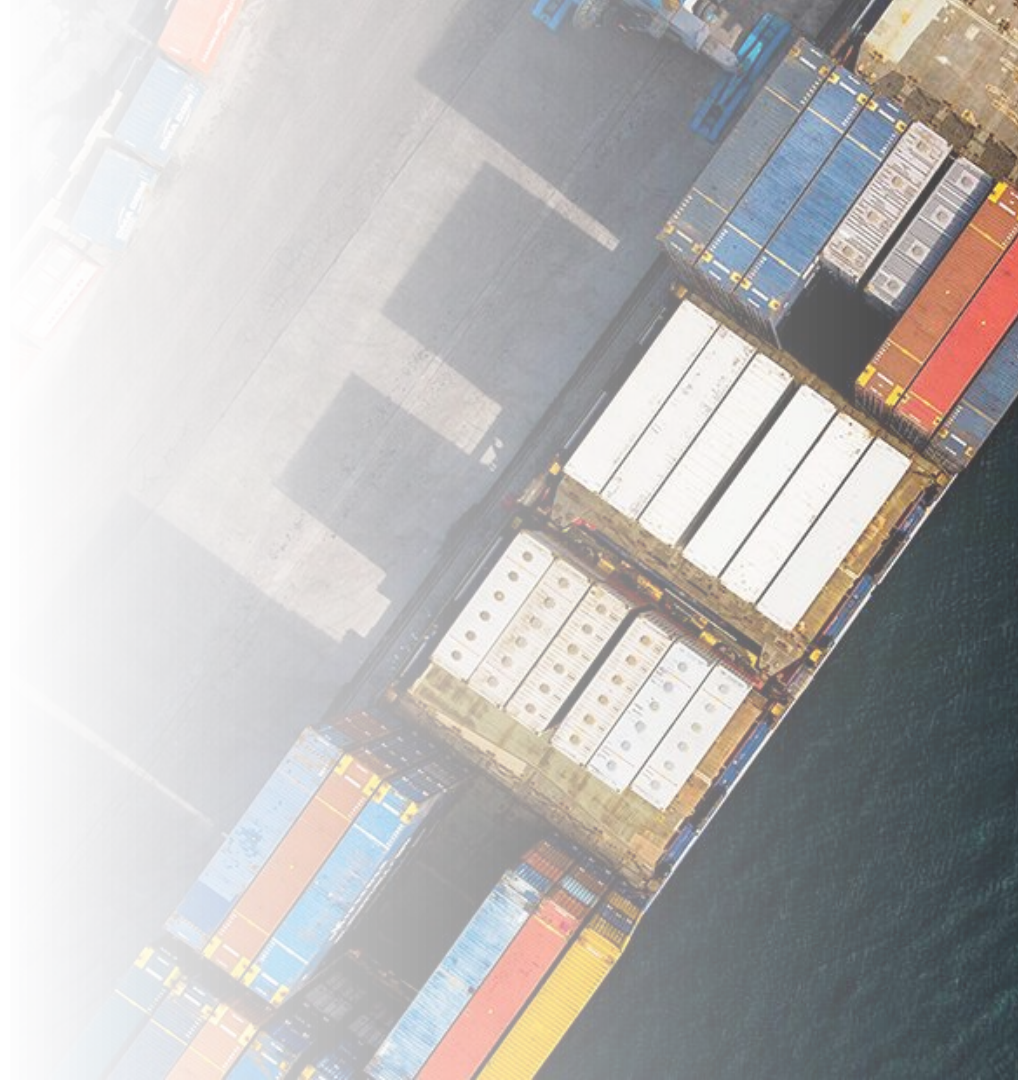


Interreg

Öresund-Kattegat-Skagerrak
European Regional Development Fund



EUROPEAN UNION



Show cases



Skandinavisk Elektrisk Transport System



Öresund-Kattegat-Skagerrak
European Regional Development Fund



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Port of Larvik

Port of Skagen

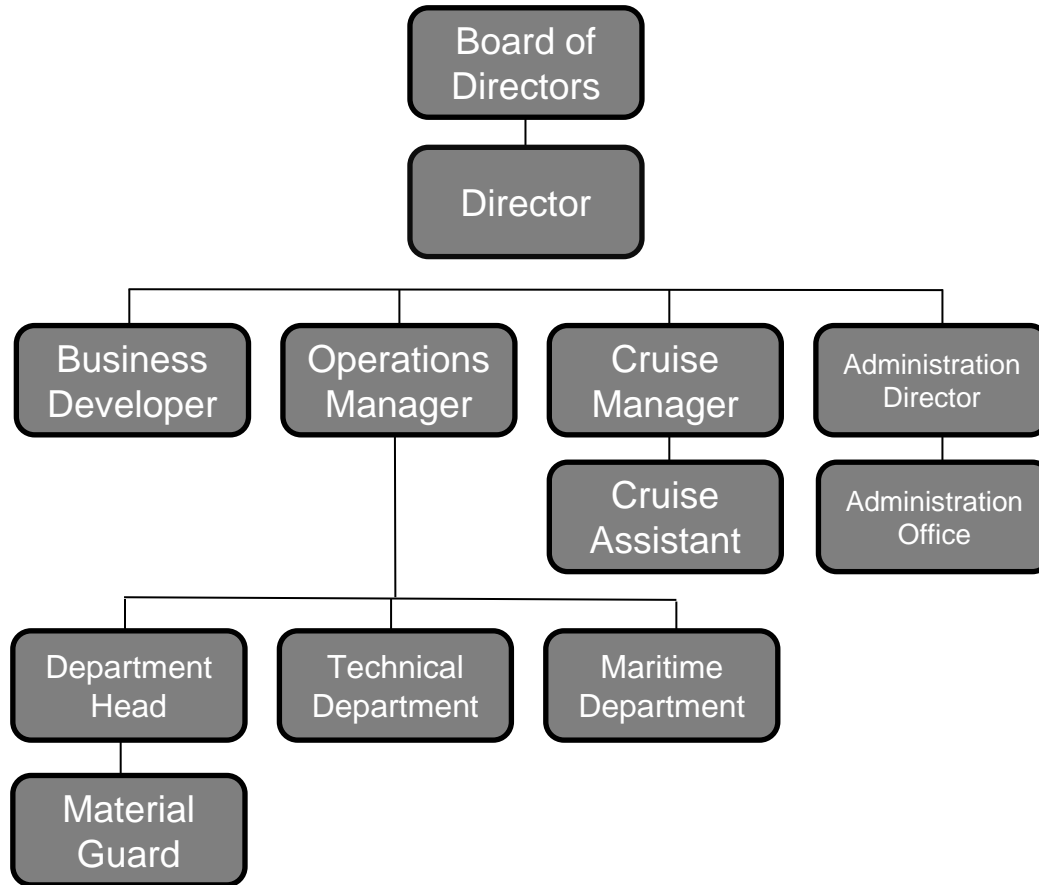
Port of Skagen



SKAGEN HAVN
MARITIME BUSINESS HUB



Skagen harbor is an active commercial port and has the status of Denmark's largest fishing port.



SUSTAINABLE DEVELOPMENT GOALS



SKAGEN HAVN
MARITIME BUSINESS HUB



12 RESPONSIBLE CONSUMPTION AND PRODUCTION



12 RESPONSIBLE
CONSUMPTION
AND PRODUCTION



Detailed water consumption mapping
allowed for significant reductions

13 CLIMATE
ACTION



Detailed energy screening, resulted in partially
replacing lighting with LED

7 AFFORDABLE AND
CLEAN ENERGY



12 RESPONSIBLE CONSUMPTION AND PRODUCTION



Establishing weekly container routes from Skagen

11 SUSTAINABLE CITIES AND COMMUNITIES



Receiving and recycling fishing trawling nets

Port of Skagen –
future initiatives

7 AFFORDABLE AND CLEAN ENERGY



SKAGEN HAVN
MARITIME BUSINESS P.A.

Port of Skagen – future initiatives

7 AFFORDABLE AND
CLEAN ENERGY



Document and reduce the energy consumption at the fishing terminal

13 CLIMATE
ACTION



Replace current fossil dependent transport solutions (cars etc.) with green tech solutions

9 INDUSTRY, INNOVATION
AND INFRASTRUCTURE



SKAGEN HAVN
MARITIME BUSINESS P.A.

Port of Skagen – future initiatives

7 AFFORDABLE AND
CLEAN ENERGY



12 RESPONSIBLE
CONSUMPTION
AND PRODUCTION



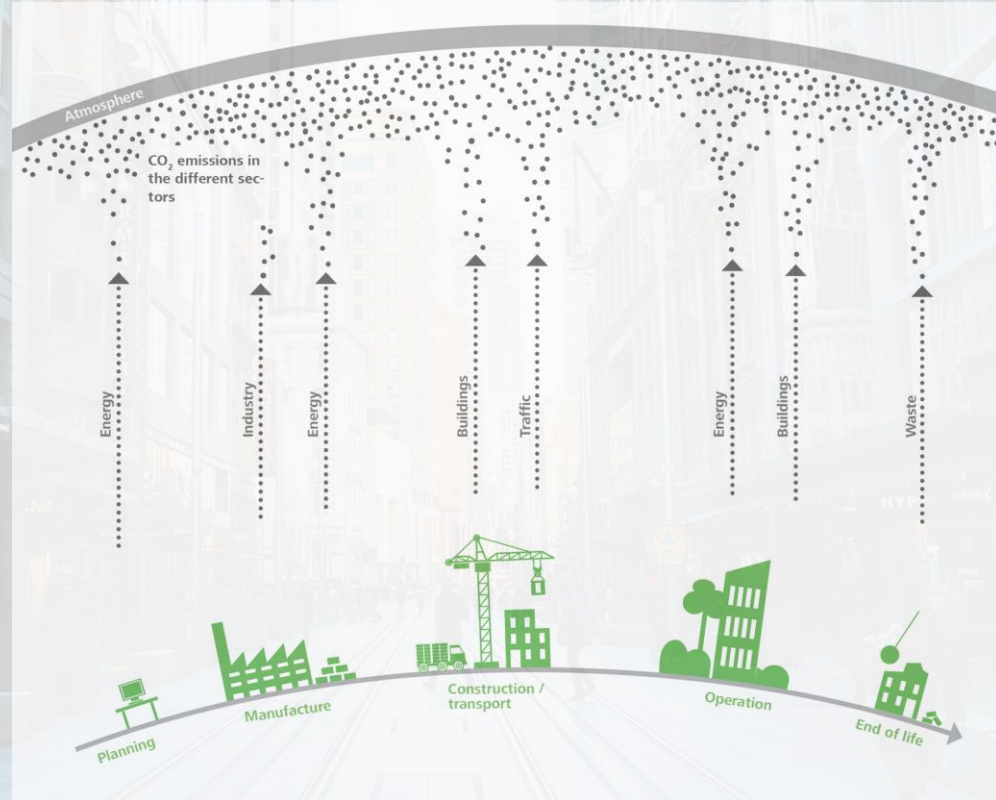
13 CLIMATE
ACTION



9 INDUSTRY, INNOVATION
AND INFRASTRUCTURE



Establishing a new sustainable port facility, DGNB-certified



Port of Skagen – future initiatives

13 CLIMATE
ACTION



Investigate current waste streams and increase segregation – From waste to Resource

12 RESPONSIBLE
CONSUMPTION
AND PRODUCTION



Mapping the waste streams coming from the fishing vessels – transitioning it into a resource

9 INDUSTRY, INNOVATION
AND INFRASTRUCTURE

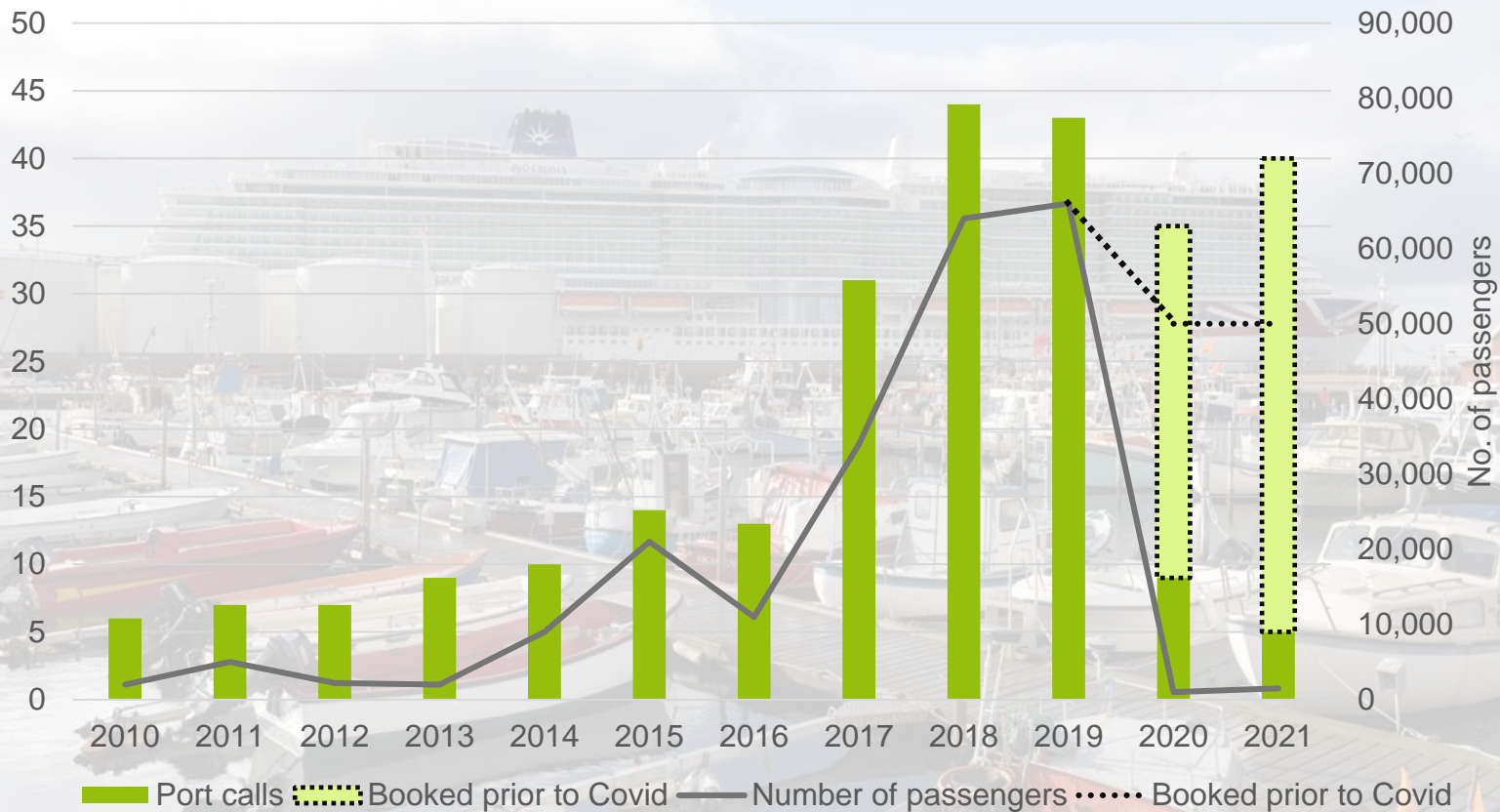


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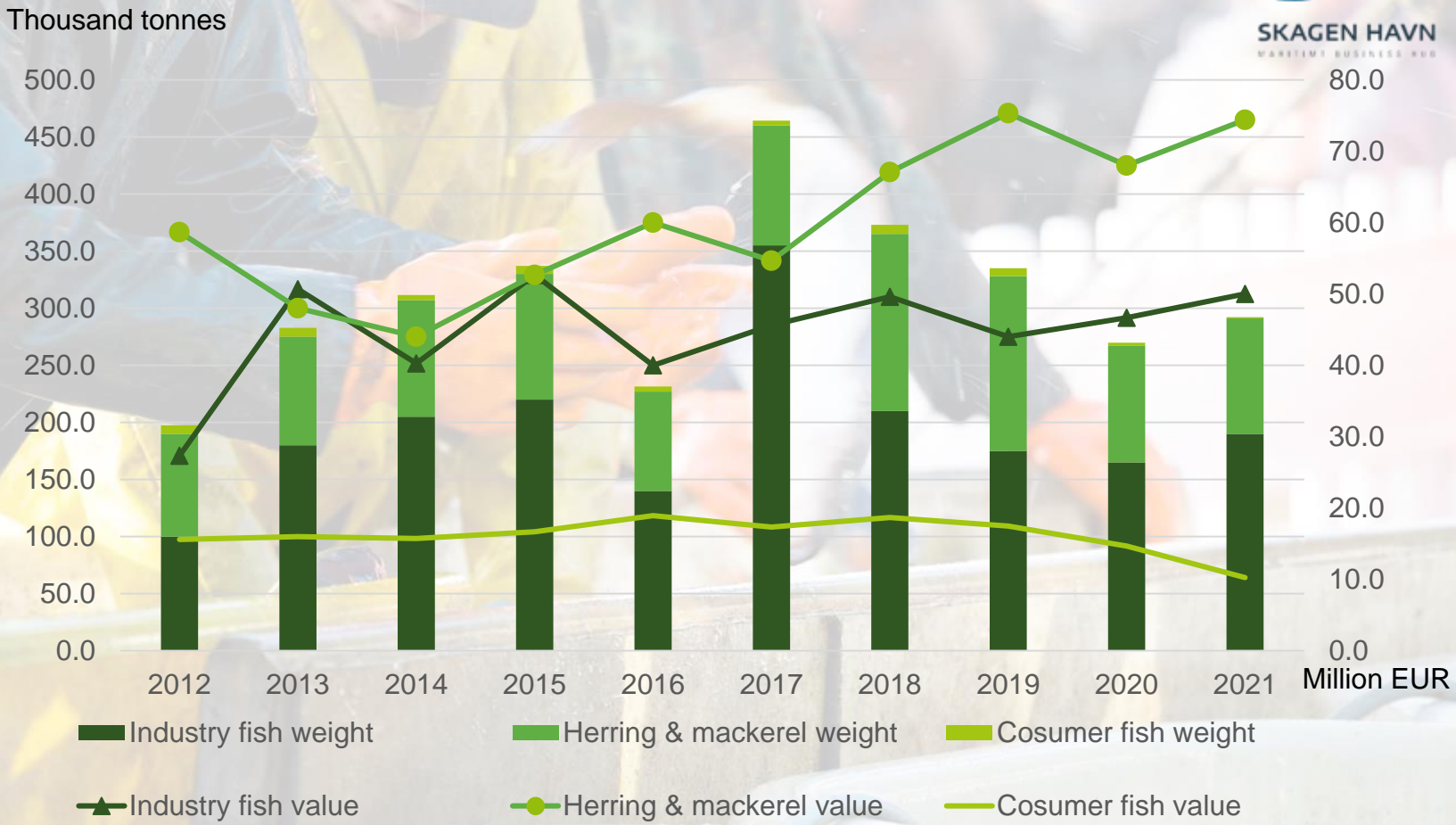
CRUISE SHIP PORT CALLS



SKAGEN HAVN
MARITIME BUSINESS HUB

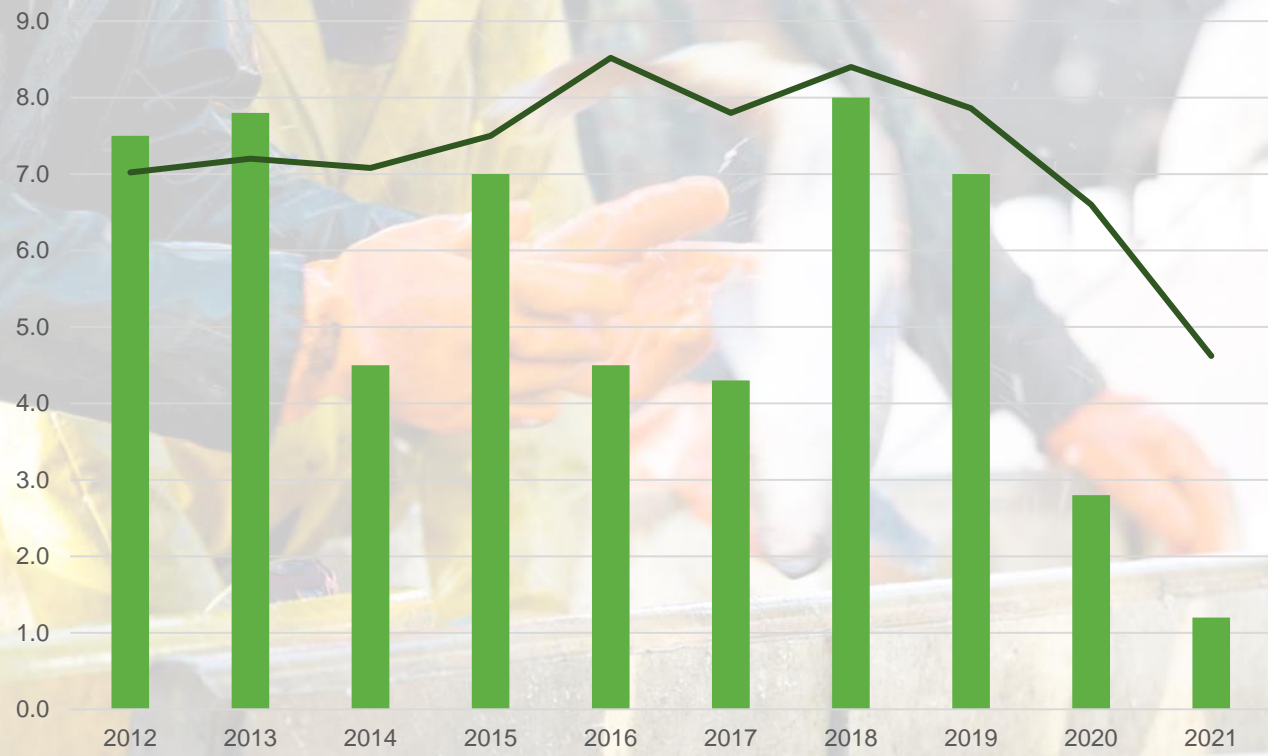


FISHING INDUSTRY



FISHING INDUSTRY

Thousand tonnes



■ Cosumer fish weight — Cosumer fish value

Million EUR

Shore power commissioned in 2021



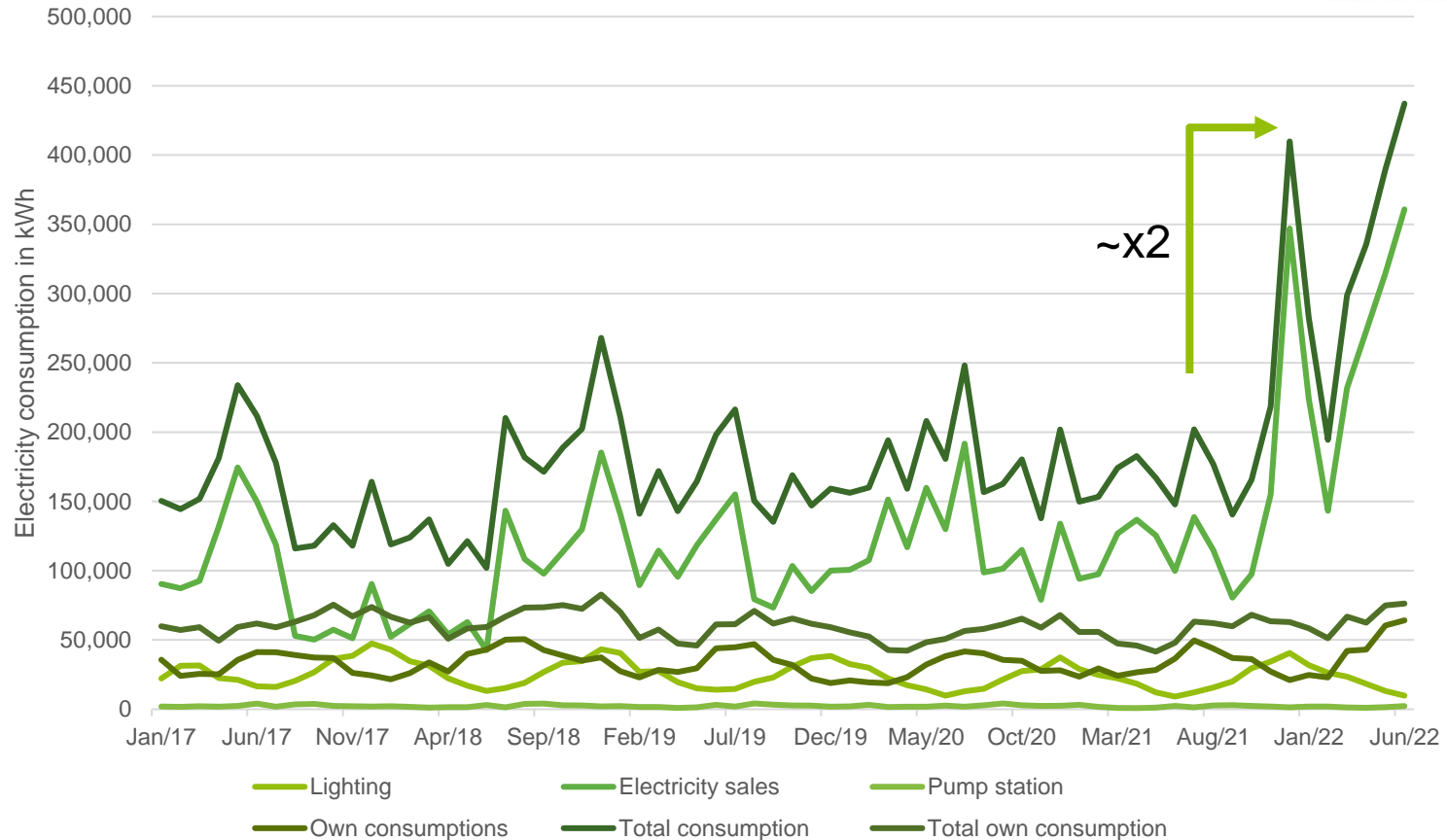
F/V Voyager

51 days, moving from utilizing auxiliary diesel engines to shore power instead

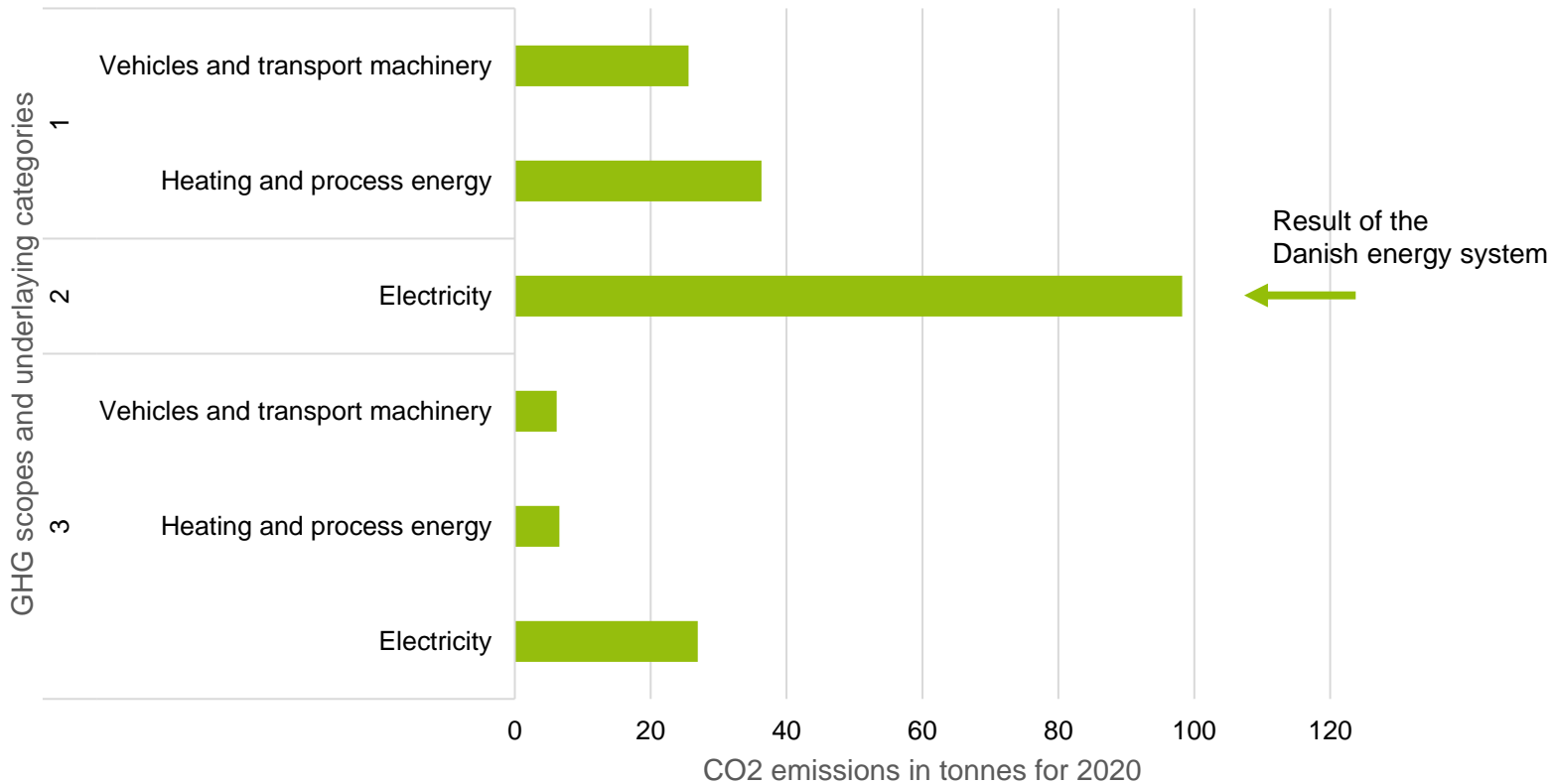
Voyager has saved 8.750 kgs of CO2 and 1.120 kgs NOX (pollution).



Energy Consumptions



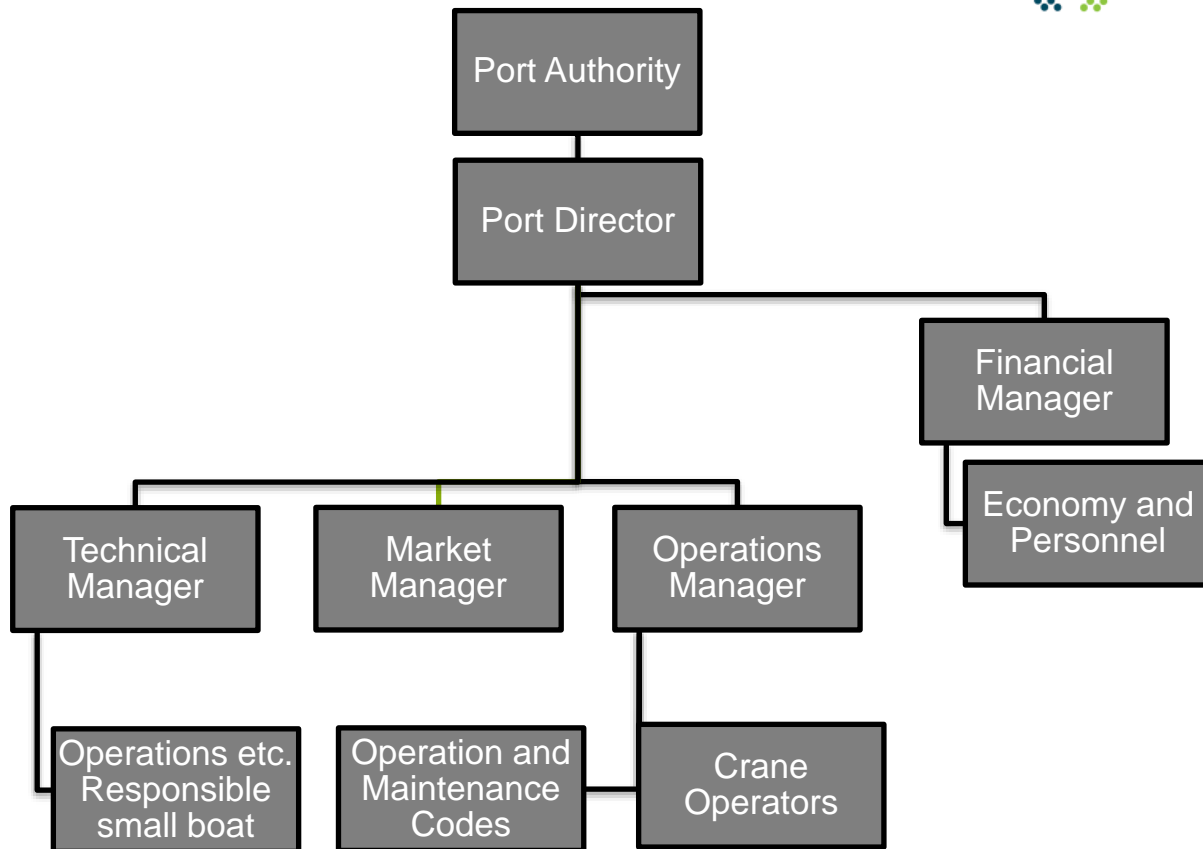
GreenHousegas Protocol



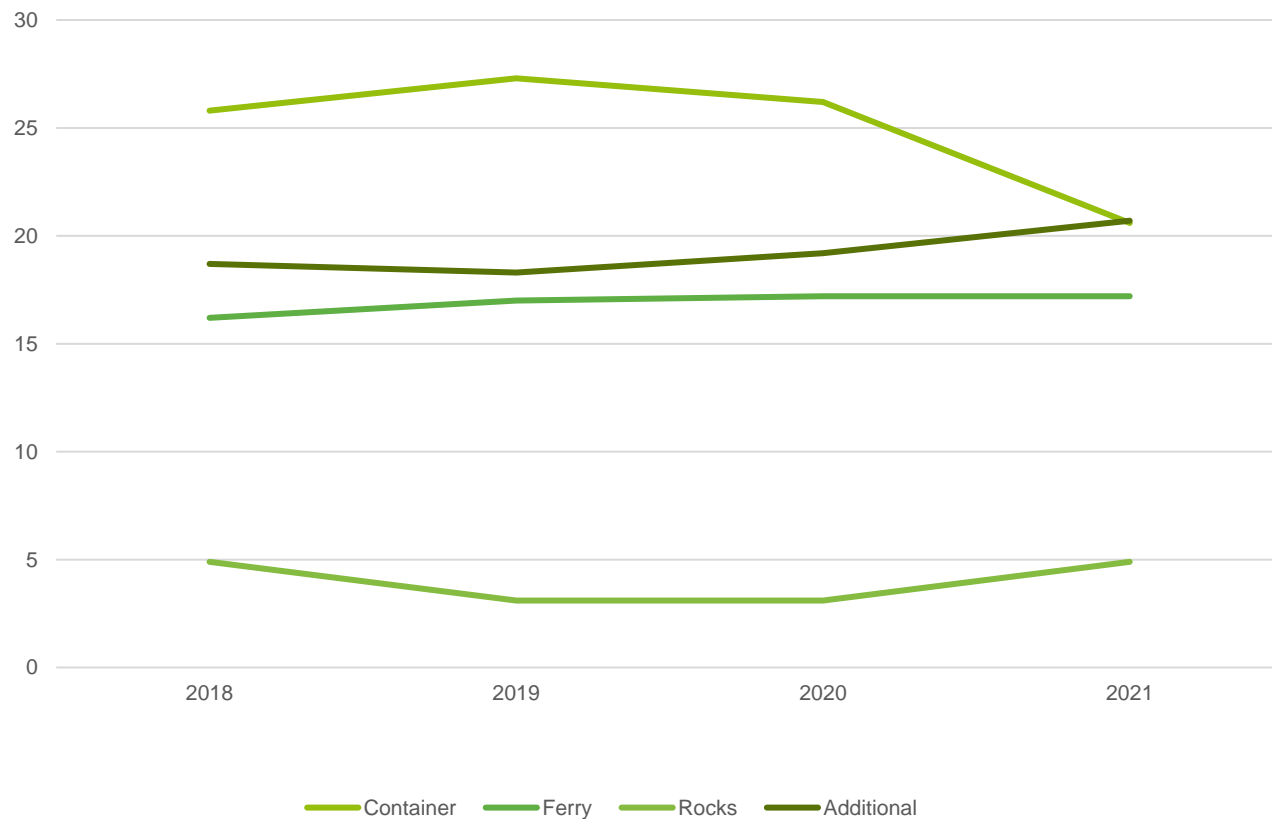
Port of Larvik



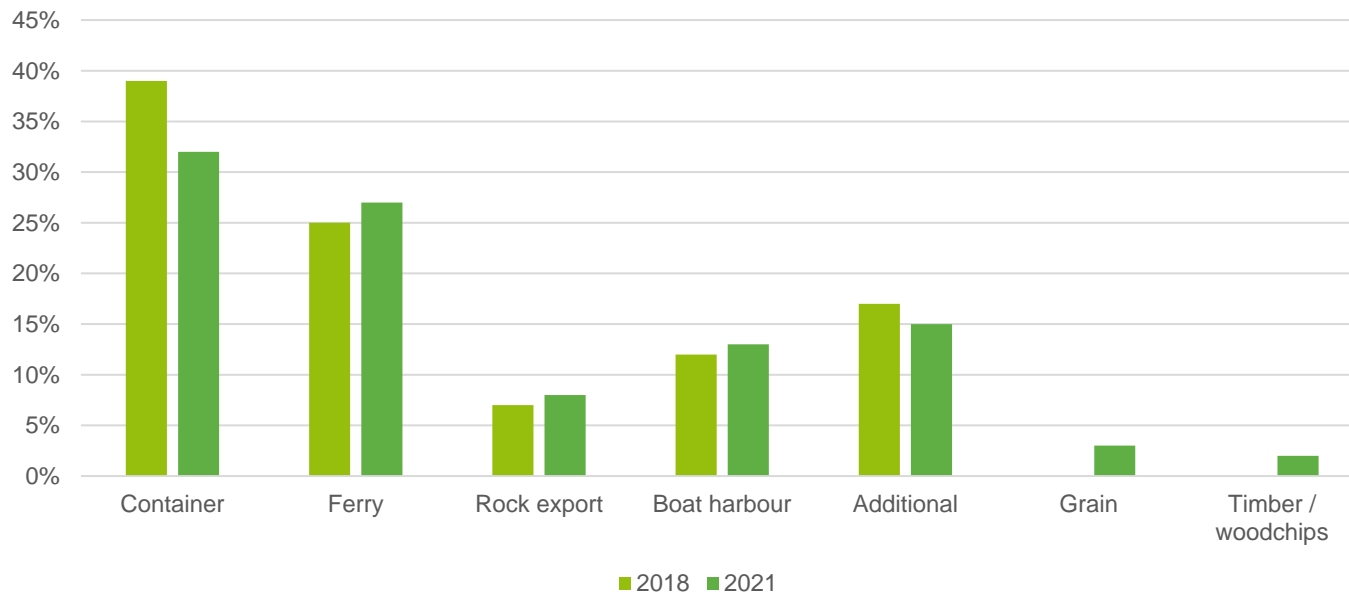
ORGANIZATIONAL DIAGRAM



INCOME 2018-2021



REVENUE BY AREA



 SUSTAINABLE DEVELOPMENT GOALS



Larvik port will in agreement and collaboration with other ports around the Oslo fjord focus on the environment through shore power for the vessel fleets.



Focus on expanding their container and sea freight business. Thereby contributing to the reduction of road transportation and emissions.



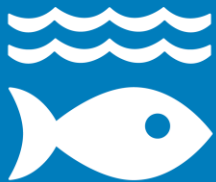
As the port is centrally positioned in the city centre, they need to collaborate to find solutions that not only ensures that the port of Larvik will become more sustainable, but also contribute to the city as a good place to live.



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Port of Larvik wishes to participate in the work of developing climate sustainable solutions, by reducing emissions actively. One of their actions is to ask construction or facility management to transition towards emission free machinery.



Larvik port will be arranged to accommodate the Yrke fishermen, ensuring that the fishing is available for the people of Larvik for generations to come. With a focus on avoiding pollution or contamination of the water and sea life.

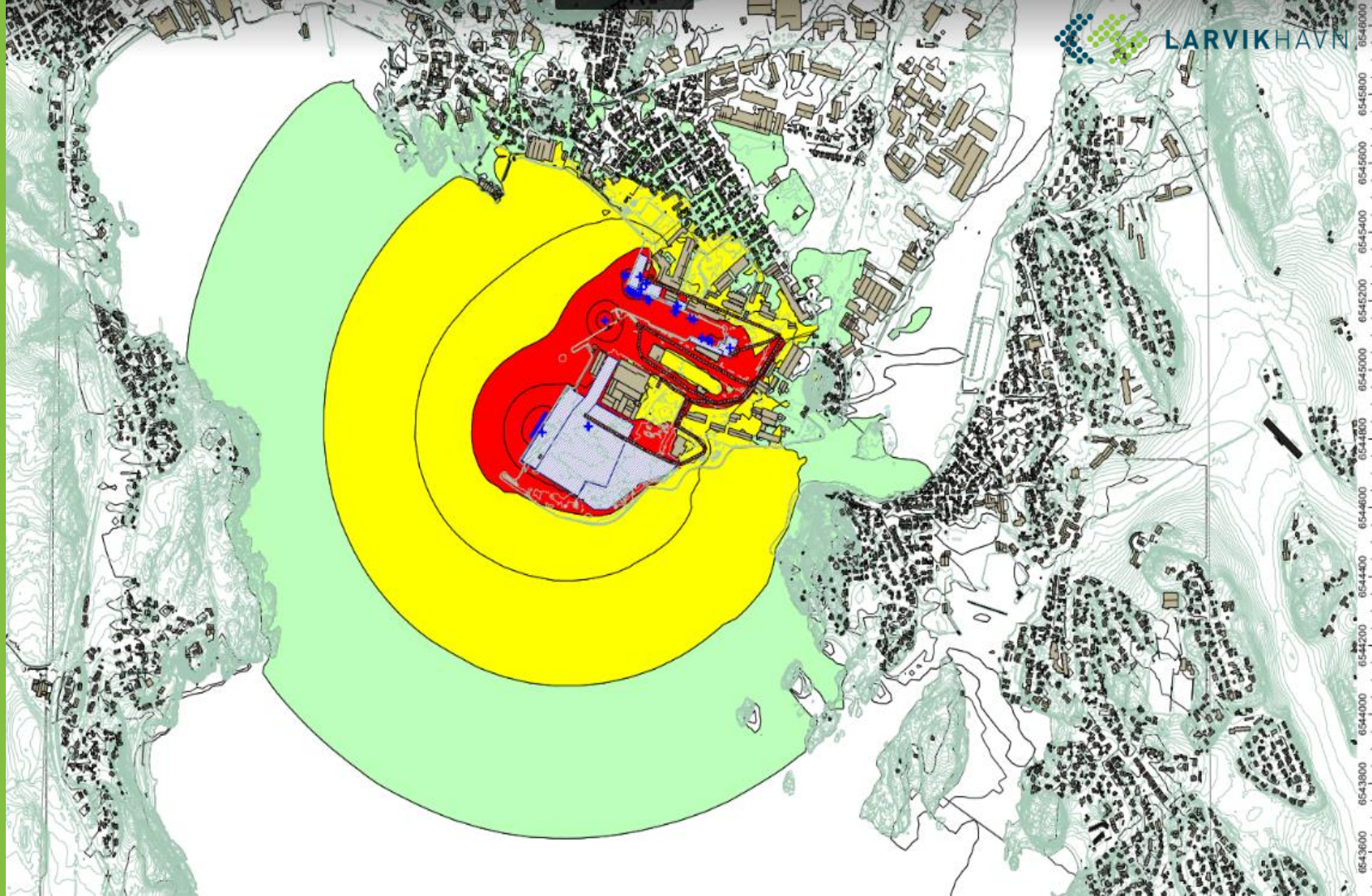


The port collaborates actively with other ports, municipalities, authorities, unions, academia, and organizations. Involving itself in research and innovation, like for instance the SETSII project in order to reach the sustainability goals.

ISO 14001



NOISE AND MEASURES MAP

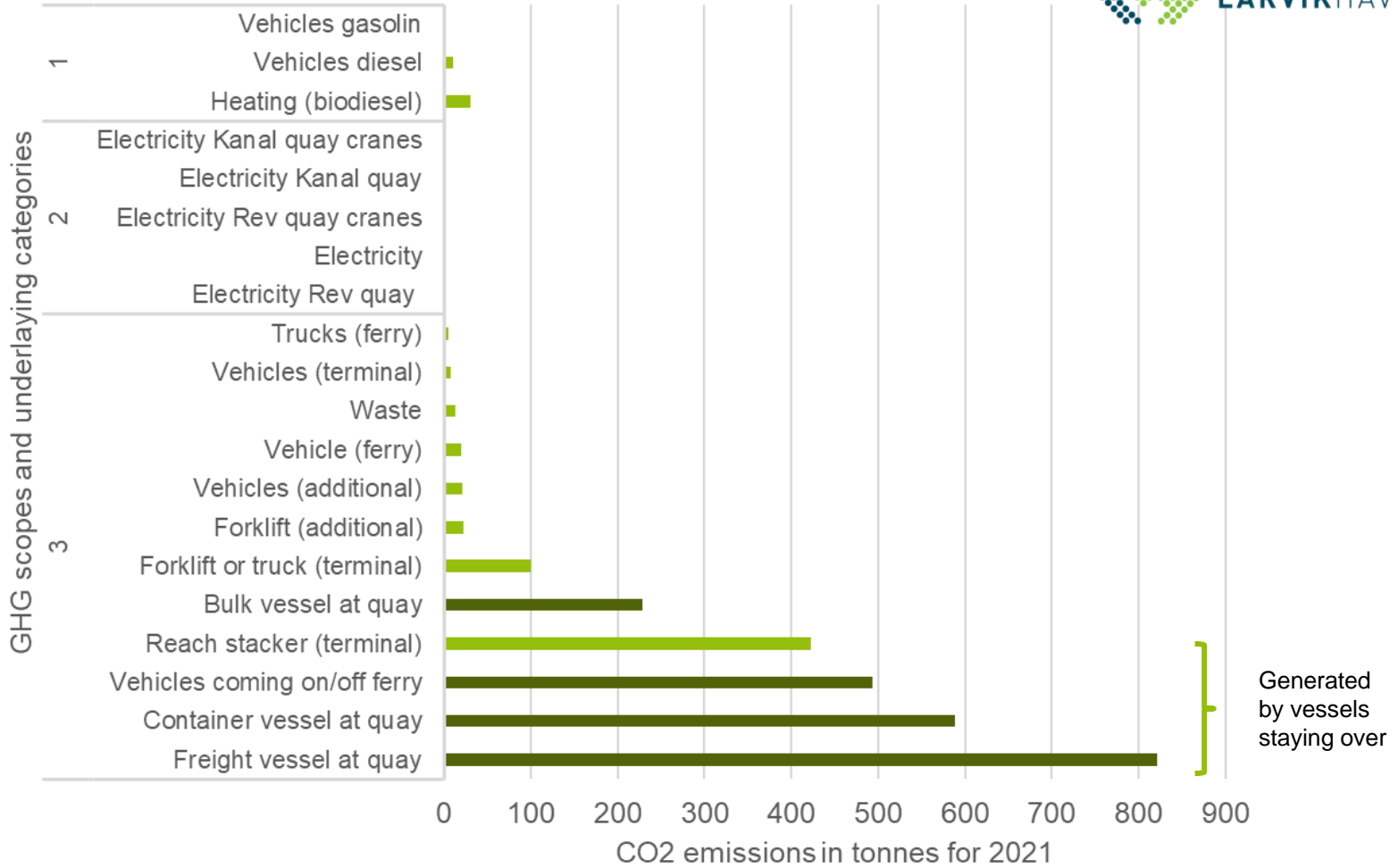




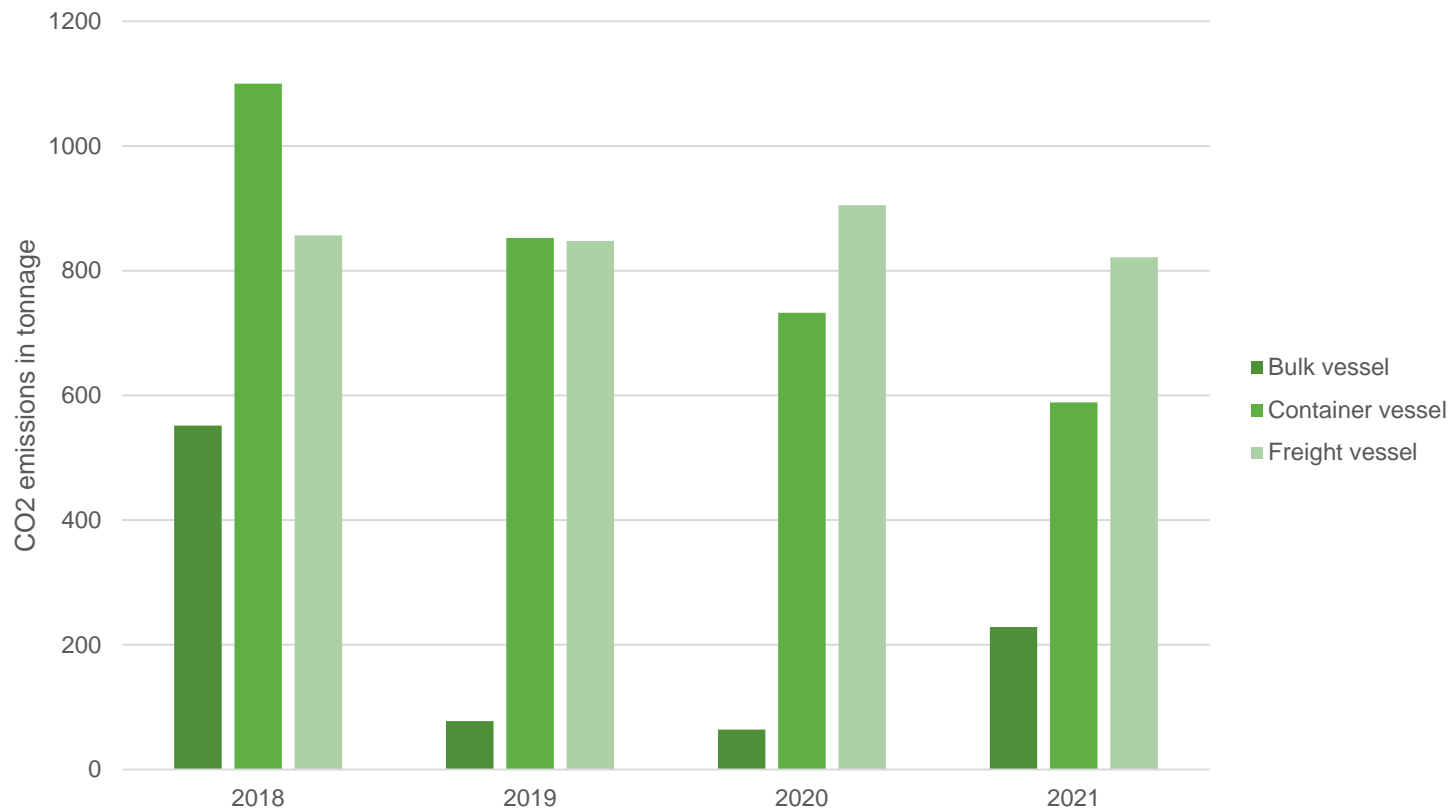
EXTENDING THE RAILROAD



GREENHOUSE GAS PROTOCOL



EMISSIONS ACCORDING TO QUAY





Reducing emissions is not a single entity battle



Legislators can be either enabling the transition or a barrier to it



Technologies are there to support us reducing our energy footprint



Vessels, ship brokers and owners have just as big a responsibility in this



Is the national grids ready for this transition?



General perspective



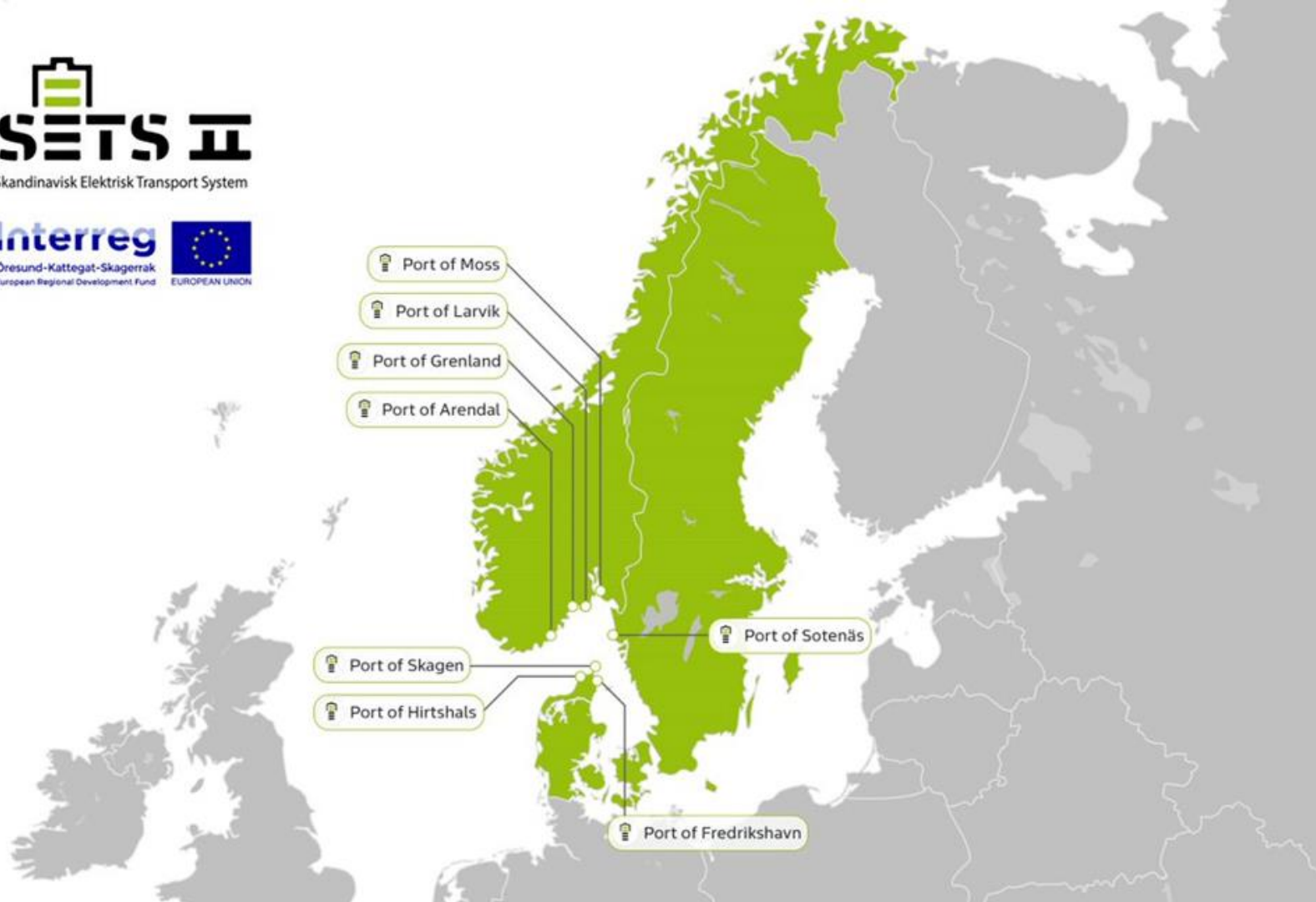
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Port of Moss

Port of Larvik

Port of Grenland

Port of Arendal

Port of Skagen

Port of Hirtshals

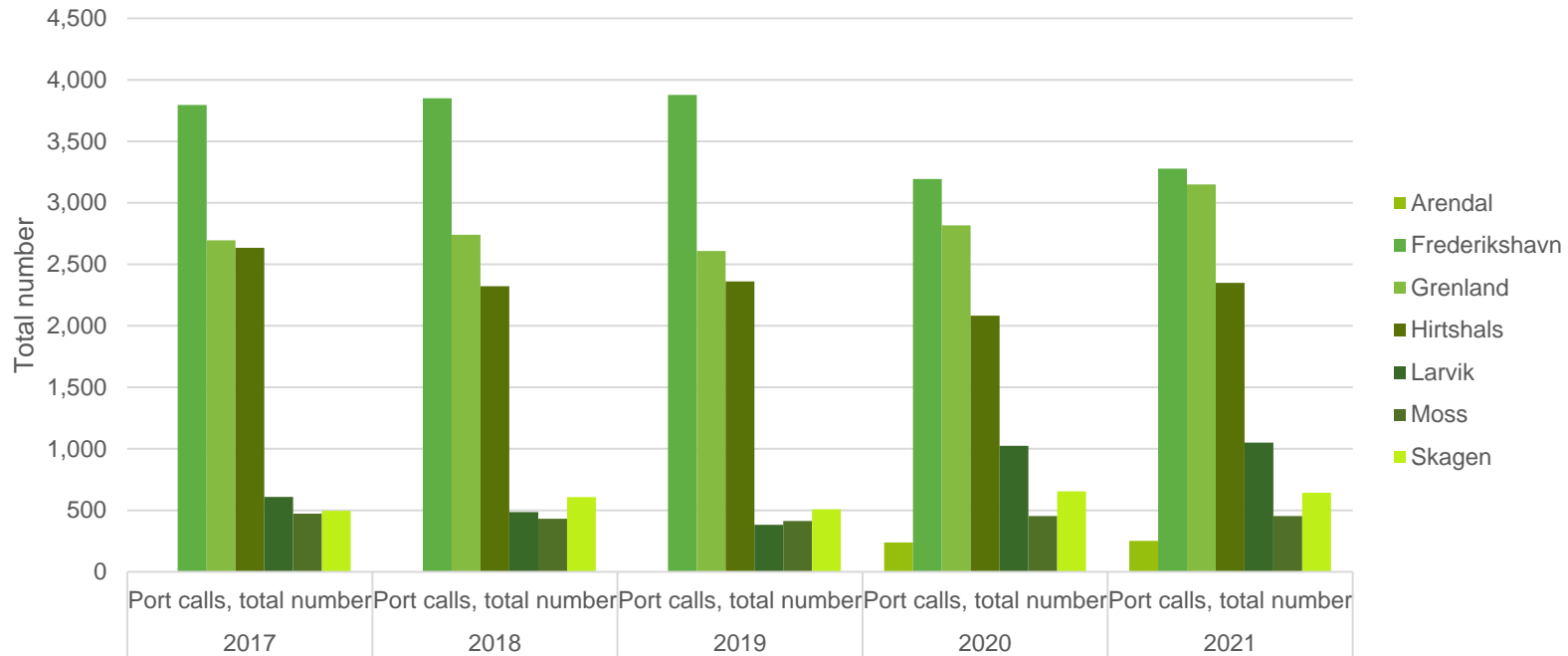
Port of Sotenäs

Port of Fredrikshavn

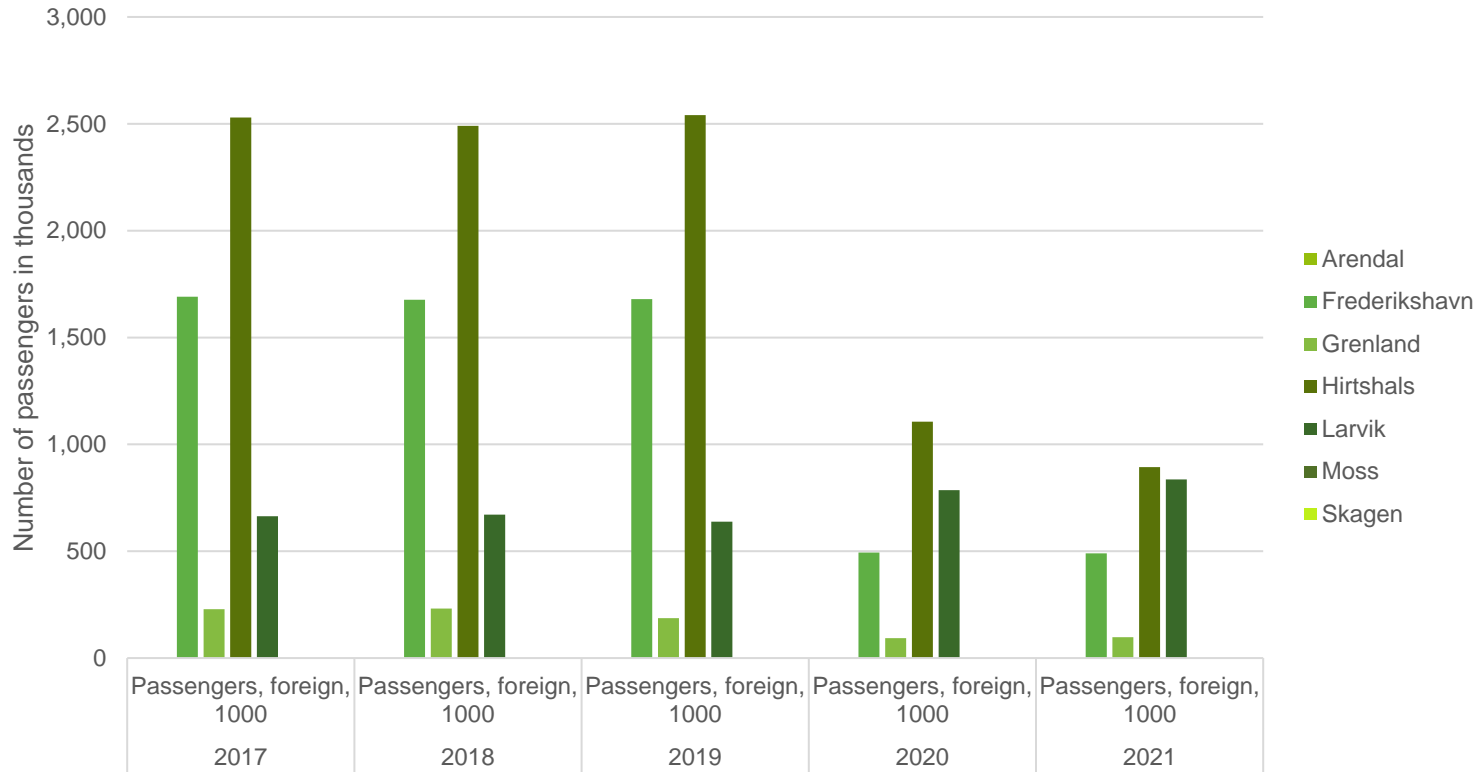


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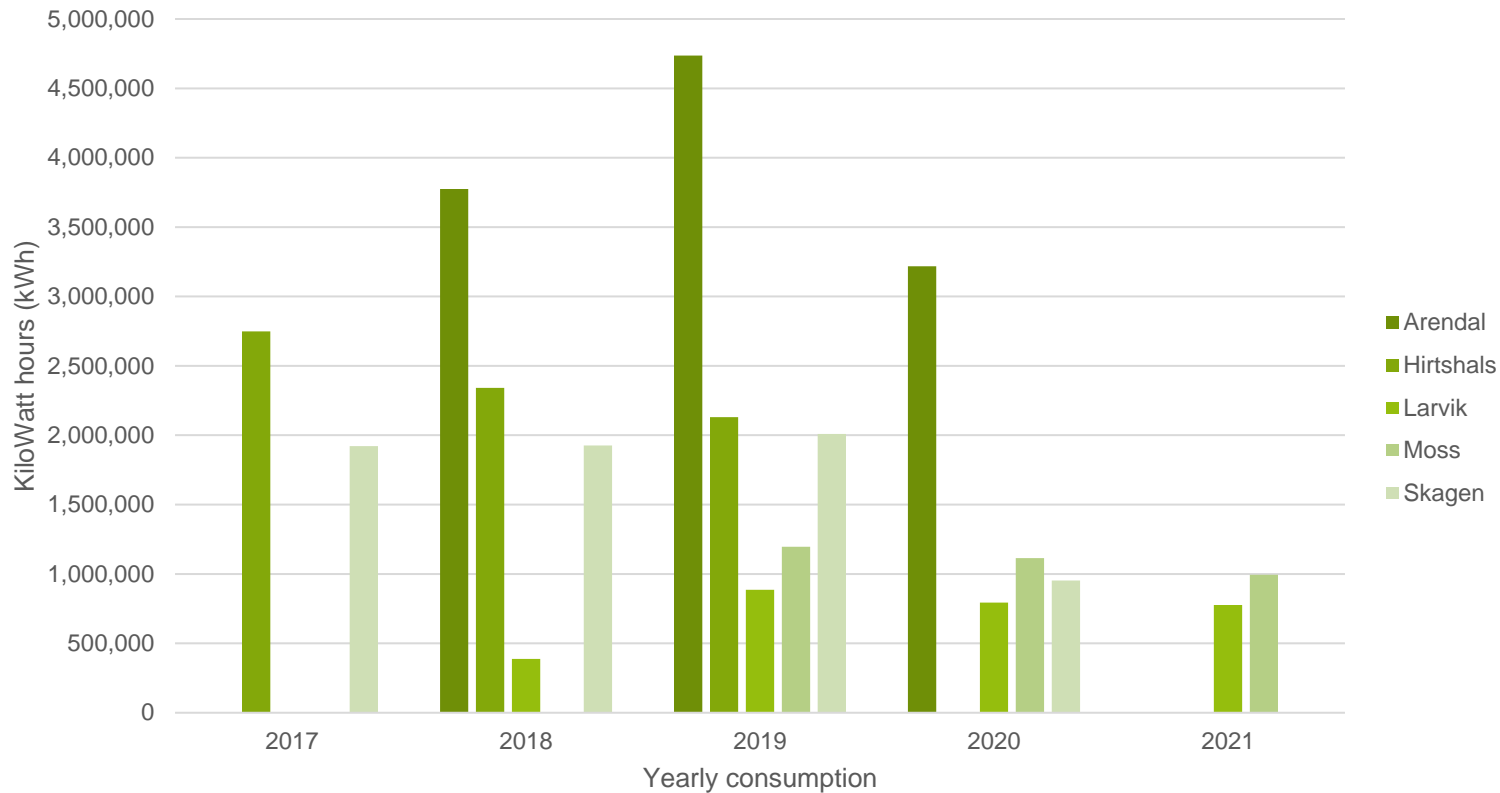
Yearly port calls



Yearly passengers



Yearly energy consumptions



Eco-design and green process engineering

Green procurement and purchasing

Green production/remanufacturing and industrial ecology with minimum energy and resource consumption

Green energy mix, and the application of techniques for product recovery and waste management

Circular economy and reverse logistics, and models to share or use products instead of owning them outright

Environmental management systems (EMS) or “a collection of internal policies, assessments, plans, and implementation actions affecting the entire organization and its relationships

Green logistics, distribution and transportation

17 PARTNERSHIPS FOR THE GOALS



Consider what collaboration among the port partners would do for your business

12 RESPONSIBLE CONSUMPTION AND PRODUCTION



Tracking energy and waste provides potential insights to untapped potentials

11 SUSTAINABLE CITIES AND COMMUNITIES



How can we best support each others development goals



How the Ports involve the companies that have chosen to be in the port areas in a fossil-free development, so that the port of the future becomes a unified green port as a geographical area.

How the cities live with their ports, and how the ports live with their cities?

It is strongly recommended that the other SETS-II ports enter into partnership agreements with their respective cities' municipal councils on how the ports and cities can jointly act on the UN Paris Agreement's climate goals in a credible, measurable and transparent manner.





Skandinavisk Elektrisk Transport System

Thank you all for your participation and collaboration

The final report will be available beginning of October 2022

