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# Improving regional maritime connectivity and reviewing implemented initiatives'

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# State of Global Maritime

# Global Maritime – Overview

## Global Maritime – What’s happening



Size of container vessels continuing to grow – cascading the once largest vessels to secondary markets



IMO sulphur cap and LNG implications for bunkering and trade routing



Regulations on fuel and vessel technology changing



Tonnage oversupply and cascading, reshaping of alliances



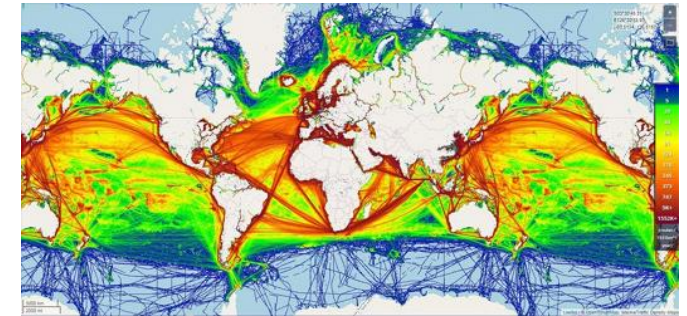
Port authorities reshaping less competitive infrastructure



Pressure on terminal operators to upgrade facilities and provide high service levels



Trade tariffs creating uncertainty



Global Shipping Traffic

# Global Maritime – Container “Cascade” Effect

Ability to handle larger vessels now required by Baltic Sea ports due to cascading

**1** The increase in the size of vessels deployed on the main arterial lanes has resulted in a displacement of former largest vessels to secondary trade lanes. OOCL Hong Kong of 21,413 TEU has since been replaced by the MSC Gülsün, with 23,756 TEU as largest vessel.

**2** Vessels that were deployed on the main trade lanes have now been “cascaded” to secondary trade lanes, ahead of the demand.

**3** Smaller Baltic ports are no longer able to handle main trade lane vessels and instead must rely on secondary trade vessels and feeder/short-sea services.

**4** Displacement of 1,000-1,500TEU vessels by 2,500-3,500TEU vessels on feeder/short-sea services as a result of an increase in incidence of transshipment in the region.

**5** With the formation of the new alliance structure, there will be a reduced number of service alternatives available to each shipper. **Baltic ports must be able to handle larger vessels efficiently to avoid losing volumes.**

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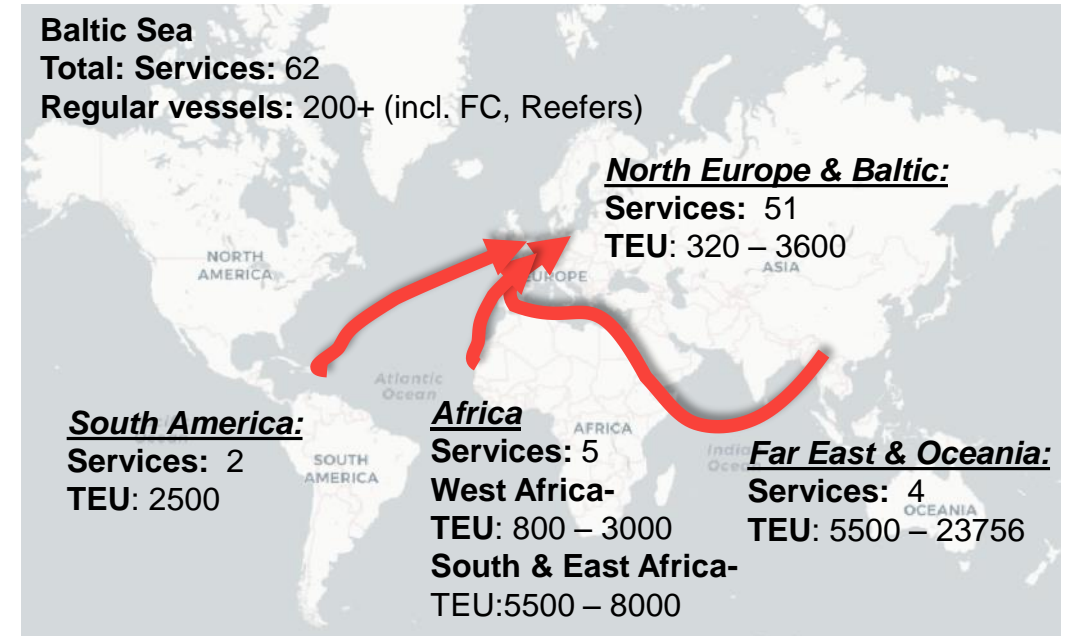
# Baltic Region Overview

# Baltic Region – Global Services

The Baltic Sea ports are served from the Asian, African, North and South American Markets

- 200+ vessels identified to be regularly calling at the ports in the Baltic Sea – with ~62 main shipping line services
- The largest vessels are operating from the Far East with ship sizes of up to 23,756 TEU operated by MSC
- Draught depth, alongside other factors such as craneage and productivity levels, have become increasingly important
- DCT Gdansk, Poland, has the deepest port with 16.7m depth, but will be challenged soon by 17m at Swinoujscie expected to be operational by 2025.
- There are 51 services operating within the North Europe with over 120 regular ships, and sizes ranging from 320 – 3,600 TEU
- 4 types of services offered are “relay” and “hub and spoke” transshipment as well as short sea “intra Europe” cargo and deepsea service to hinterland via road/rail “gateway” service

## Shipping line services to the Baltic Sea (2018)

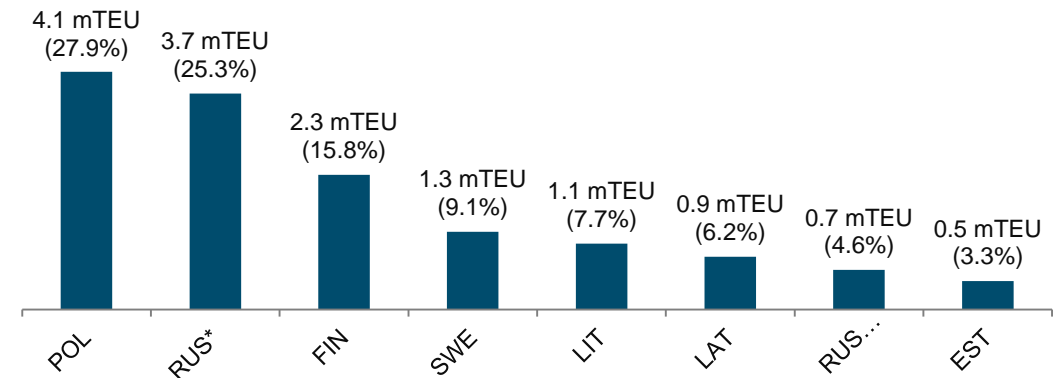
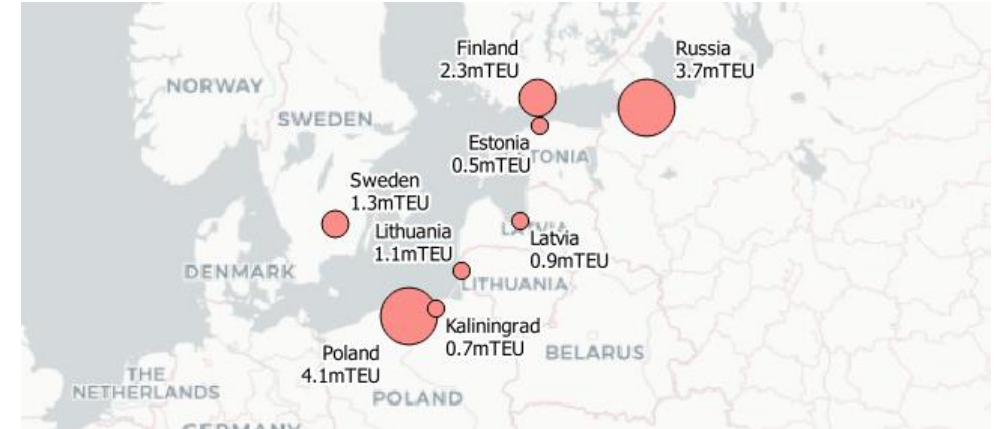


# Baltic Region – Deployed Vessel Capacity

Maersk employs the largest capacity in the region, followed by MSC and CMA CGM

- The total deployed vessel capacity in the region was at ~14.6m TEU
- Poland had the largest vessel capacity deployed
- Russia (excluding Kaliningrad), has the second largest, followed by Finland
- The top three accounted for about 69% of the total
- 2 main alliances call at DCT Gdansk, means limited opportunity for other polish ports to *capture* the other alliance

Total Capacity Deployed per country in 2017



\* - Excluding Kaliningrad

Note: % in the brackets indicate share of the total



# Baltic Region – Port Ownership

Major stakeholders in the Baltic Sea container terminals

Largest annual capacity regional ports (TEU);

- **Poland**, Gdansk DCT Gdansk – 3m TEU (**PSA**)
- **Poland**, Swinoujscie – 1.5m TEU phased from 2025
- **Poland**, Gdynia Baltic Container Terminal – 0.6m TEU (**HPH**)
- **Poland**, Gdynia – 1.2m TEU (**ICTSI**)
- **Russia**, St Petersburg Bronka-Terminal – 1.45M TEU
- **Russia**, St Petersburg First Container Terminal – 1.25m TEU
- **Russia**, St Petersburg Petrosport Container Terminal- 1m TEU
- **Lithuania**, Klaipeda Klaipedos Smelte Terminal - 0.6m TEU (**TIL**)
- **Russia**, St Petersburg Container Terminal – 0.75m TEU
- **Finland**, Kotka Steveco Kotka Container Terminal – 0.75m TEU

## Regional Port – Ownership



# Baltic Region – Port Developments

## Expansion of infrastructure

- **Gdynia:** Increasing inner entrance from 100m to 140m, deepening access channel, and outer port expansion
- **Gdansk DCT:** Outer port large scale expansion following initial expansion
- **Swinoujscie:** New quays, channel deepening-capacity expansion and dredging to 17m by 2025 (1.5mTEU “phased”capacity potential)
- **River Elbe:** Dredging of river to impact hinterland competitiveness
- **Stockholm:** A new terminal will open in 2020 with 0.45m TEU capacity (Nynashamn)
- **Hamina/ Kotka:** new terminal developed in May 2018
- **Klaipeda:** Expansion is expected to be ready in 2020. Dredging to increase depth to 14.5m
- **Kaliningrad:** Government proposed (2015) new deep-sea port (Yantarny)
- **Saint Petersburg:** container terminal of MSCC Bronka will reach 1.45 m TEU capacity by end of phase 1. Ambition to reach 3m TEU by the end of the final phase

## Developments



Source: WSP/Respective Port Websites

# Transshipment & Hinterland Competitiveness for Baltic

# Transshipment Competition – Choice of Port

Typical influencing factors for the choice of port in any region



- Location and Facilities (e.g. physical accessibility, water depth, cranes etc.) and availability of capacity
- Tariff levels (cargo handling and ship dues) and operating costs
- Performance and service levels (e.g. speed of container handling, flexibility, IT systems etc. labour arrangements, avoidance of congestion)
- Potential for dedicated facilities/terminal areas
- Support services and value-added services – functions – i.e. container maintenance and repair, bunkering/fuel, ships stores Free Zone credentials etc
- For transshipment ports, access to a local market in addition to providing good hub facilities is also of strong appeal to shipping lines

# Transshipment and hinterland competitiveness

## Port strategic competitive updates

### Elbe/Hamburg dredging

- Dredging of the **River Elbe**, will finally improve vessel access to Hamburg, strengthening shipping line's desire to call
- The objective of the **Port of Hamburg** is to reclaim some of the transshipment traffic lost to Antwerp and Rotterdam
- Some increased competitiveness to reach hinterlands in Eastern Poland by rail may also be a concern for Polish ports

### Gdansk development

- **DCT Gdansk** has attracted the worlds largest container vessel the MSC Gülsün, which handled over 11,000 TEU
- Further potential to expand as demand requires

### Gdynia expansion

- **ICTSI / HPH** scoping potential developments opportunities in Gdynia
- Ongoing expansion activities are known to exist, which will bring additional capacity and (generally) improve overall competitiveness to shipping lines and stakeholders

### Swinoujscie

- 17m deep water capacity operational by 2025, with 1.5m TEU capacity potential. Difficult competition with DCT

### MSC Gülsün at DCT Gdansk (08/2019)





# Shipping costs – West Europe vs Baltics

## Transshipments

- Automation developments more advanced in West Europe's facilities against the Baltic region – led by a highly automated Rotterdam
- Costs per TEU is an ongoing test between reliability of automation against known manual labour
- Baltic region varying levels of automation and service costs - Generally lower and more competitive than West Europe.
- The competition between Baltic states and West Europe creates innovation and development

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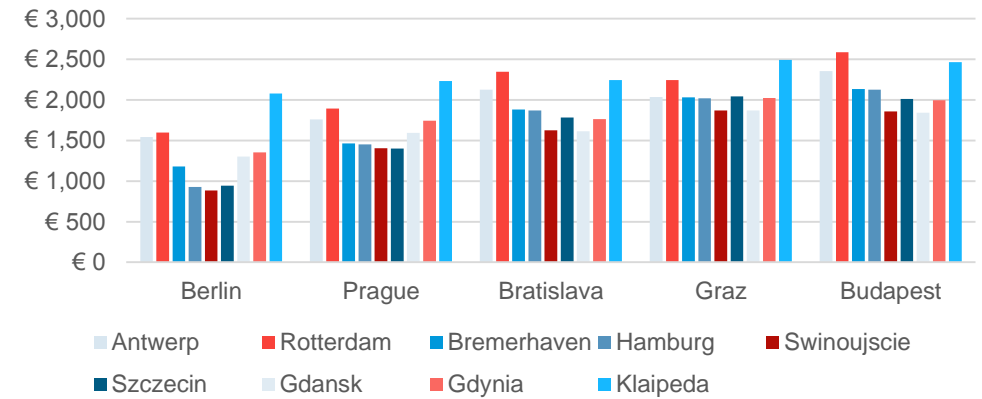




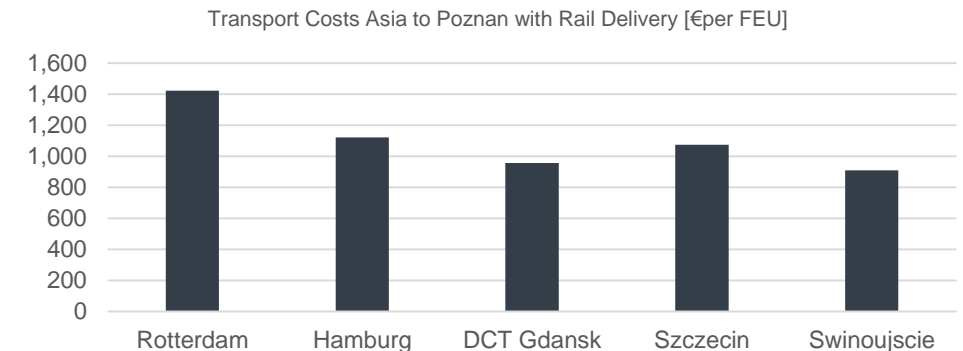
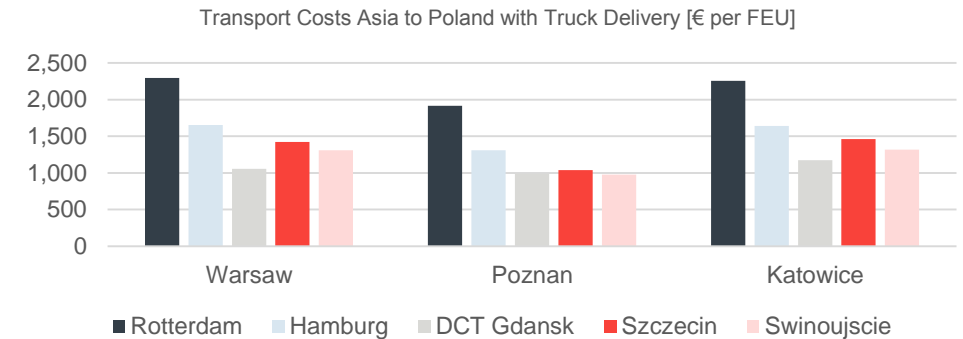
# Trucking / Intermodal Costs – Hinterland Competitiveness

## Direct calls, transshipments and trucking costs

- Competitiveness for Baltic regions is close against North West Europe, for Central Europe destinations
- With deepwater terminals in the Baltic, competitive advantage can be gained
- Example with trucking shown to be cheaper versus rivals
- *Rotterdam to Ostrava* € 1,119
- *Gdansk to Ostrava* € 524
- Poland, Russia (Kalingrad), Estonia are in competition amongst Baltic nations/ports for the vast for central and east Europe hinterlands
- Lithuania and Belarus are operating the same gauge railway. Poland is operating trains to the European-gauge railway while Lithuania and Belarus to the Russian-gauge track
- Recently a gauge changer has been installed at the Belarus – Poland border



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# Reviewing Implemented Initiatives



# Initiatives Available to Baltic Sea Ports

*Terminals need to be able to handle bigger vessels if they are to compete as direct mainline calls on main arterial trade lanes.*

Pay to expand an existing facility or to develop a new one?

- *Alliances service demand plays an integral role in expanding and development planning.*
- Pay to develop automation capabilities
  - *Attractive for shippers as costs and efficiency should be increasingly favourable – CAPEX handled by port*
- Pay to dredge the channel or turning circle to allow access for bigger vessels requiring deeper water.
  - *Critical for attracting the largest of all types of vessels*
- Pay for new and bigger STS gantry cranes with wider reach.
  - *Can directly capture the largest Container vessels*
- Pay to increase the terminal area to provide more stacking spaces for an increase in the number of units handled.
  - *Capacity and storage expense to accommodate for increase hinterland demand*



# Initiative Review

## Examples

Partnership with rail providers, e.g. DB Schenker at Port of Szczecin;

- *Mutual benefit of container volumes being moved by rail with a partner that provides the necessary rail links and services. Similar partnerships could work with forwarding agents / hauliers to move units by truck.*

Widening of and improvement of the quality of access roads;

- *More difficult to get anyone to improve roads – should it be a Government / EU responsibility, or Port Authority responsibility? Potential opportunity for investment in toll roads in key areas to speed up vessel movements and provide incentive for investment.*

Links with ICDs to consolidate cargo volumes for further on carriage

- *Desire to move units out of the container terminal as soon as possible could result in the possible need to consolidate volumes in a few strategic places. ICD's can be profitable and may be of interest to the terminal operators.*



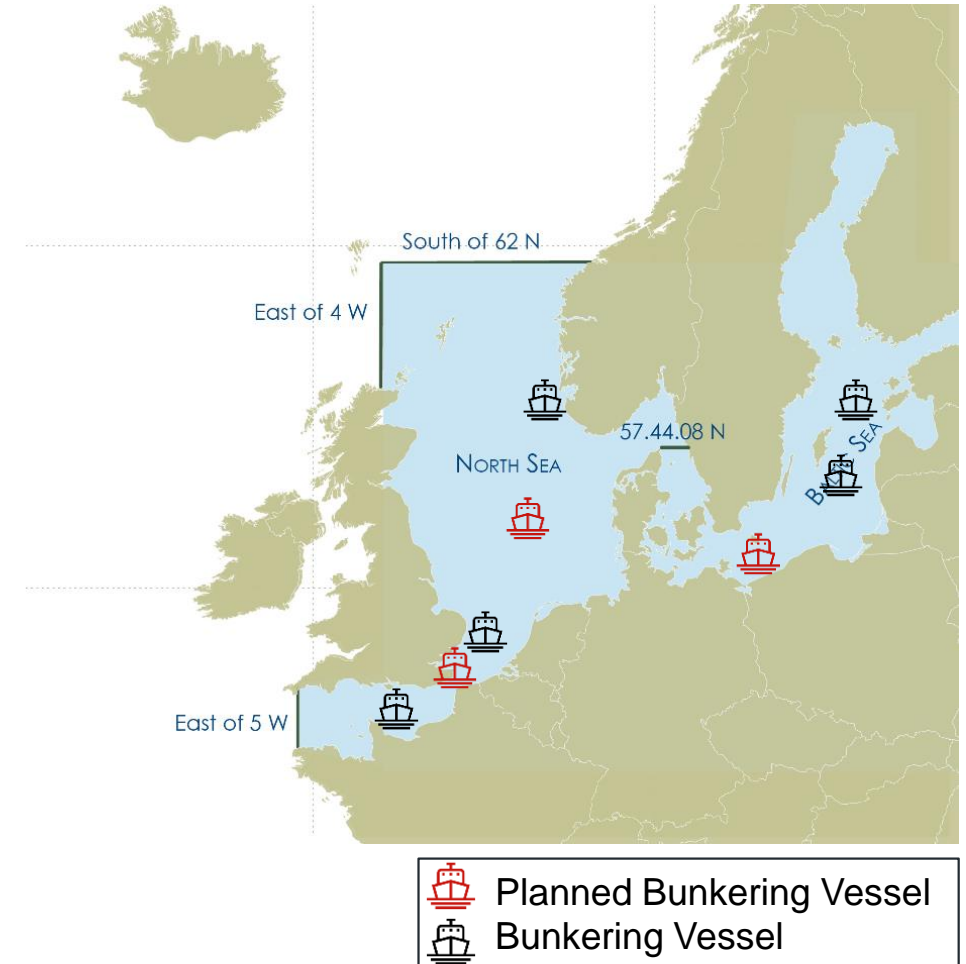
# Initiative Review

## LNG bunker vessels

- SECA regulations have required Baltic vessels to limit sulphur emissions – this has increased LNG powered vessels in the region (since 2015)
- Furthermore, global IMO 2020 will expand sulphur emissions worldwide – LNG fuelled vessels becoming increasingly popular on global trade routes
- Bunkering vessels in the Baltics will have opportunities to refuel large global travelling vessels
- Cost of low sulphur fuels ~\$560 (Q3 2018 - Q2 2019) compared with the lower price of High sulphur fuels ~\$340 (Q3 2018 - Q2 2019)
- CMA CGM have taken the initiative to launch a fleet of nine LNG powered 23,000 TEU container vessels

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## EU Sulphur Emissions Control Area (SECA)



Source: EP, DNVGL

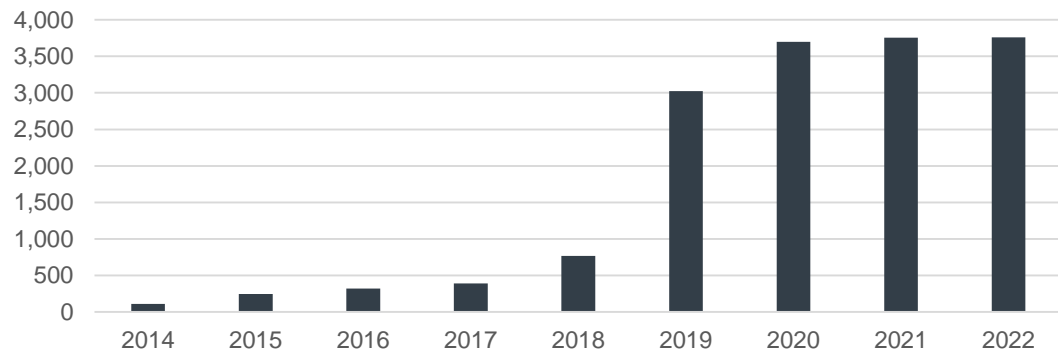
# Initiative Review

## LNG bunkering / storage facilities

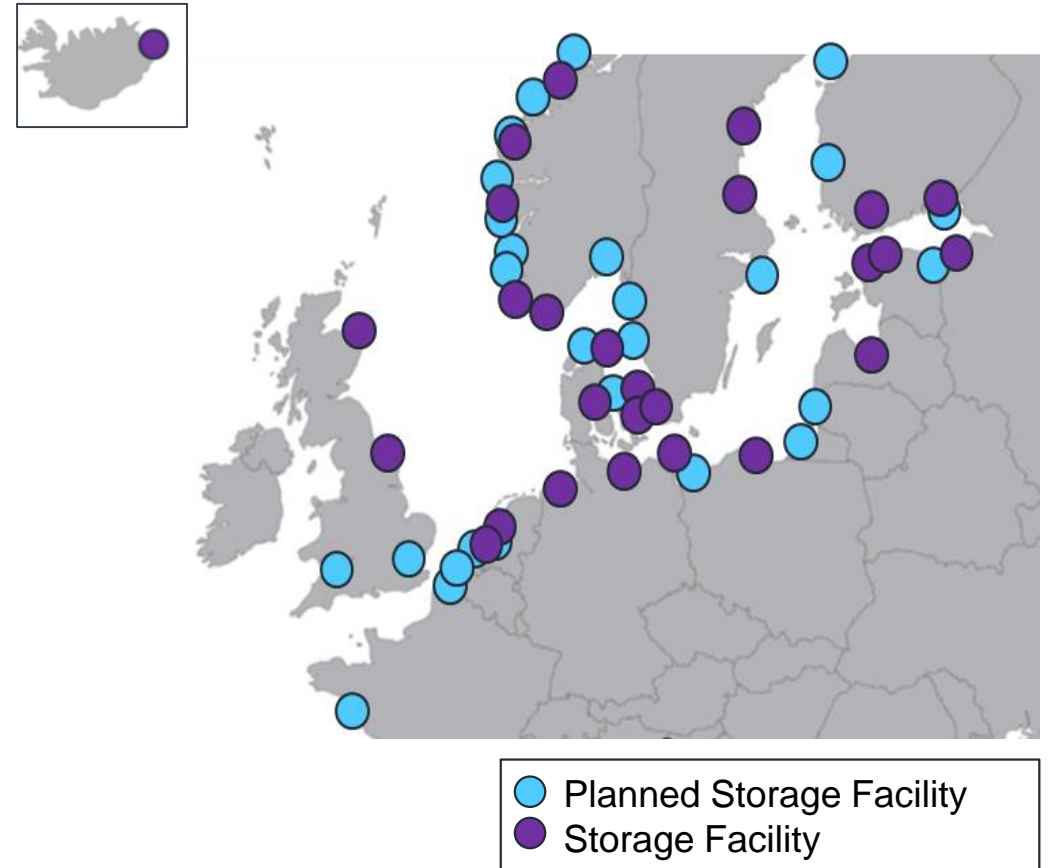
- Many ports have created storage facilities for LNG and bunkering vessels to service LNG fuelled vessels and to import reserves
- Planned and proposed storage facilities populate the region, indicating growing market demand
- Retrofitted scrubber vessels to adapt to IMO 2020, have different requirements for ship maintenance and repair

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### Number of scrubber fitted vessels









## European LNG Storage Facilities



# Conclusion

# Regional Connectivity – Conclusions

## Market summary

- Fleet expansion has given opportunity for Baltic ports to attract direct calls and compete with western Europe for Central Europe market 
- The active developing ports will lead the less organised / developed ports behind. 
- Ports are showing initiatives to attract volumes, breeding healthy competition 
- LNG powered vessels also showing increasing demand 
- Demand for LNG likely to continue as LNG becomes the more attractive 'clean' fuel source in the future 
- Low interest rate environment encouraging investment will not be around indefinitely, prime time for firms to invest 

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