

CCS in the Swedish cement industry – Logistics collaboration potentials in the Baltic area

Vendela Santén, RISE
Baltic Carbon Forum 13th of October 2023

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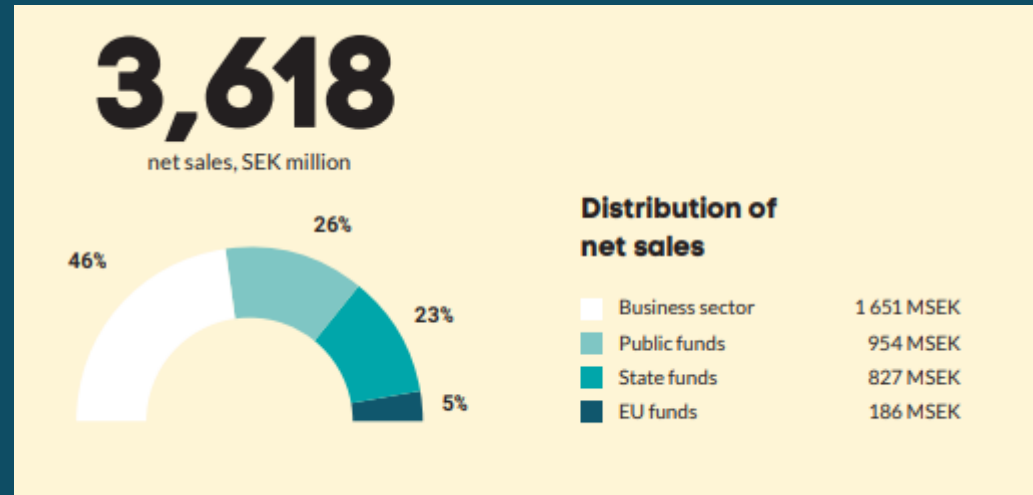
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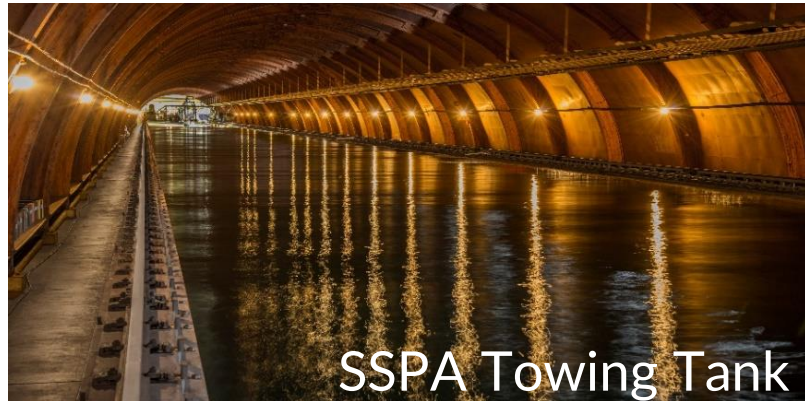


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SSPA Towing Tank



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21 Nationalities
30 PhD



SEAMAN Simulation



SSPA
Databases



SSPA Cavitation Tunnel

+125 dedicated employees | Worldwide network and partnership

Project LoCCS - “Logistics for Carbon Capture and Storage in the cement industry”

The project increases the understanding of the design of a reliable, cost and environmentally efficient logistics system for Carbon, Capture and Storage (CCS) in the Swedish cement industry.



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Project Team



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Background Sweden CCS



Stockholm Norvik Port potential CCS hub in Sweden

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Background Cement industry

- Cement industry in Sweden - 4% of Swedish national CO2 emissions
- CCS important part of the road map towards offering climate positive cement production in Sweden 2030
- Main site in Slite Gotland emits 1,8 Mton CO2/yr



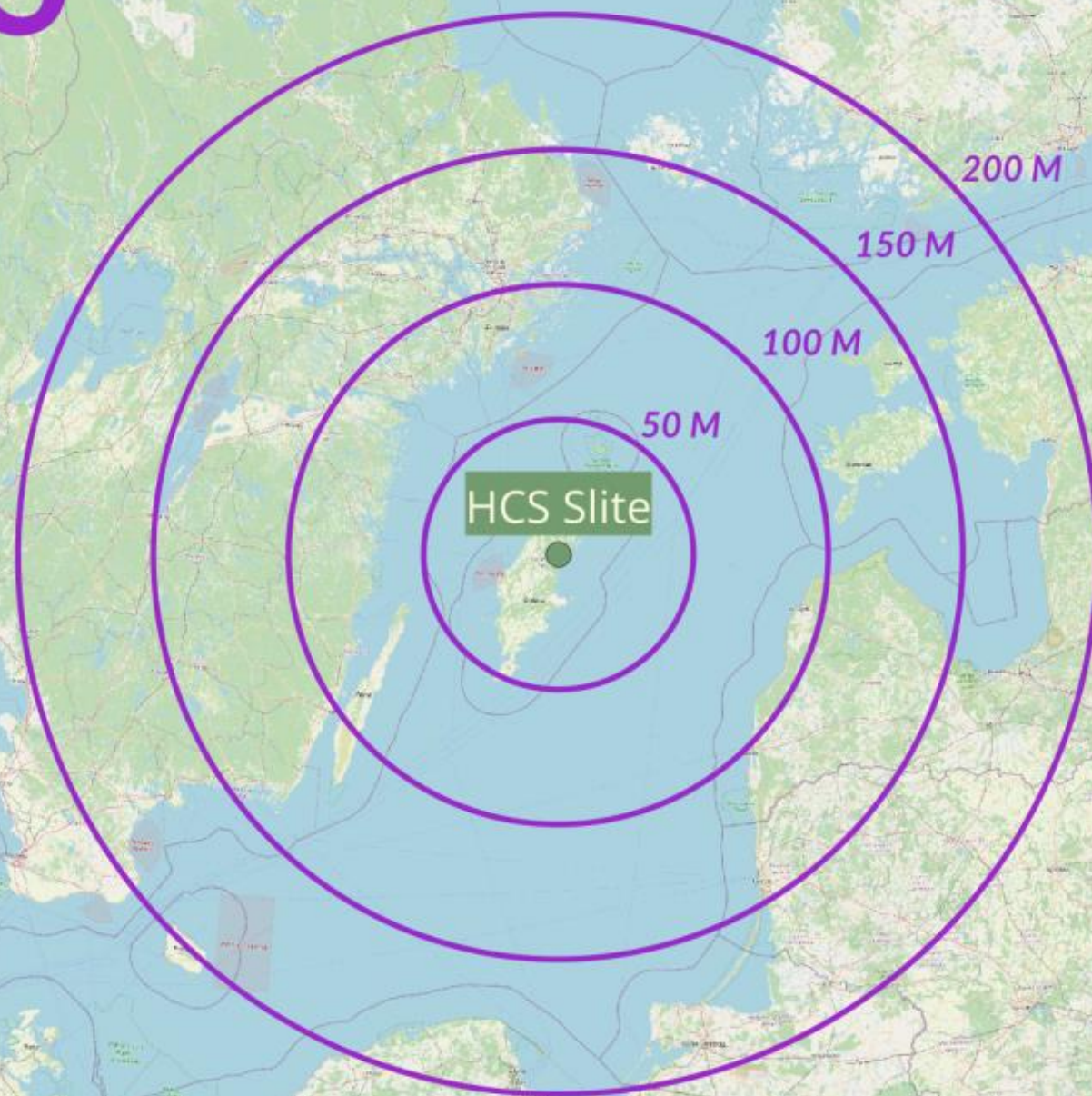
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Areas to cover in the project



Literature review of logistics systems for CCS



Mapping CCS initiatives and actors in the Baltics



CO2 logistics scenarios and operational aspects



Development of zero emission CO2 ships



Business models for the cement industry's CO2 logistics

Some challenges



Literature review of logistics systems for CCS



Mapping CCS initiatives and actors in the Baltics



CO2 logistics scenarios and operational aspects



Development of zero emission CO2 ships



Business models for the cement industry's CO2 logistics

Ultra-fast
development in
this new
innovation
system

Some challenges



Literature review of logistics systems for CCS



Mapping CCS initiatives and actors in the Baltics



CO2 logistics scenarios and operational aspects



Development of zero emission CO2 ships



Business models for the cement industry's CO2 logistics

Direct vs hub-
and-spoke

Many
uncertainties
and ifs...

Some challenges



Literature review of logistics systems for CCS



Mapping CCS initiatives and actors in the Baltics



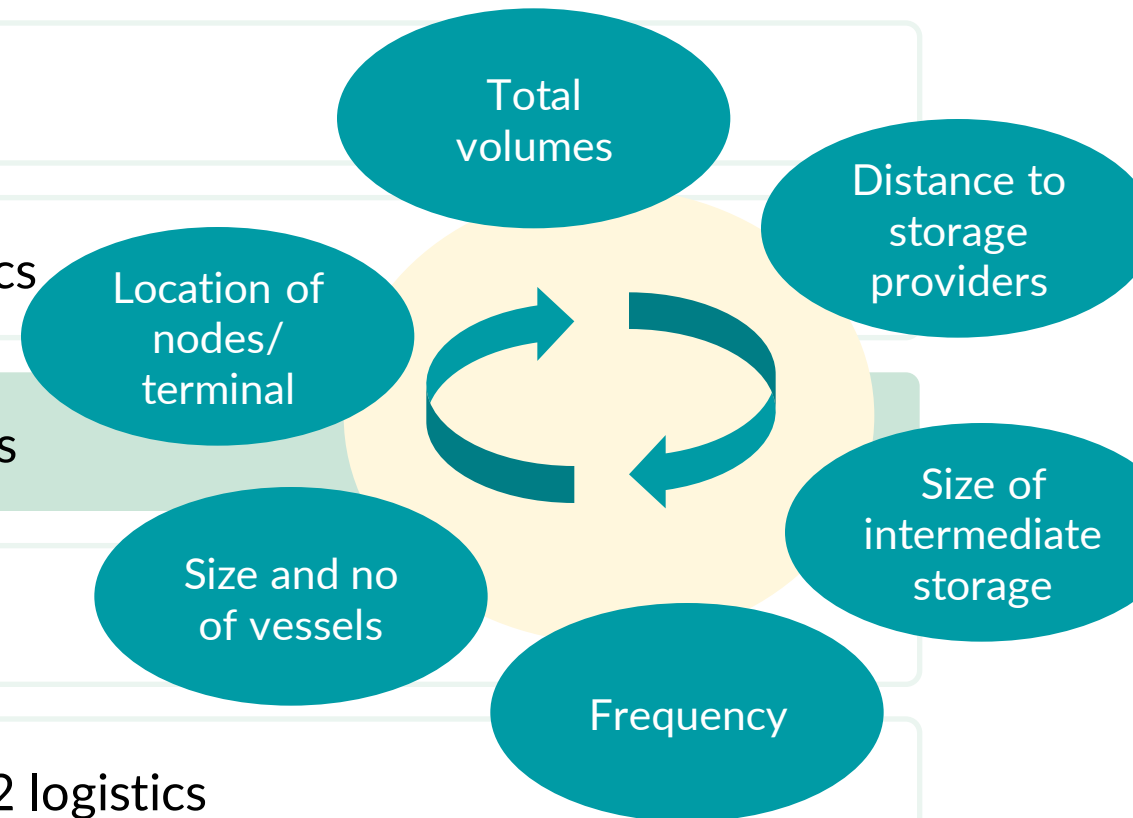
CO2 logistics scenarios and operational aspects



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Development of zero emission CO2 ships



Business models for the cement industry's CO2 logistics

Large investments
– who is paying?

Which role to take

New collaborations

Networking and information sharing



Literature review of logistics systems for CCS



Mapping stakeholders and actors in the Baltics



CO2 scenarios and operational aspects



Development of zero emission CO2 ships



Business models for the cement industry's CO2 logistics

Thank you and to be continued...!

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