

## Cross-Border Collaborative Innovations for Business and Environmentally Sustainable Ports

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VTT Technical Research Centre of Finland



VTT is one of the leading technical research organizations in Europe, and a visionary research and innovation partner for companies and societies.

2,355

1,135

284 M€

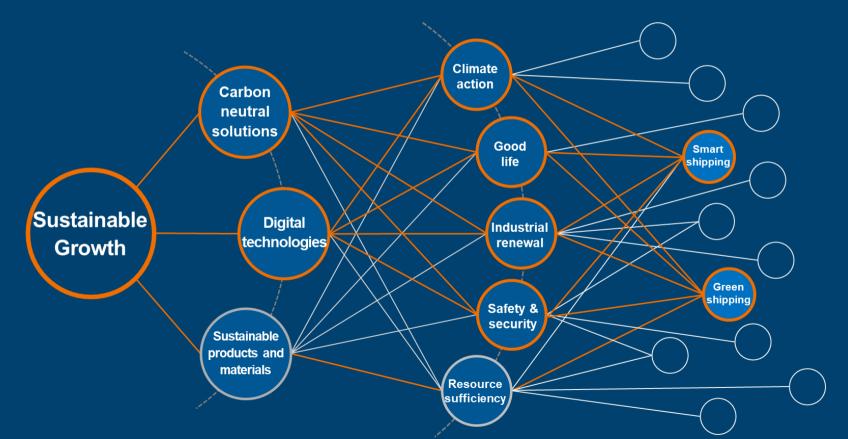
operating income

employees

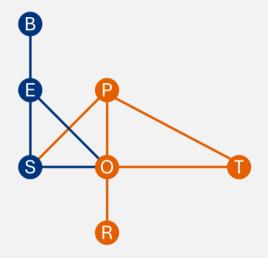
customers



#### VTT goes beyond the obvious



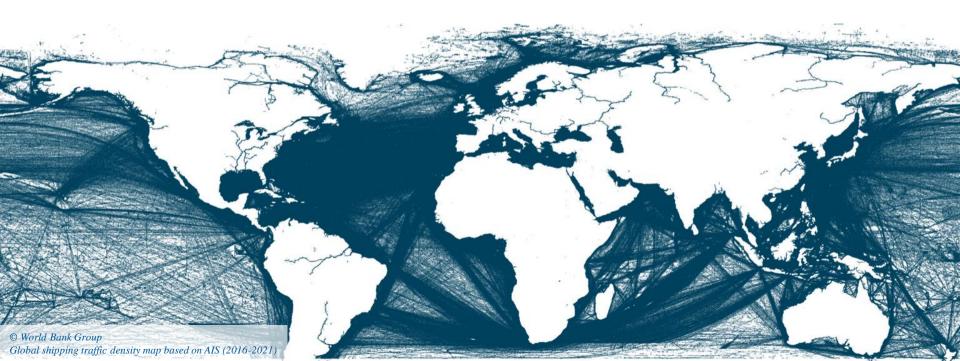




Cross-border collaborative innovations for **Business** and Environmentally Sustainable PORTs

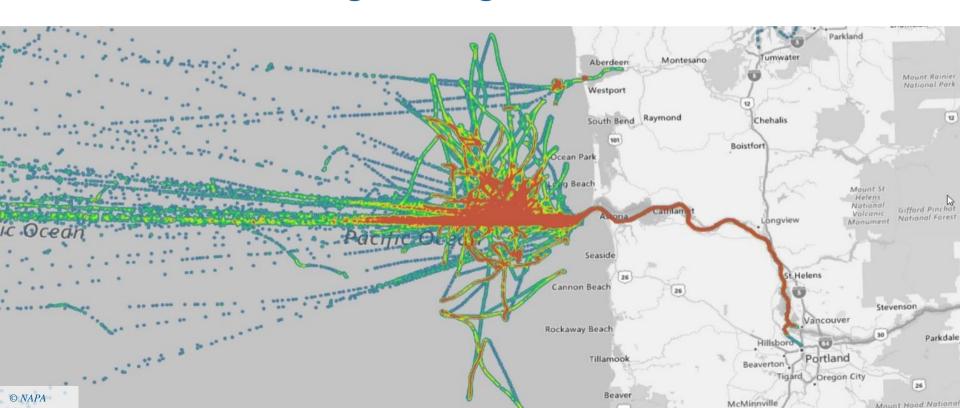


Efficient and cost-effective freight transport requires close collaboration and data sharing across the entire logistics network.





## ... especially true for seaports as the critical nodes and bottlenecks of global logistics network.





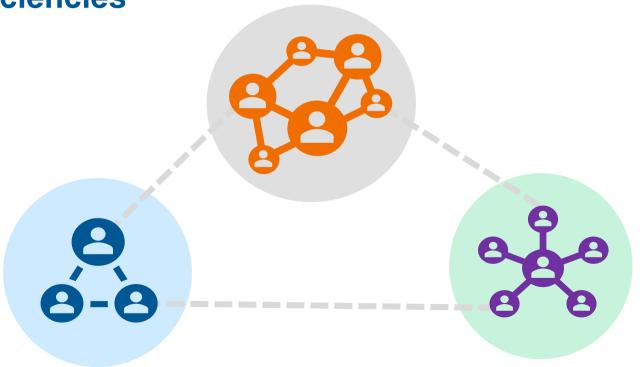
#### Port operation is of a collaborative nature

Port owner Port authority Shipping agence Port operator Ship operator Service provider Labour unions esearch institution **Energy supplier** 

System vendor



Functional silos cause unnecessary complexities & uncertainties, and consequently unnecessary inefficiencies





### Digital transformation can be an enabler, ... but the level of readiness and willingness varies greatly

We have collected a lot of data of our systems, but we don't know how to efficiently use the data



We collaborate with partners, but we don't want to share data, information and knowledge with competitors



We provide digital models & solutions as a service, but struggle to find partners and customers

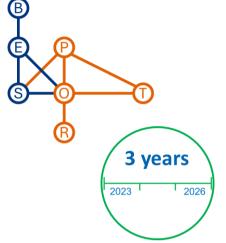




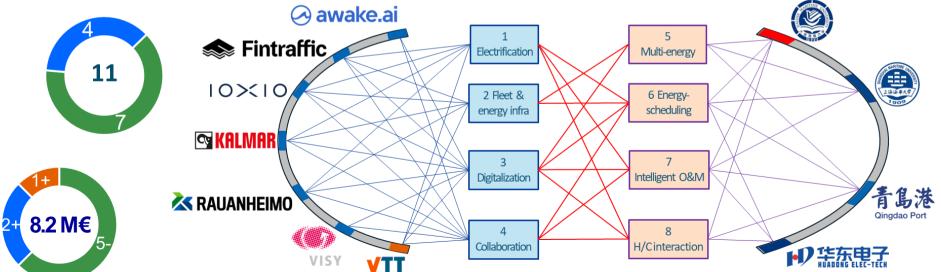
Digitalization, decarbonization and automation are shaping the future of port operation globally





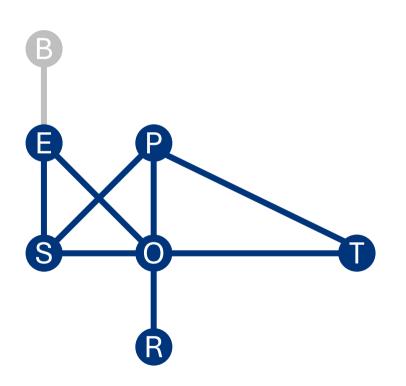


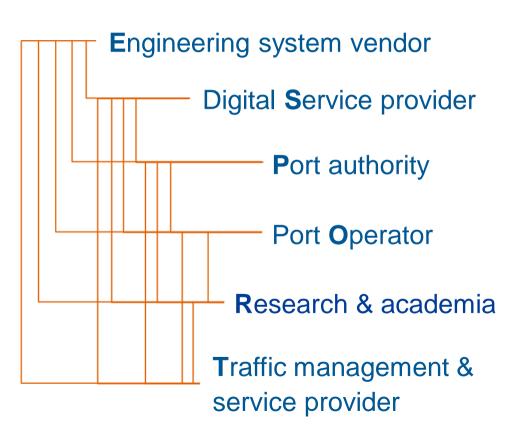
"A Finland-China joint innovation action to address industry's major challenges and need for electrification, digitalization and operational optimization towards smart and green ports."





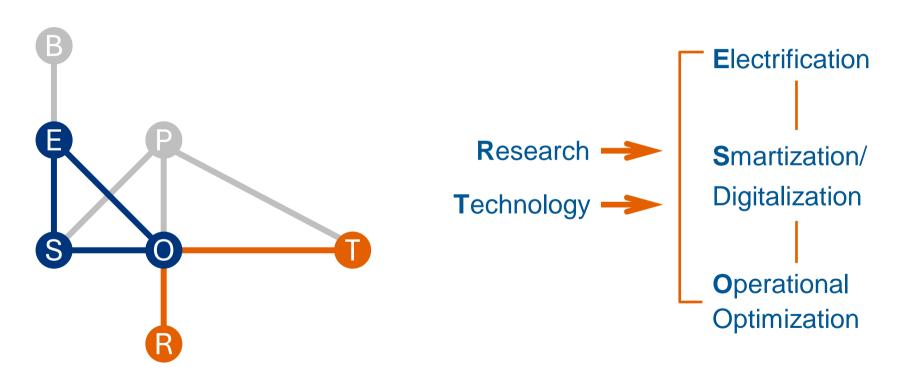
#### **Cross-border collaboration**





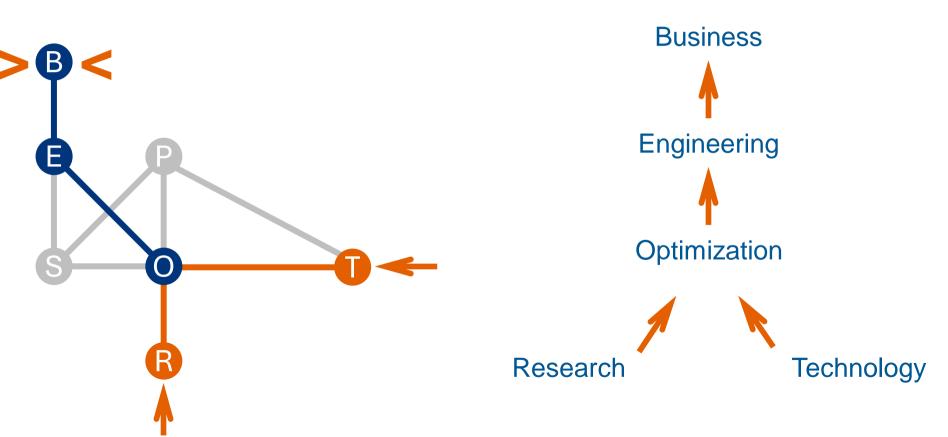


#### **Collaborative innovation**



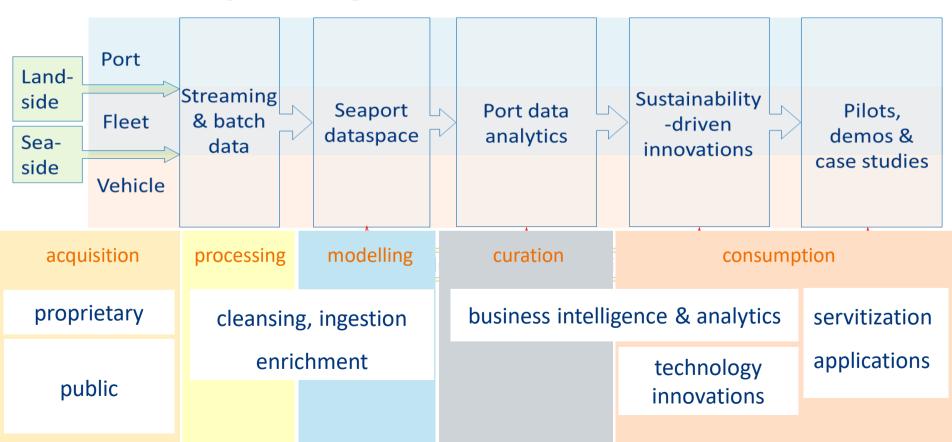


#### **Business exploration**





#### Holistically looking into the entire data pipeline...







# bey<sup>O</sup>nd the obvious

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