Maritime Data Space as an enabler for Virtual Port Arrivals

Contributes to the European Gaia-X common data space initiative

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- What is the challenge?
- How are we solving it?
- Potential of the data space
- Next steps

Climate change & tightening of environmental regulations

Operational efficiency is influence by economic, political, energy, environmental instability

Data standardization and harmonization

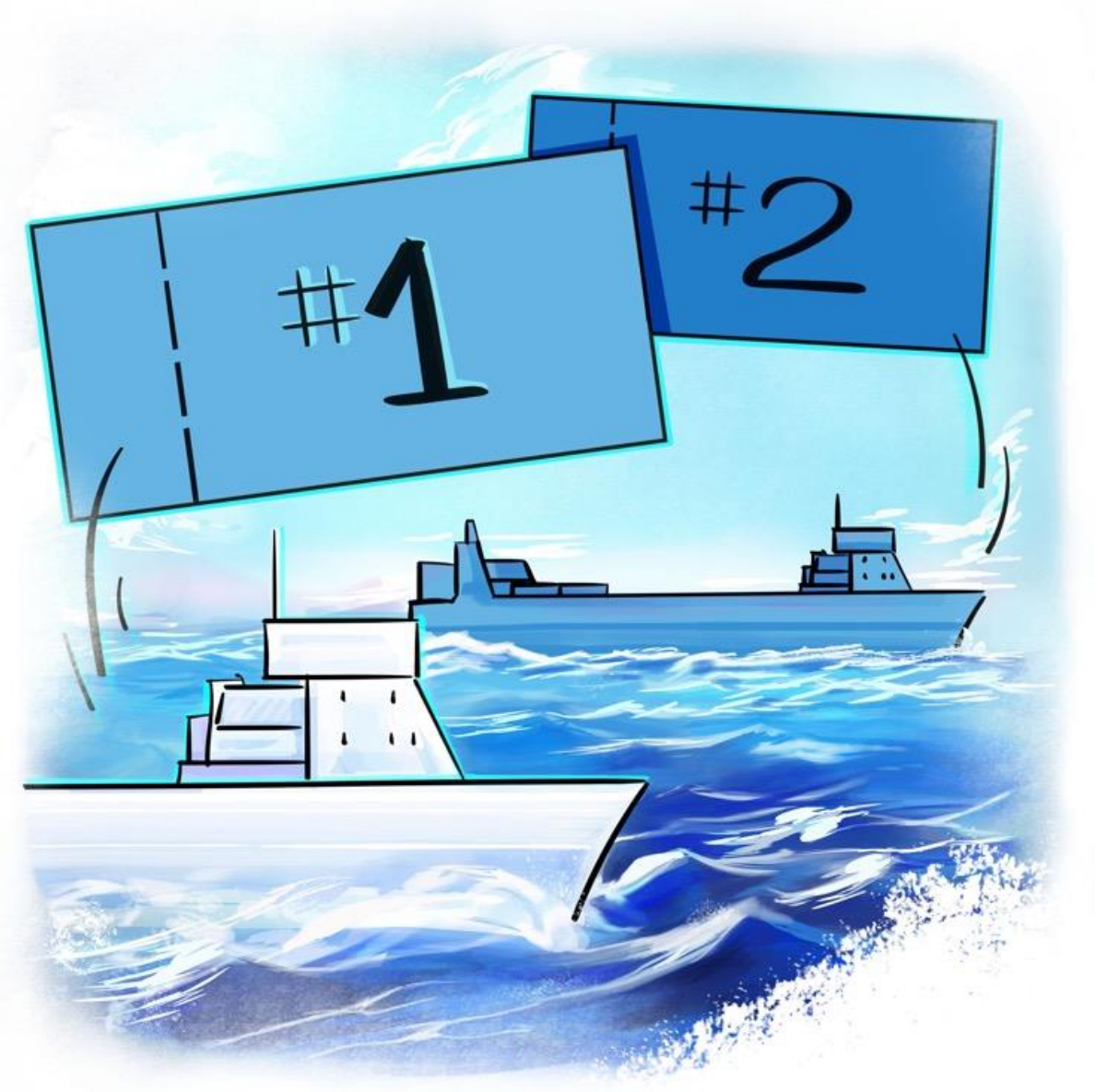
Maritime sector is facing complex challenges

Virtual Port Arrival Concept *- no more “Hurry to wait”*

Allows vessels to lower speed to arrive when the berth is free.

Ensures no loss of place in line without violating contracts.

Shares monetary monetary benefits from the reduced fuel consumption to the parties.



The ship "virtually arrives" at the original scheduled time.

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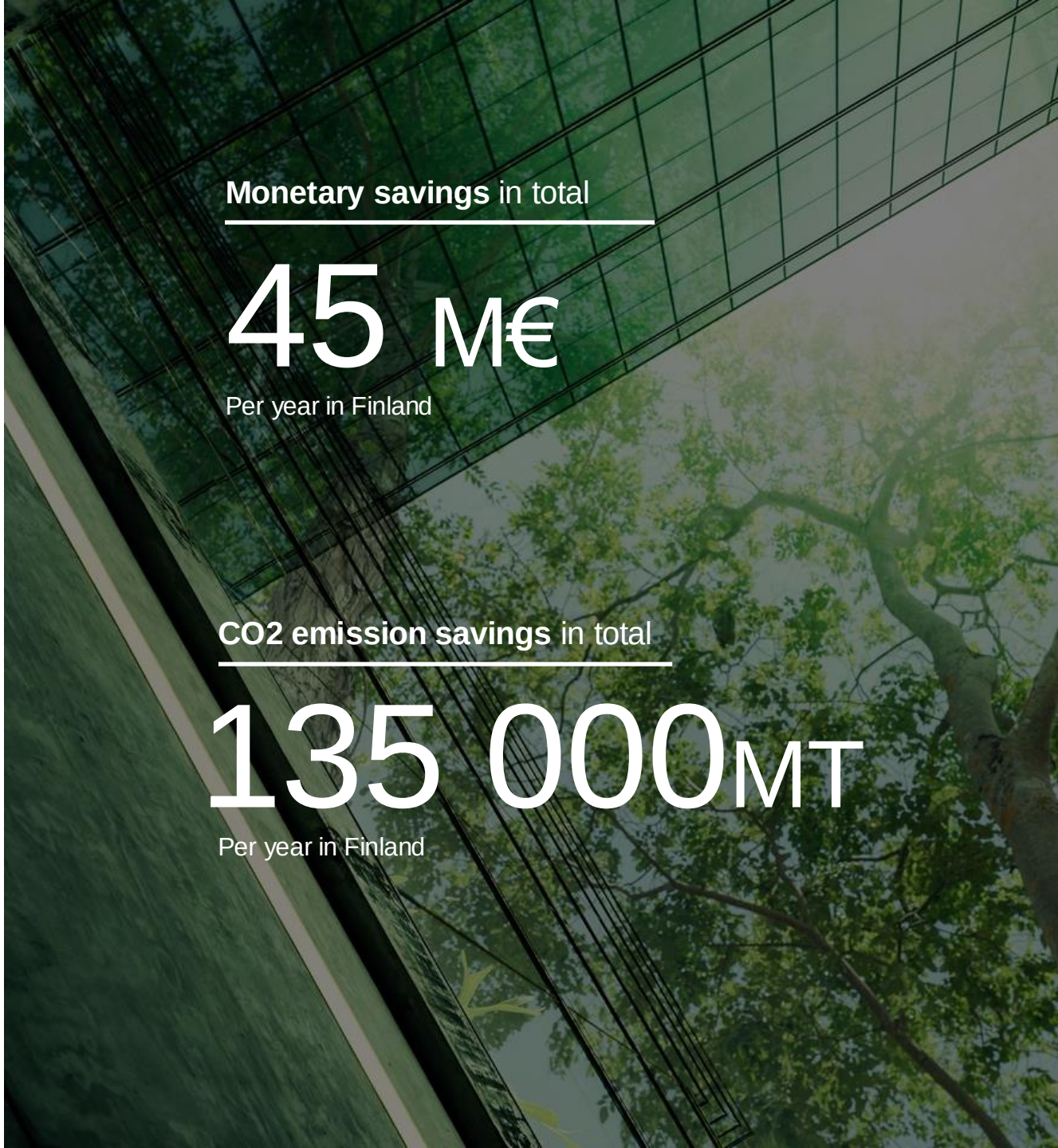
Huge potential in savings

Proven decrease in CO2 emissions by more than 24 %.

Nomination at the Global Green Shipping Challenge at the 27th UN Climate Change Conference (COP27) by John Kerry



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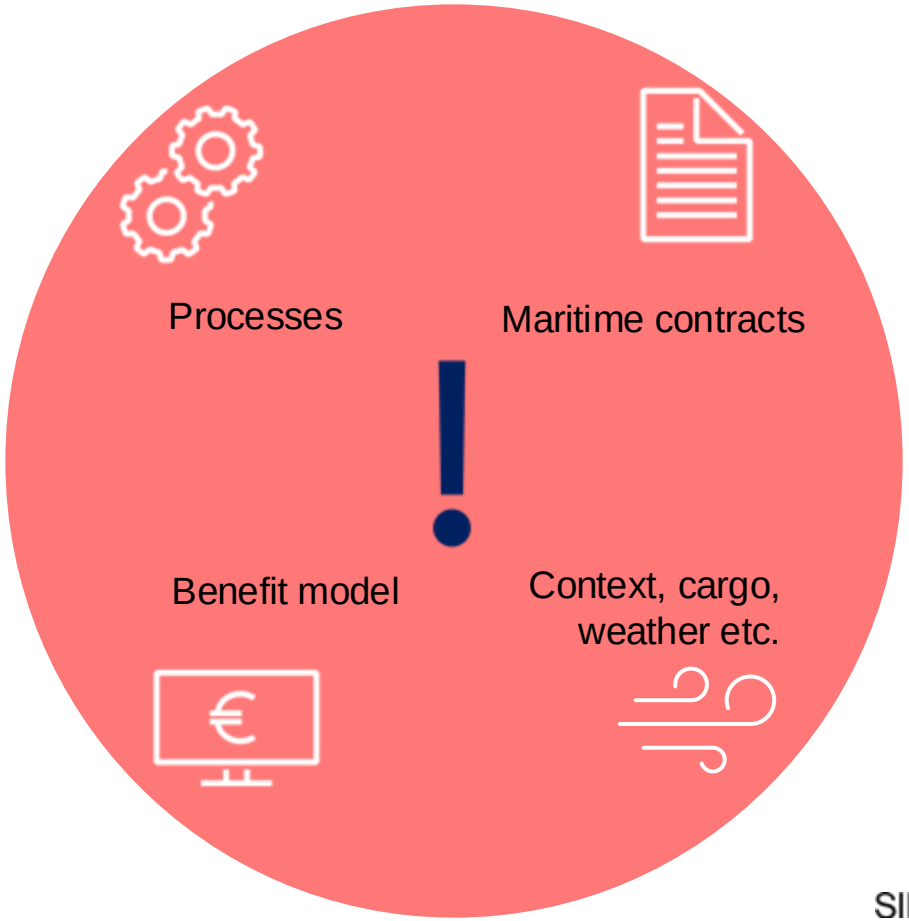
Challenge behind the idea of Virtual Port Arrival

Transforming ”Hurry to wait”

DATA SHARING – ONE OF THE KEY PREREQUISITES



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Maritime Data Space Virtual Port Arrival PoC

To whom:

- for the maritime logistic chain connected to a vessel voyage bonded by contracts

Why:

- to efficiently and safely share data and indicate the will to apply Virtual Port Arrival among logictic chain parties and lower emissions.

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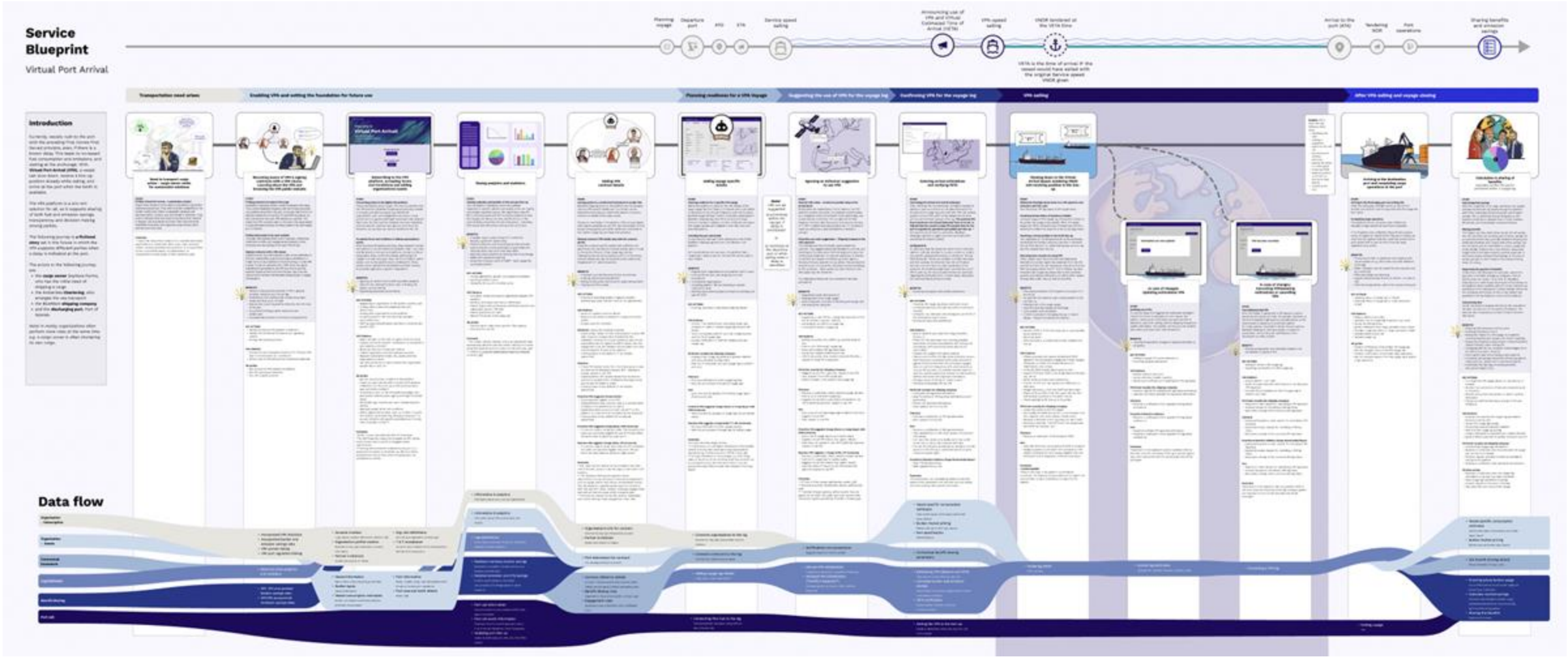
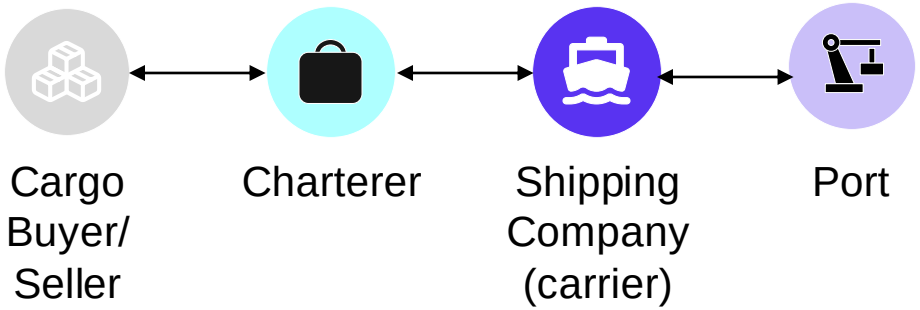
Defining a blueprint and data assets



Siili led the ecosystem building of the Virtual Port Arrival Maritime Dataspace PoC

30 organisations & 50 people



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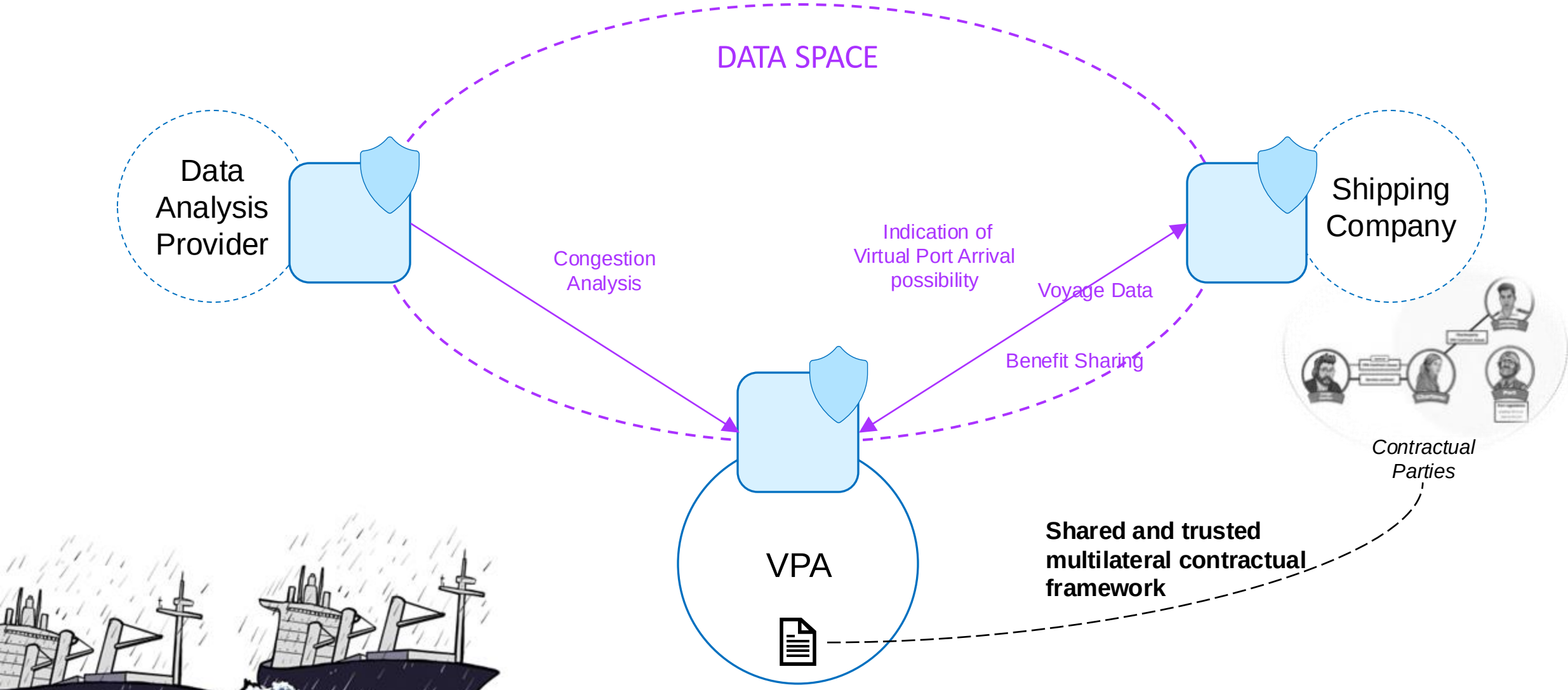
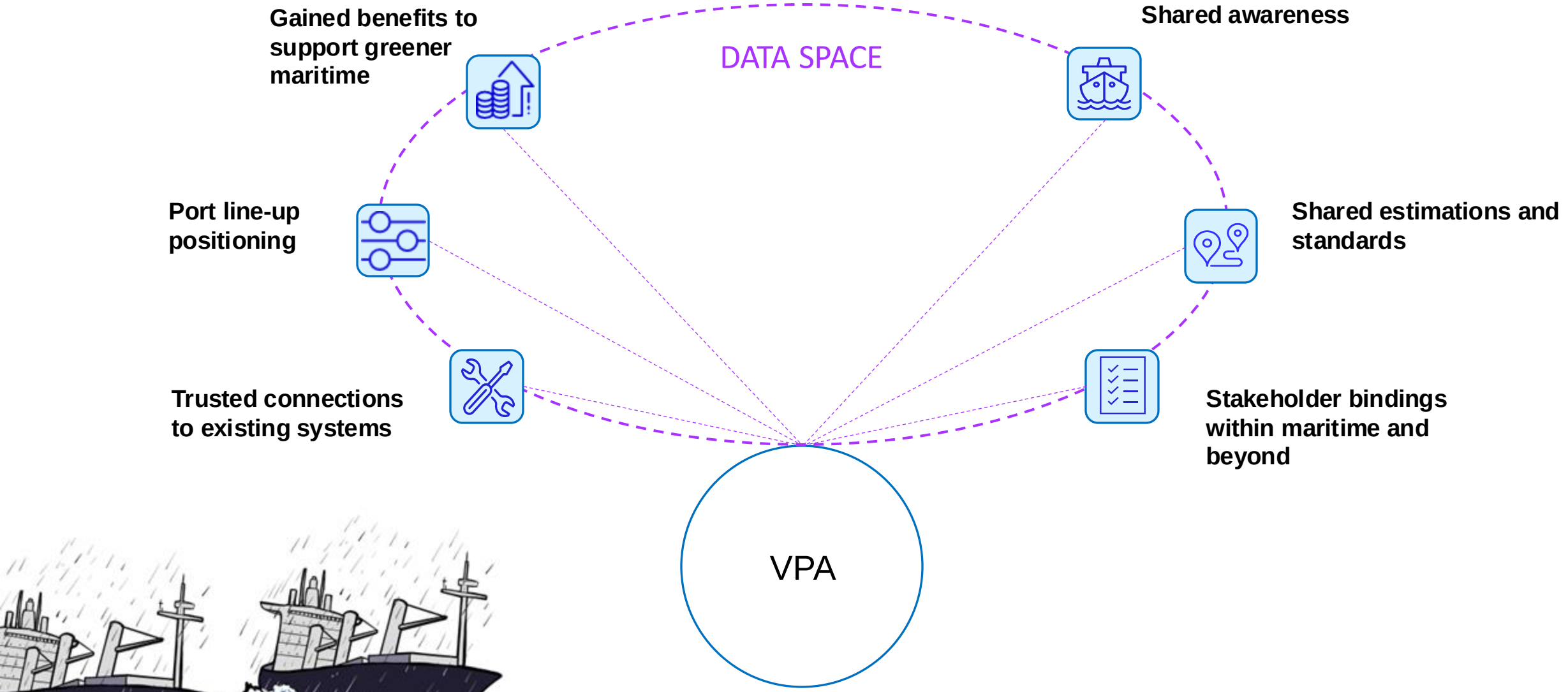
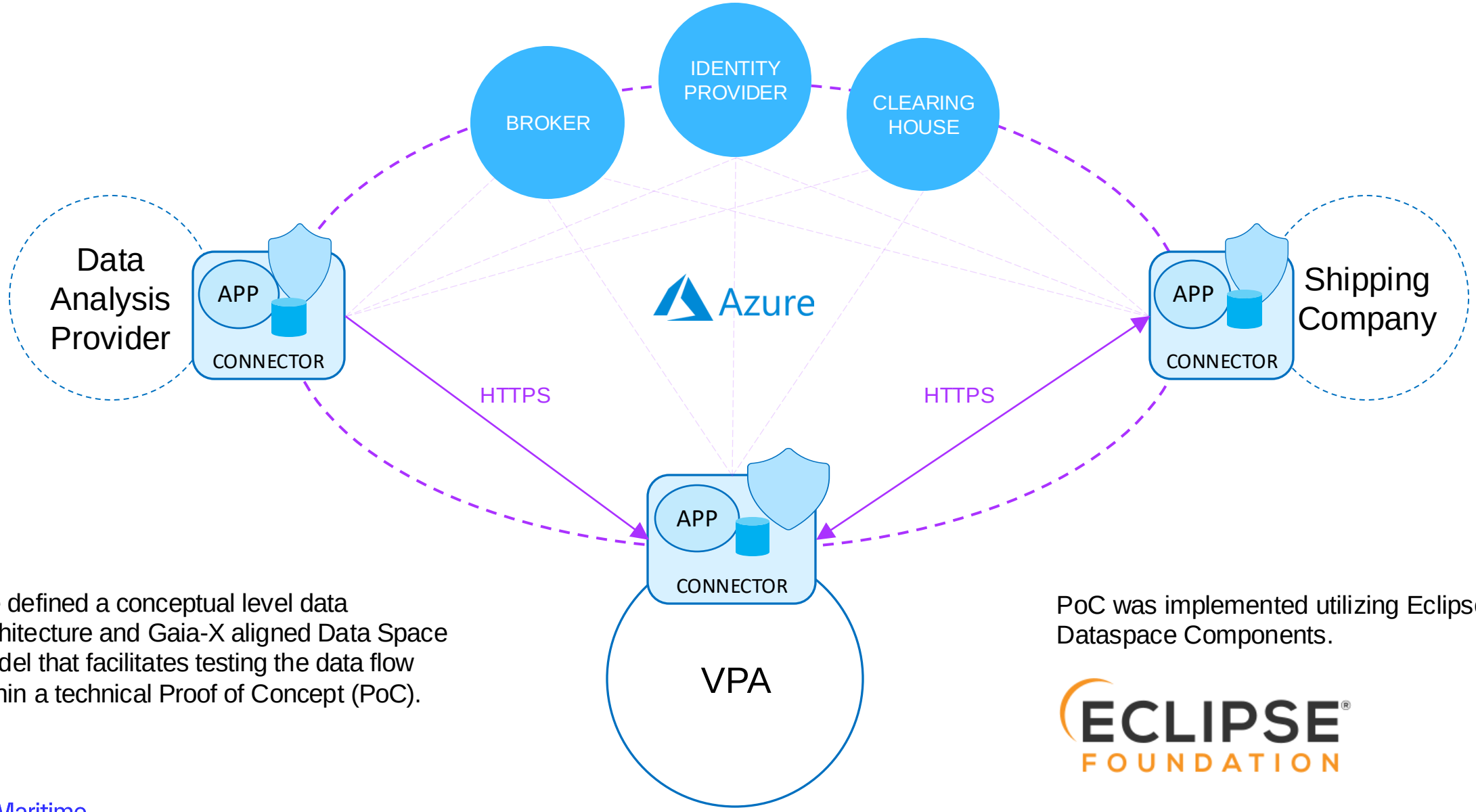
Vision for data spaces as an enabler for VPA



Conceptual possibilities of VPA as a provider to data spaces



PoC implementation



We defined a conceptual level data architecture and Gaia-X aligned Data Space model that facilitates testing the data flow within a technical Proof of Concept (PoC).

PoC was implemented utilizing Eclipse Dataspace Components.

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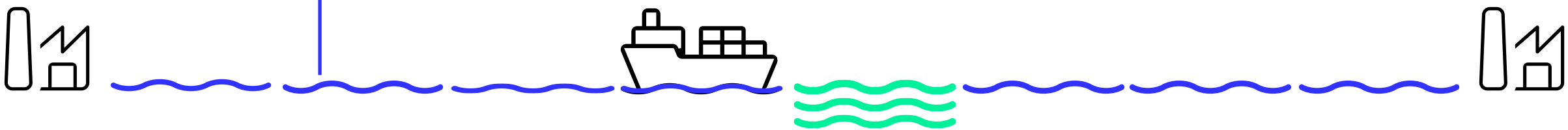
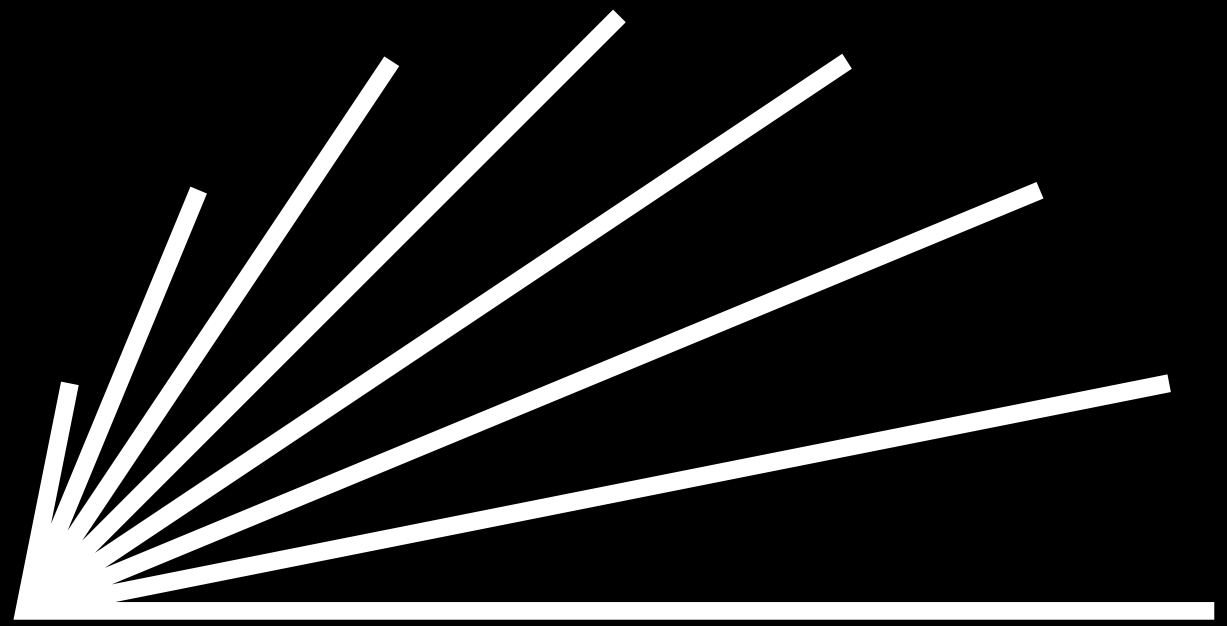
NEXT STEPS – Siili is working together with Fintraffic to gather a consortium for an international Just-In-Time (JIT) streamlining the entire logistics chain.



Virtual Port
Arrival in case
of fallback

TO REMEMBER – Data spaces requires capability to create real-life need-based solutions and lead the ecosystem towards a mutual goal.

This is our passion.



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