

STM POLICY ADVISORY GROUP

FOCUS ON THE FUTURE OF STM



TUESDAY 12 SEPTEMBER 09.00-11.30



Co-financed by the European Union
Connecting Europe Facility



Agenda

09.00-09.10 Welcome

09.10-09.30 STM Services and solutions

09.30-09.45 Projects in pipeline

09.45-10.00 New Project ideas

10.00-10.15 Break

10.15-11.30 STM Governance

- Introduction
- Proposal for a STM Governance Structure
- Discussion

11.30 Closure of the meeting



Co-financed by the European Union
Connecting Europe Facility



09.10-09.30

STM Services and Solutions



Co-financed by the European Union
Connecting Europe Facility



STM Validation Project

Partnership: 38 beneficiaries
from 13 countries
Total budget: appr.43 million euro
EC contribution: 50%
Time frame: 2015-2018



Co-financed by the European Union
Connecting Europe Facility



STM TEST-BEDS

- 300 ships
- 13 ports
- 5 shore centers



Ports:

Göteborg, Umeå, Vaasa, Oslo, Bergen, Stavanger, Valencia, Limassol, Civitavecchia, La Spezia, Naples, Venice, Genoa.



Shore Centers:

Göteborg, Tarifa, Horten, Kvitsøy, Aarhus, Karup, Åbo.

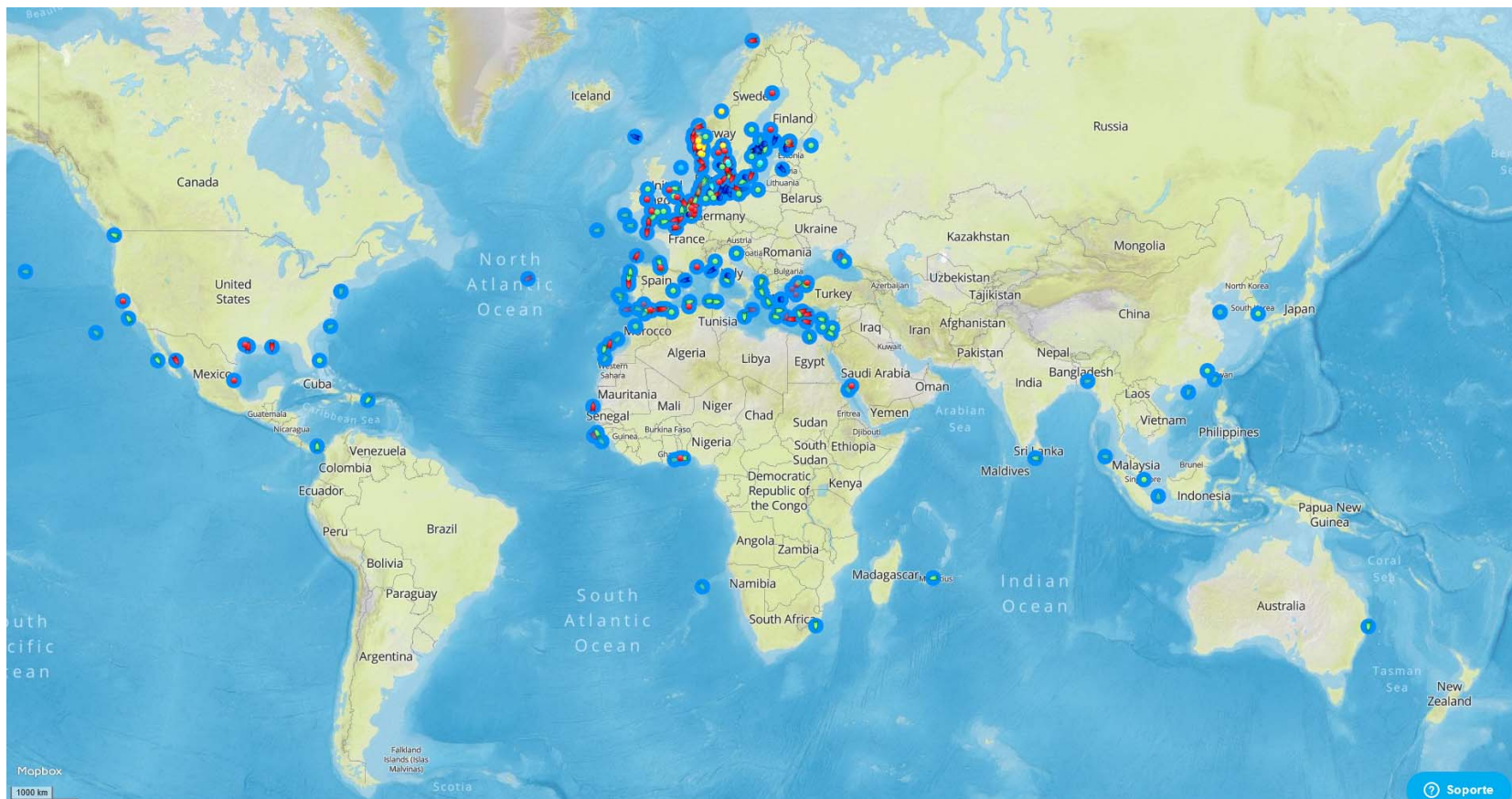


Co-financed by the European Union
Connecting Europe Facility

May 2017



GLOBAL POSITION 25TH MAY 2017 – 272 STM VESSELS

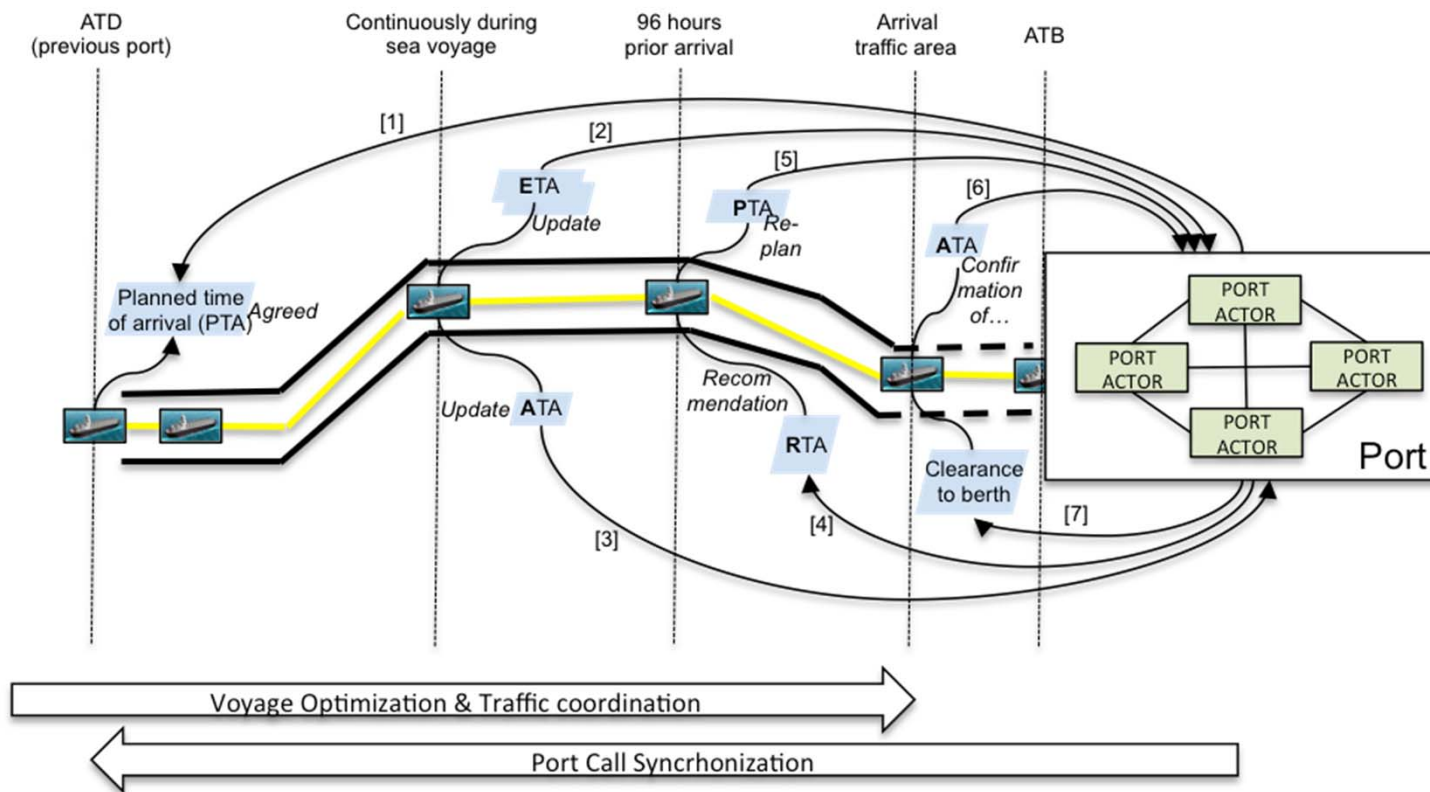


Source: marinetraffic



Co-financed by the European Union
Connecting Europe Facility

Episodic tight coupling...

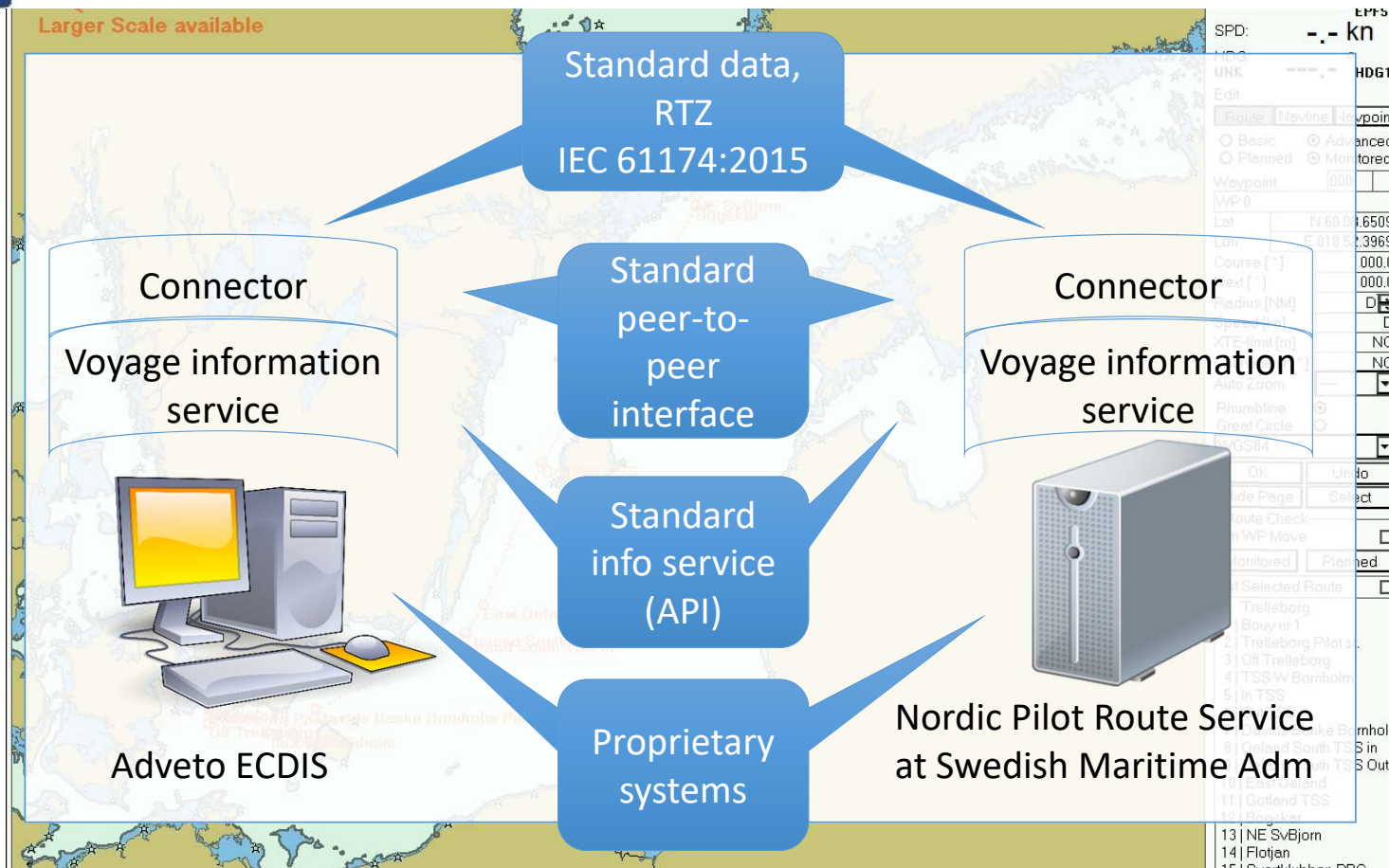


...requires global standards

- System-Wide Information Management
- Builds on the Maritime Cloud
- Backbone for information sharing and service distribution/discovery
- Distributed approach
- Standardized information services and communication protocols

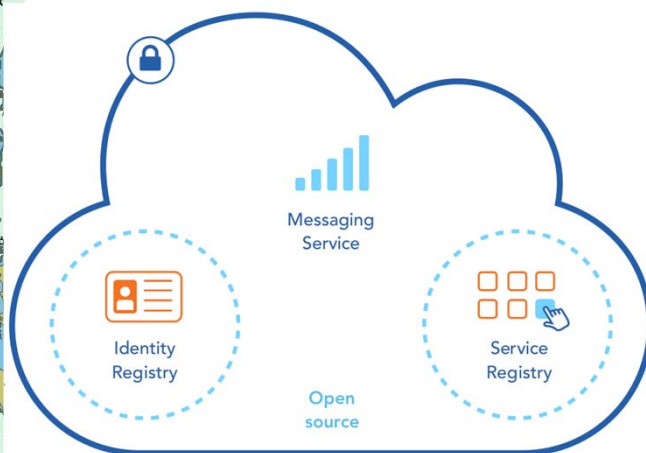


STM architecture enabling E-navigation...



...built on the Maritime Cloud

- authentication and identity management
- discovery of identities and services





MSP 1 VTS (wider context)

Ships can easily optimize routes using different service providers, based on standardized exchange of voyage plans



Information needs

- Ships identification/UVID
- Route (Waypoints/Schedule/ETAs and Destination)
- Draught
- Fuel type
- Block coefficient
- Dimensions (Length, beam)
- Speed-to-power profile
- Max Sign Wave height
- Speed/Apparent wind direction speed reducing ratio
- XYZ.... (Additional fields anticipated to be needed in long-term...)

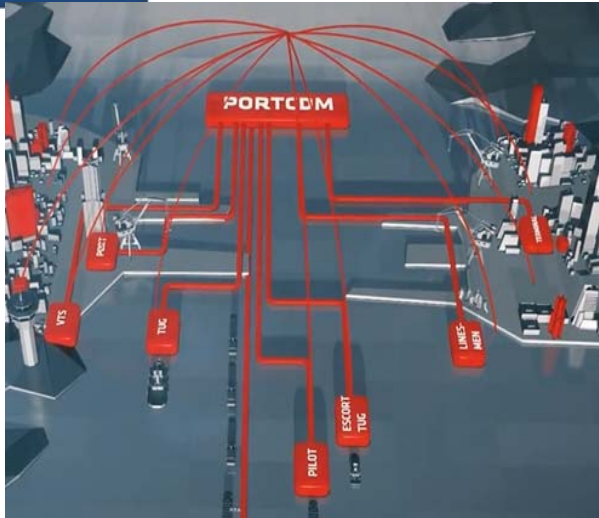
Use case/functions to be supported

1. The route is shared to a service provider for optimisation.
2. The service provider alter the route as to their calculations.
3. The optimised route is send back to the ship.
4. The Master/OOW decides upon changing route or not



Co-financed by the European Union
Connecting Europe Facility

MSP 4 Local Port Service



Ports in the test-bed can collaborate with participating ships exchanging information about arrival/departure times

Information needs

- Unique Voyage Id (UVID)
- Ship name
- Call sign
- POS, SOG
- ETA/RTA/PTA/ATA
- More information is needed in ports.
Specified in act 1 (draft port call message format)

Use case/functions to be supported

1. Due to tugboat shortage arrival port sends new RTA to ship, ship updates it's voyage plan, ship automatically "sends" new PTA and ETA to port
2. Due to severe weather, ship sends new RTA, port replies with confirmation/rejection, ship updates it's voyage plan and automatically sends new PTA and ETA to port
3. Due to Pilot shortage departure is delayed, as a consequence a new ETD and PTA is sent



Co-financed by the European Union
Connecting Europe Facility



MSP 13 Ice Navigation Service

Directions transmitted directly to ships navigation system.

Icebreakers services and assisted ships automate procedures.



Information needs

- Ship name
- Call sign/UVID
- POS, SOG, COG,
- Route (Waypoints/Schedule/ETAs and Destination)
- Text message
- Past Track
- Risk factor for delays (in text message function?)

Use case/functions to be supported

1. Ship with destination in ice infested waters share route/voyage plan with Icebreaking service (ICEINFO). ICEINFO send route proposal and instructions (text) to ship before entering the ice or before leaving an ice-port.
2. Icebreaker send route and instructions (text) to ship. If possible icebreakers "past track" is transformed to a route.
3. If escort assistance icebreaker sends a Requested Time of Arrival (RTA) to a flow/rendezvous waypoint, ship updates its voyage plan and send new PTA and ETA to rendezvous/flow point to Icebreaker.
4. When ship is assisted PTA (incl. risk factor) is given by Icebreaker to ship. Ship updates its voyage plan and new PTA is updated to stakeholders in final port

Co-financed by the European Union



Connecting Europe Facility



Route exchange will be used in SAR operations by Swedish MRCC and SAR-units as a means of distributing search areas, search patterns or MOB-positions.



- ### Use case/functions to be supported

- 

Co-financed by the European Union
Connecting Europe Facility



MSP 6 Pilotage Services

We are launching a
Nordic Pilot Route Service

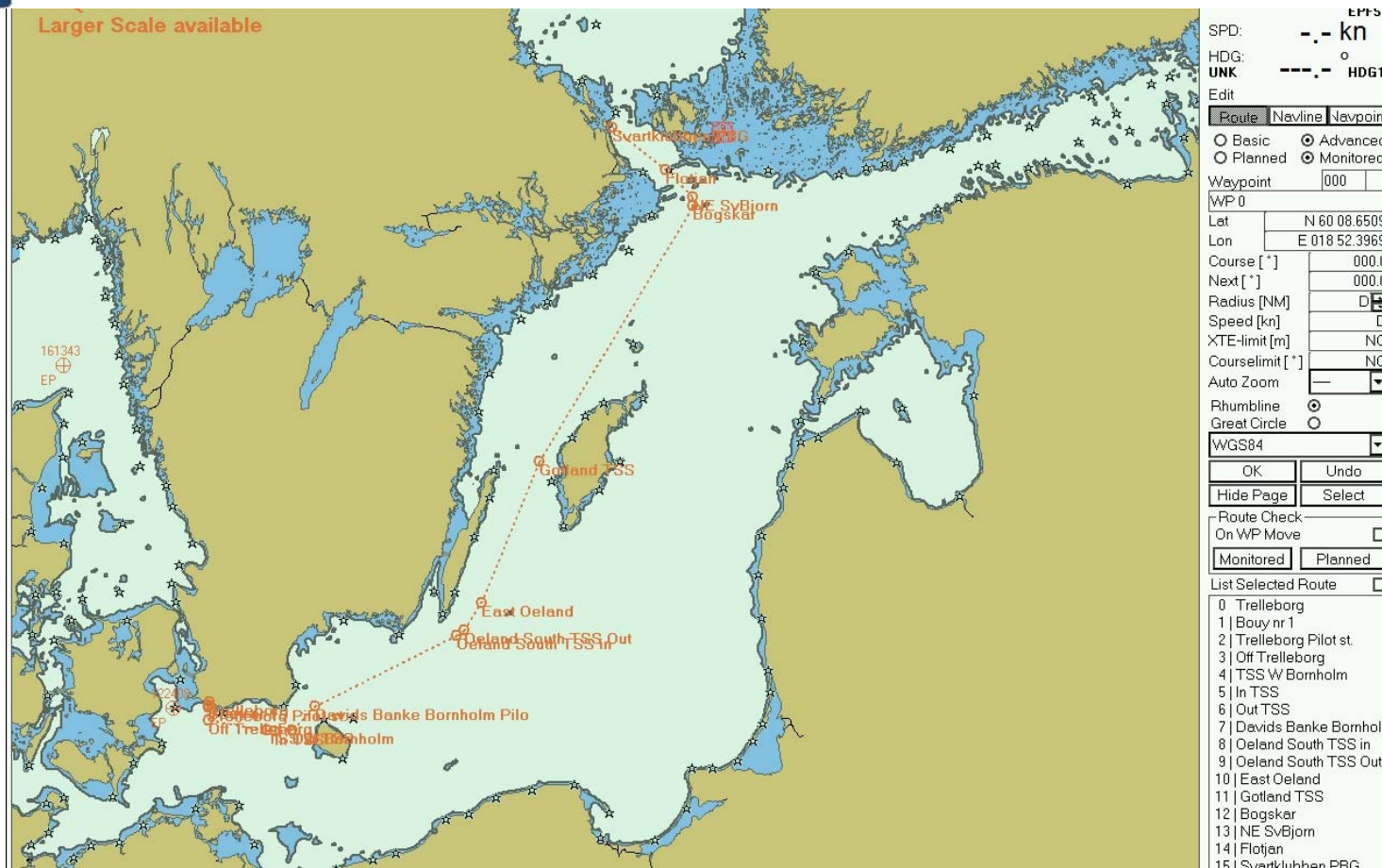
Let's have a peek!



Co-financed by the European Union
Connecting Europe Facility



A voyage plan in ECDIS



Imagery: Adveto AB



Co-financed by the European Union
Connecting Europe Facility

Service call Pilot Routes

STM Module - Cinderella

VIS SPIS

Voyage Plans Services Identities Ar

Actual Voyageplan

UVID urn:mrn:stm:voyage:id:a

Route Status 1 Original

Call Service with VP Nordic Pilot Route Service

Published VP:s

UVID	Status	Published
urn:mrn:stm:voyage:id:adveto:20298-Trelleborg-Svartklubben-20170425	1	2017-04-25 17:59:51

Received VP:s

UVID

urn:mrn:stm:voyage:id:s

urn:mrn:stm:voyage:id:t

Received VP:s

UVID

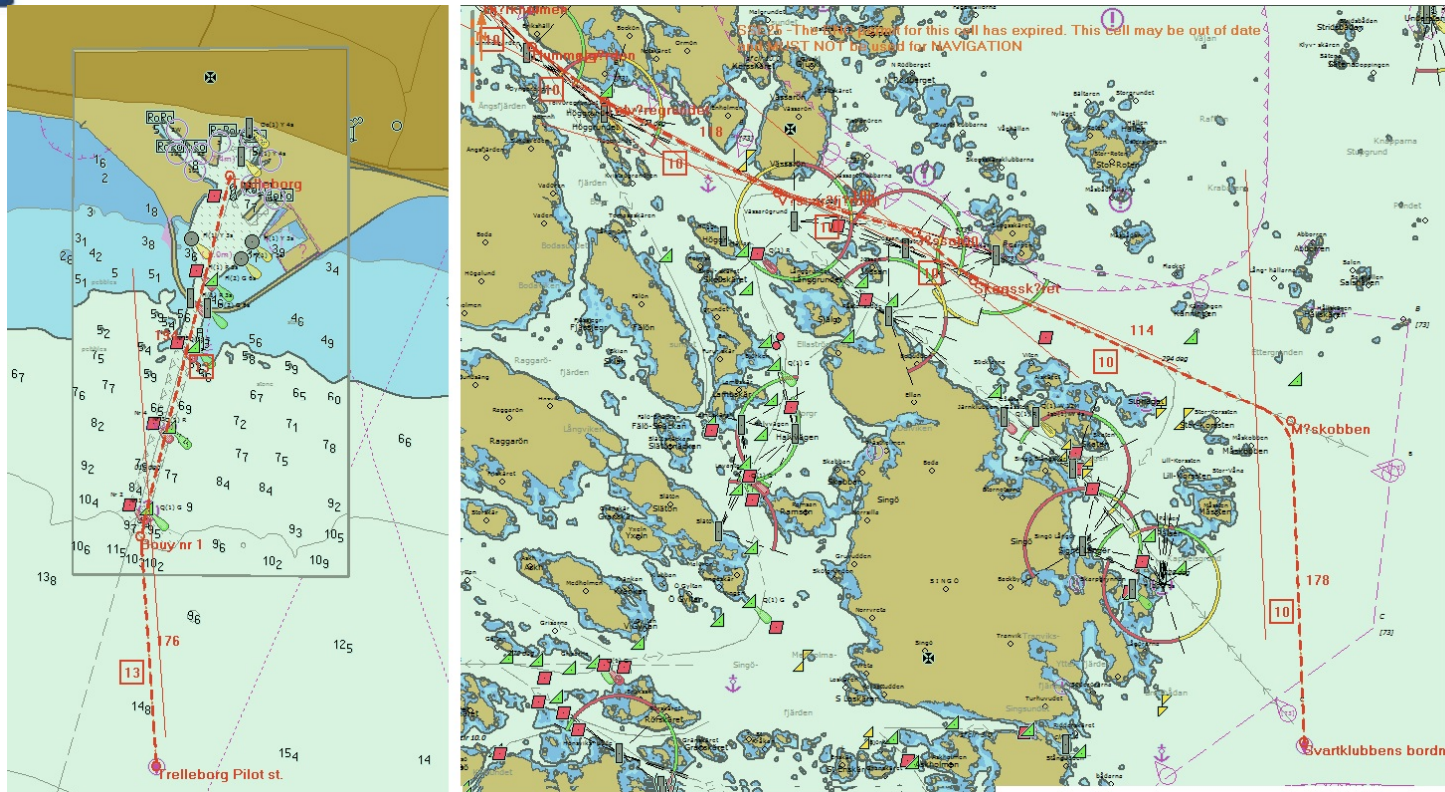
urn:mrn:stm:voyage:id:svartklubben:001

urn:mrn:stm:voyage:id:trelleborg:001

Imagery: Adveto AB



Pilot routes displayed in ECDIS...



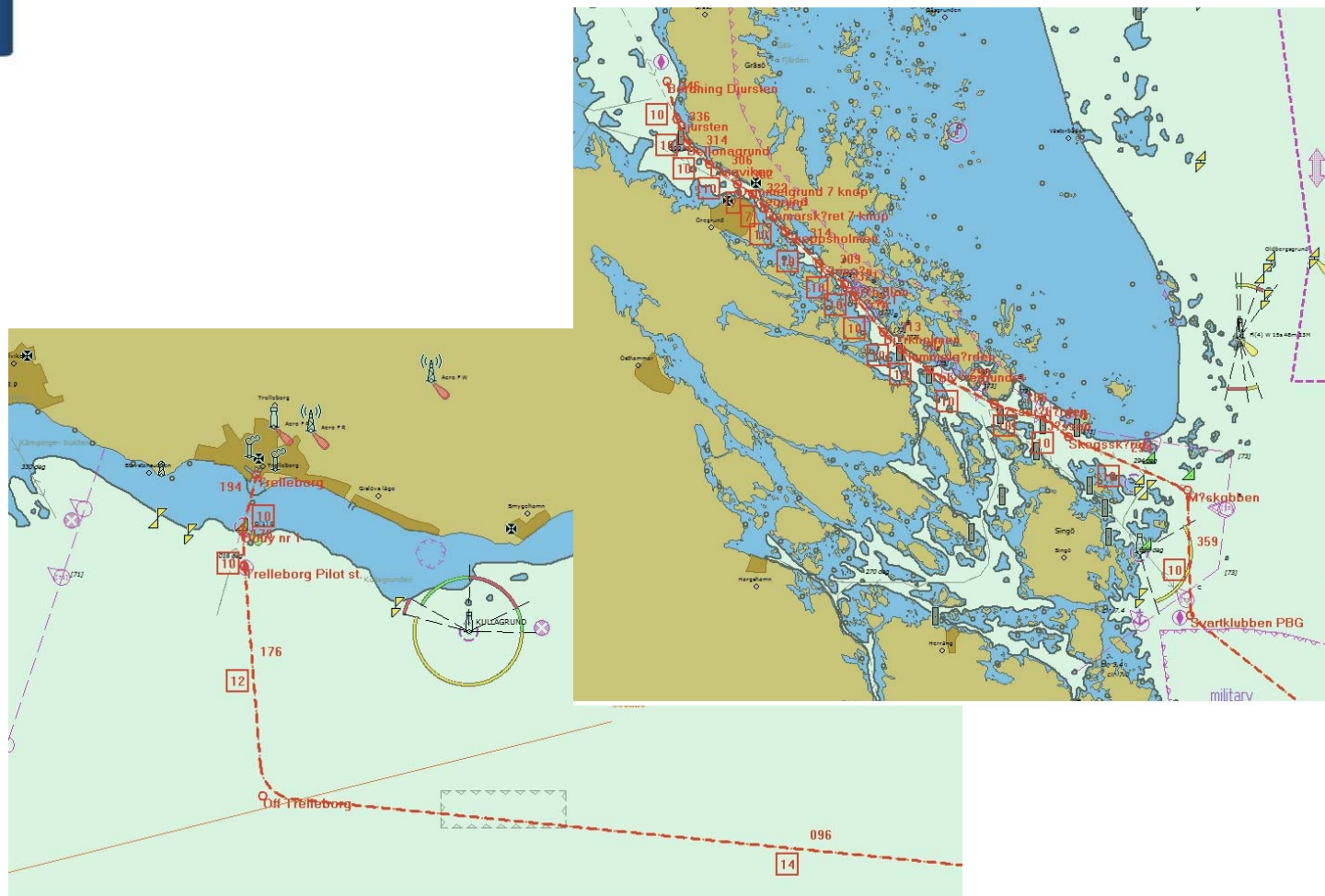
Imagery: Adveto AB



Co-financed by the European Union
Connecting Europe Facility



...merged with voyage plan



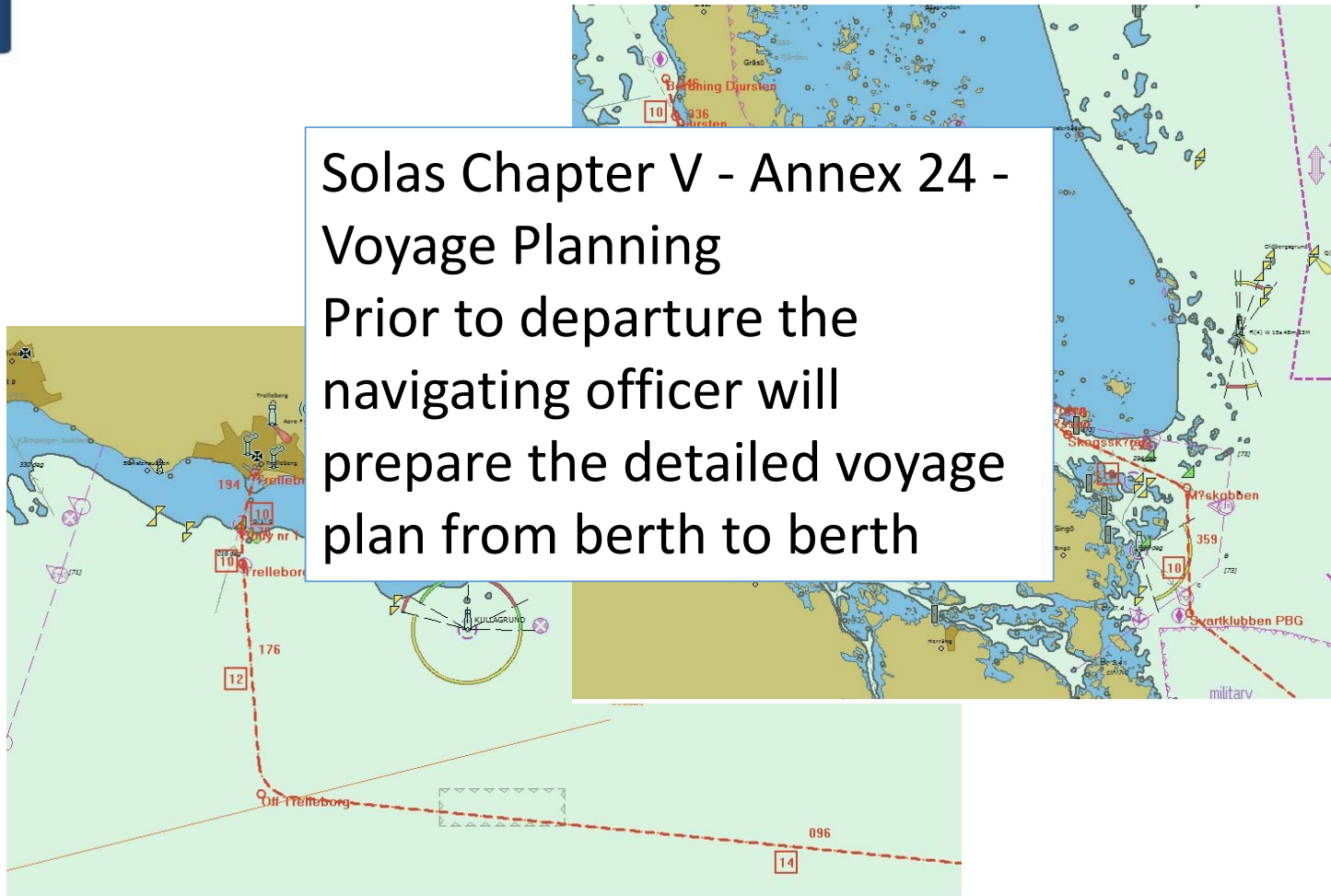
Imagery: Adveto AB



Co-financed by the European Union
Connecting Europe Facility

...merged with voyage plan

Solas Chapter V - Annex 24 -
Voyage Planning
Prior to departure the
navigating officer will
prepare the detailed voyage
plan from berth to berth



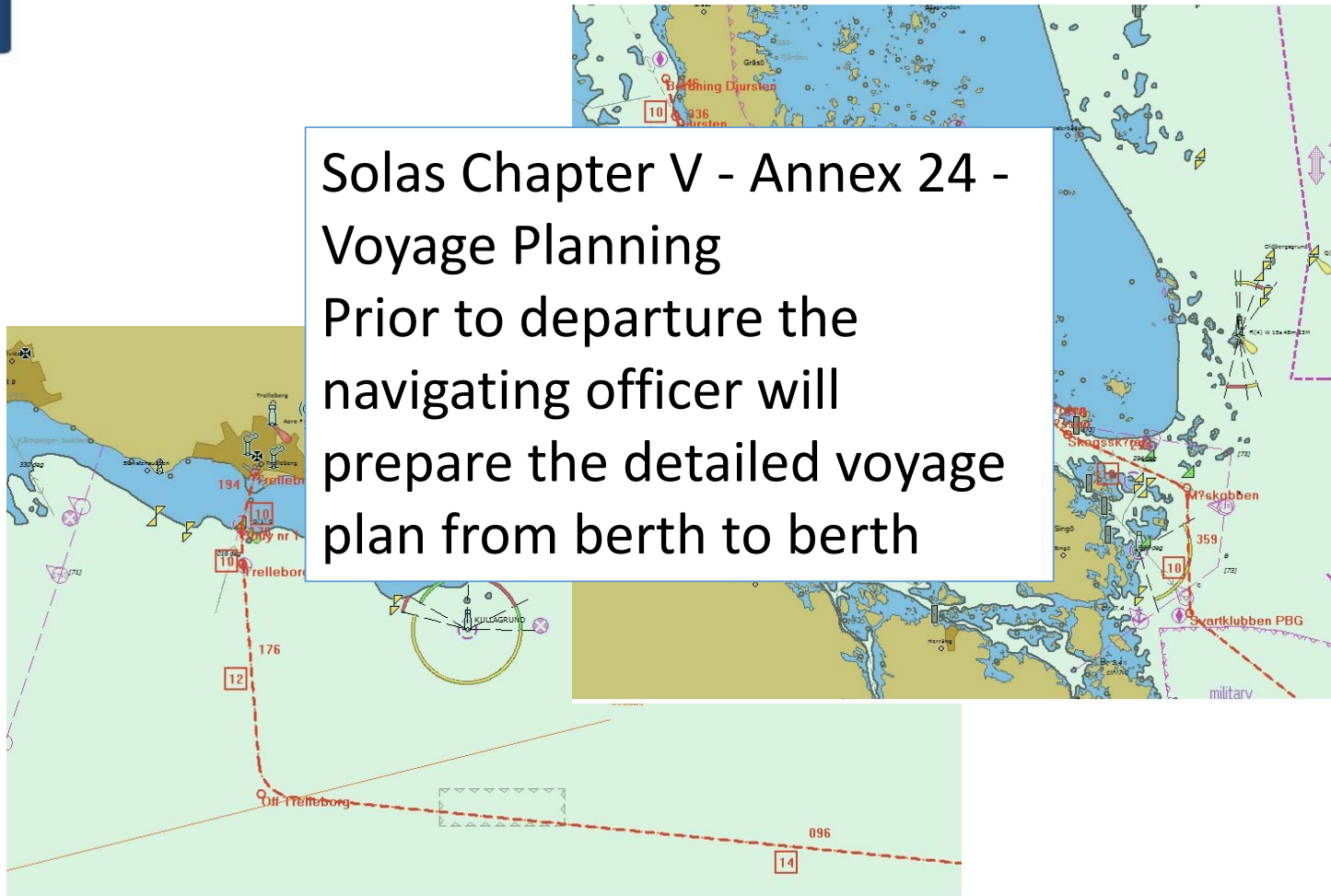
Imagery: Adveto AB



Co-financed by the European Union
Connecting Europe Facility

...merged with voyage plan

Solas Chapter V - Annex 24 -
Voyage Planning
Prior to departure the
navigating officer will
prepare the detailed voyage
plan from berth to berth



Imagery: Adveto AB



Co-financed by the European Union
Connecting Europe Facility



09.30-09.45

Projects in pipeline



Co-financed by the European Union
Connecting Europe Facility



SMART NAVIGATION PROJECT
WIDER CONNECTION SAFER NAVIGATION

+

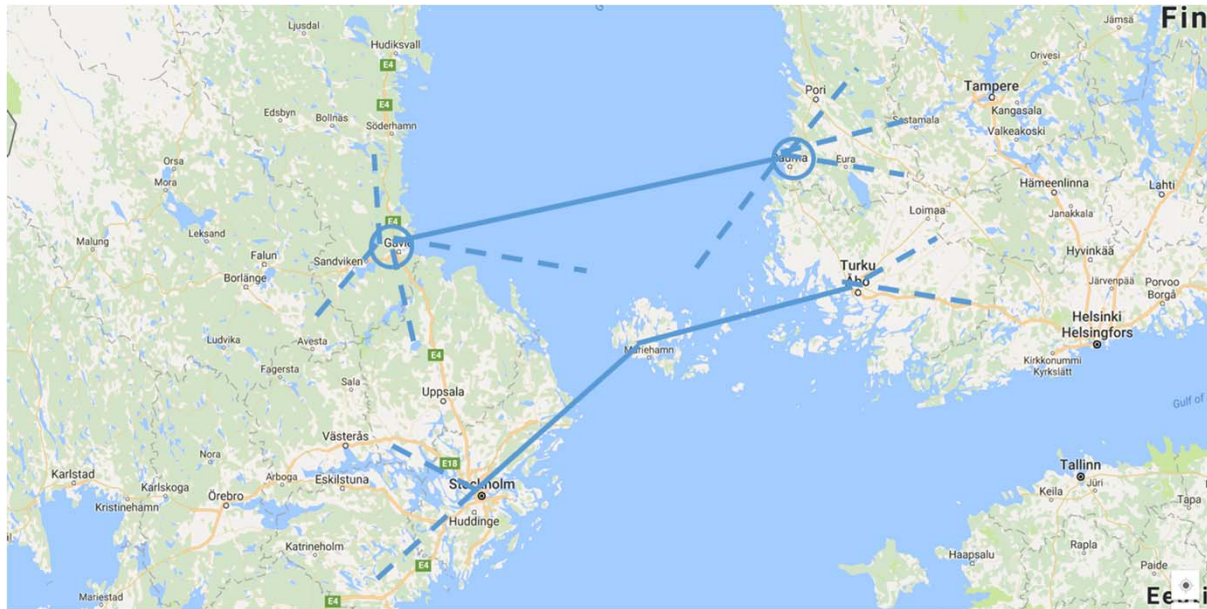


= TRUE



Co-financed by the European Union
Connecting Europe Facility

EfficientFlow



- Implementation of STM in Central Baltic



STM in the ports of Gävle and Rauma

- Port Call optimisation by implementing Sea Traffic Management (PortCDM and Voyage Management) in two new ports
- Information sharing between ports and hinterland operators (rail and road)
- More automated pilot ordering and pilot administration in the Port of Gävle



STM in ScanMed corridor

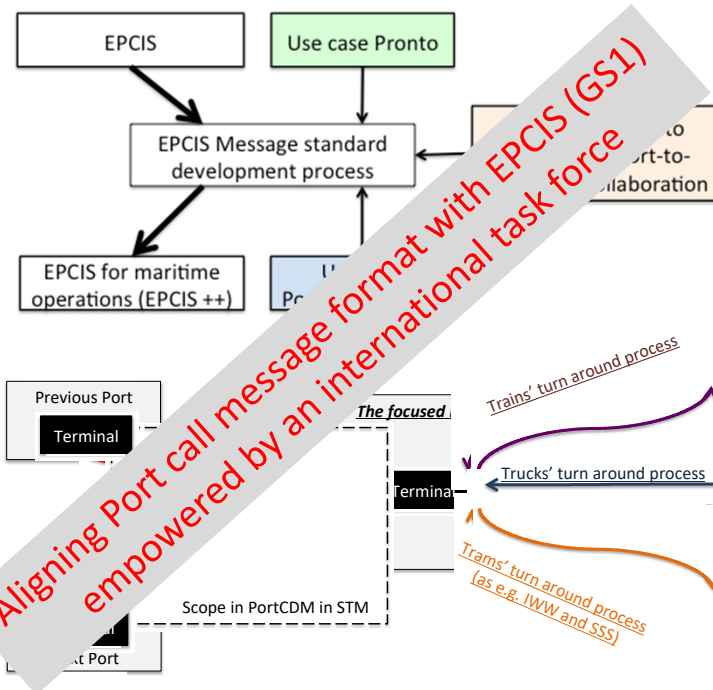
- Implementation of flow management services in the Stockholm-Turku corridor
- Optimizing route planning by information exchange ship-to-ship and ship-to-shore



Real Time Ferries



Enhancing Port Efficiency through Digital Standardization (EPEDS)



Creating a S-2xx standard
Informed by PCMF



Co-financed by the European Union
Connecting Europe Facility



09.45-10.00 Future Project Ideas



Co-financed by the European Union
Connecting Europe Facility



STM Baltic

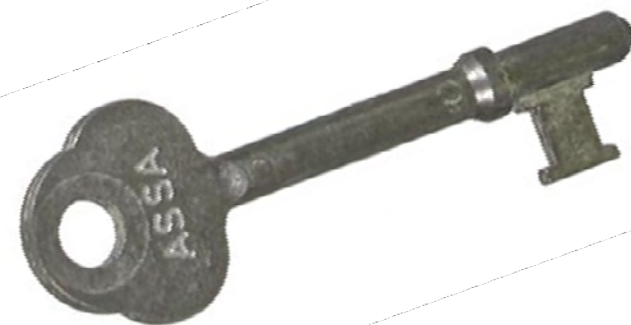
-time to deploy





Point of departure

- There are STM solutions available for deployment;
- The maritime service infrastructure for STM should be sustained and further matured;
- Exchange of voyage plans and port call messages are facilitators;
- Baltic Sea Region is the most mature area for starting deployment;
- Institutional support through HELCOM;
- Open window for funding this autumn.





Focus



- Sustaining and further maturing the maritime service infrastructure;
- Making systems onboard and onshore STM compliant;
- Deploying mature STM services;
- Will be based on real needs of business and public sector.



Results

- Will create business values for private and public sector;
- Will create emperical data for research;
- Will create further decision support for international processes and standardisation;
- Will increase the critical mass;
- Will engage third party developers of STM services.



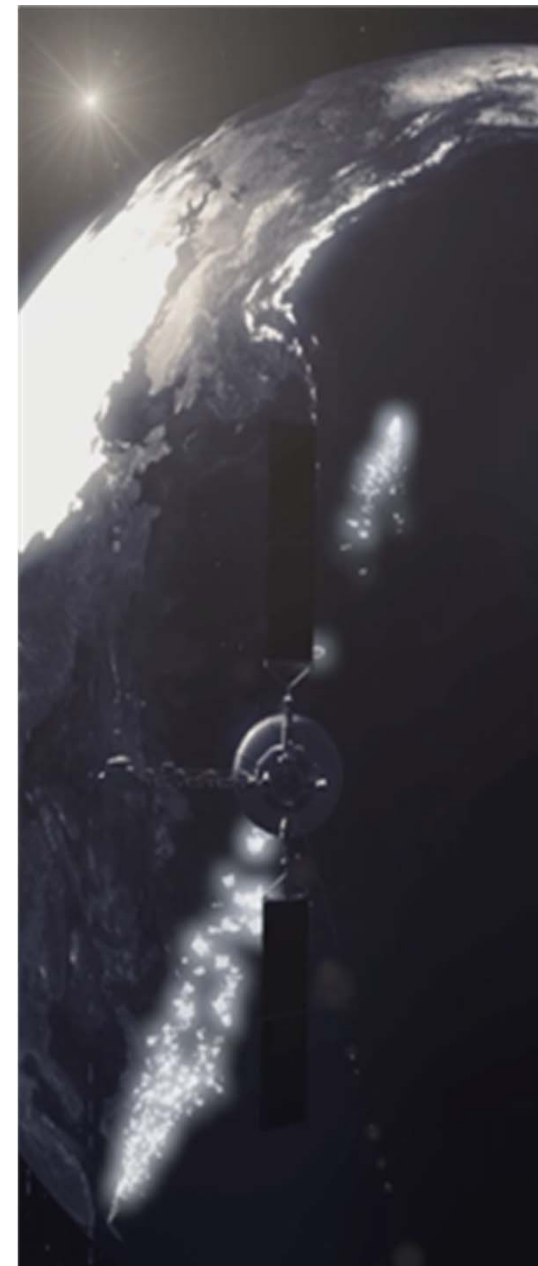


Next steps...

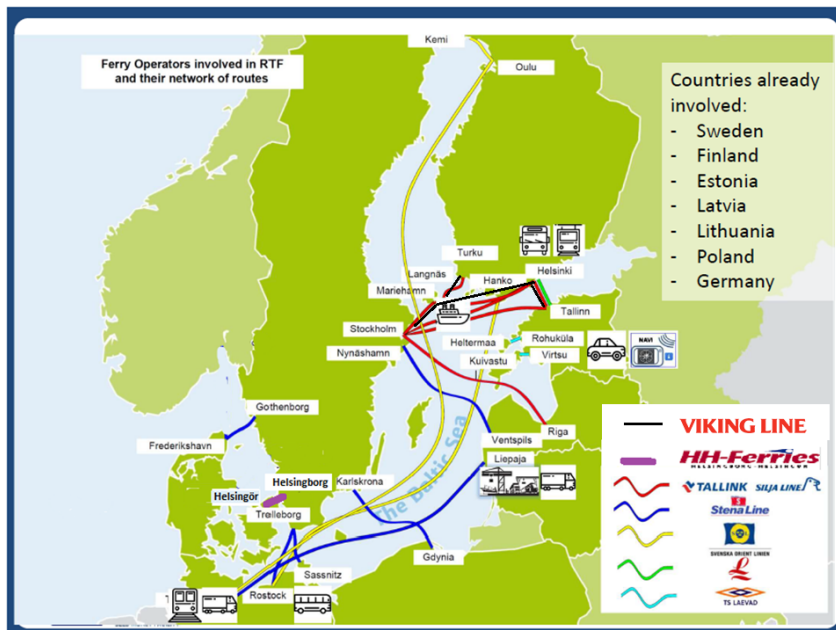
- Decide the focus area;
- Extensive stakeholder dialogue to identify and further verify the business cases;
- Align with funding possibilities;
- Project orchestration.

Are you interested to join?

Do you have ideas for focus areas?

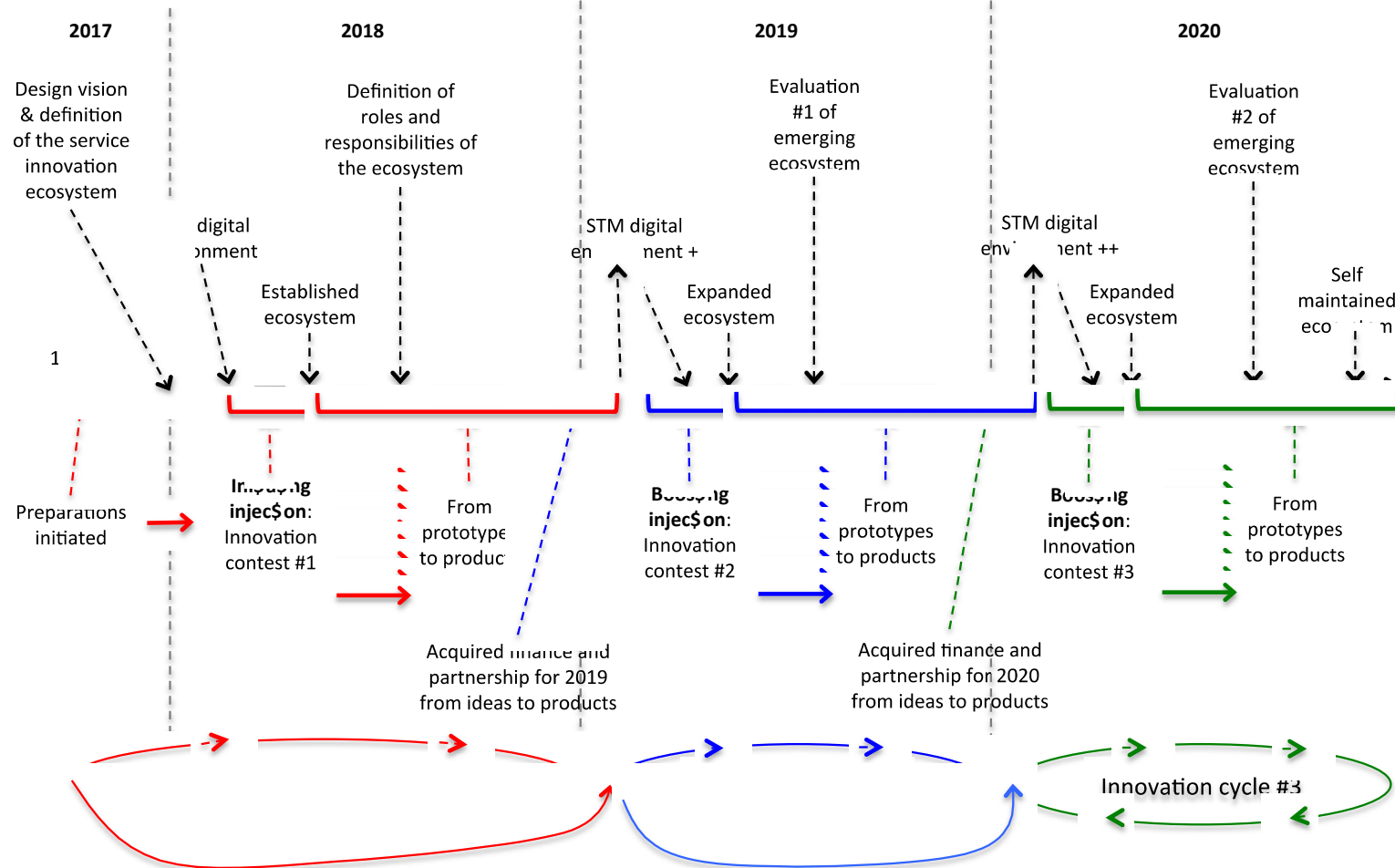


Expansion towards hinterland operations and corridor management end-to-end



- Real Time Ferries
- Inter-modal information sharing
- Digital infrastructures for corridor management (DTLF)
- Integration STM-RIS
- STM Göta älv

Accelerating the establishment of a sustainable maritime ecosystem for (maritime) service innovation by innovation contests

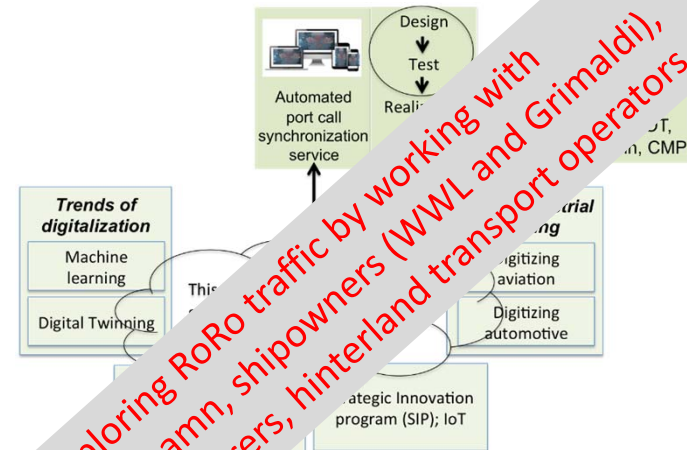


STM digital environment = test platforms, simulation environment, developer zone, application services, information services
 Innovation cycles constituted by phases in action design research

New areas of application of STM...

Enhanced performance in shipping
empowered by Maritime Informatics

Fresh food corridor –
from Aqaba to Marseille



Commercializations ...



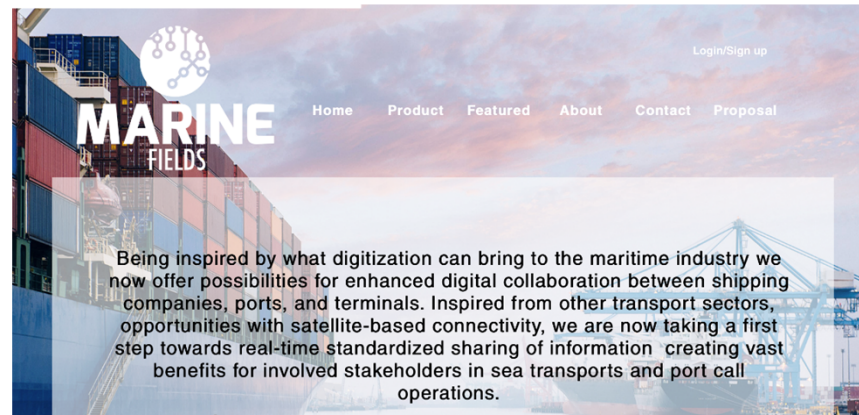
Port Call Optimisation



A reliable port starts with reliable information

29,022 sea-going vessels called at the port of Rotterdam in 2016. In the shipping industry the stakes are high: delays or inefficient use of vessels can make a considerable financial difference. Shipping companies therefore look for maximum efficiency - while sailing, in vessel usage and in the time vessels spend in a port.

In order to plan a vessel's journey as effectively as possible, shipping companies need detailed information on depth, admission policies and arrival and departure times. Currently, different ports communicate this information in different ways, resulting in inefficiency.



Anything more...?



10.00-10.15 Break



Co-financed by the European Union
Connecting Europe Facility



10.15-11.30 STM Governance



Co-financed by the European Union
Connecting Europe Facility



Why do we need a STM Governance?



Co-financed by the European Union
Connecting Europe Facility



Thanks for your contribution!



Co-financed by the European Union
Connecting Europe Facility