STM Validation Project

The STM Validation Project will demonstrate the STM concept in large-scale test beds in both the Nordic and Mediterranean Seas, encompassing around 300 vessels, 13 ports and 6 shore based service centres as well as using the European Maritime Simulator Network.

Co-financed by the European Union
Connecting Europe Facility
Secure information exchange

SeaSWIM
(system-wide-information-management) ensures secure information exchange among authorized parties.

Co-financed by the European Union
Connecting Europe Facility
Voyage Information Service
Standardized exchange of voyage plans

Ship systems with STM functionality

SeaSWIM

Share VP
Find services
Control access

Voyage Information Service & SeaSWIM connector

Get VP
Subscribe to VP
Send VP

Identity Registry
Service Registry
Maritime Cloud

Shoreside actors

Service provider
Shore Centre/VTS
Ports
Fleet operations
Ice breaking services
SAR
MSW

STM functionality

Ship systems with STM functionality

Planning Station

Maritime Cloud

Co-financed by the European Union
Connecting Europe Facility
STM supported services

- Route Optimisation
- Monitoring Services
- Port Call Synchronisation

Co-financed by the European Union
Connecting Europe Facility
Route message format (AIS-ASM) will be validated and brought forward for standardization.
Two dedicated testbeds

Utilizing STM for ice and SAR operations

Winter navigation:
• Exchange of standardized text messages and dynamic ice routes

SAR operations:
• Exchange of standardized text messages, search areas and patterns
Voyage Management Testbed

Sea Traffic Management Services
Creating a safer, more efficient and environmentally friendly maritime sector

Co-financed by the European Union
Connecting Europe Facility
STM STRATEGIC CONCEPTS & OPERATIONAL SERVICES

Voyage management
Support planning and dynamic re-planning

Flow management
Area management and flow optimization

PortCDM
Approach and Port synchronization

Co-financed by the European Union
Connecting Europe Facility
**DESIRED PORTCDM EFFECTS**

- Fast turn-around
- Minimal waiting times
- Just-in-time operations
- Optimal resource utilization
- Green Steaming
- High degree of predictability

**Diagram:**

- Vessel
- Port operator
- Port
- Port operator
- Port operator

Co-financed by the European Union
Connecting Europe Facility
States prior and during port calls

All ports work differently

INTEGRATING WITH EXISTING SYSTEMS AS THE SOURCE

SeaSWIM

PortCDM Information Service System

PCM

Approach Management System

Single Window

PCM

PCM

Shipping ERP

Vessel Operating System

PCM

PCM

Port Community System

Co-financed by the European Union
Connecting Europe Facility
Some characteristics

• Focuses
  - Within the port
  - Integration with voyage man.
  - Port-to-port collaboration
  - Port-to-hinterland collaboration

• Operational services:
  - Port call optimization
  - Port call synchronization
  - Port call monitoring
  - Port call improvement

• KPI’s
  - Predictability
  - Duration time
  - Berth productivity
  - Puctuality
  - Waiting times
  - Capacity utilisation
Harmonization with other initiatives and connection to MSP

**IMO E-navigation Maritime Service Portfolios (MSP):**

As part of the improved provision of services to vessels through e-navigation, MSPs have been identified as the means of providing electronic information in a harmonised way.

**STM**

A holistic approach to distributed service related to the *berth-to-berth voyage* enabling the efficient, safe, and environmentally sustainable sea transport.

=> STM is an example of implementing part of IMO’s e-navigation initiative.
Harmonization with other initiatives and connection to MSP

1) VTS Information Service
2) VTS Navigation Assistance Service
3) VTS Traffic Organization
4) Local Port Service
5) Maritime Safety Information Service
6) Pilotage Service
7) Tug Service
8) Vessel Shore reporting
9) Telemedical Maritime Assistance Service
10) Maritime Assistance Service
11) Nautical Chart Service
12) Nautical Publication Service
13) Ice Navigation Service
14) Meteorological Information Service
15) Real-time hydrographic and environmental information Service
16) Search and Rescue Service
Harmonization with other initiatives and connection to MSP

1) VTS Information Service
2) VTS Navigation Assistance Service
3) VTS Traffic Organization
4) Local Port Service
5) Maritime Safety Information Service
6) Pilotage Service
7) Tug Service
8) Vessel Shore reporting
9) Telemedical Maritime Assistance Service
10) Maritime Assistance Service
11) Nautical Chart Service
12) Nautical Publication Service
13) Ice Navigation Service
14) Meteorological Information Service
15) Real-time hydrographic and environmental information Service
16) Search and Rescue Service
Next steps

STM past, present and future


MONALISA

STM VALIDATION PROJECT

STM DEVELOPMENT

STM DEPLOYMENT

Co-financed by the European Union
Connecting Europe Facility
THINK DIFFERENT
MAKE THINGS HAPPEN
MAKE A DIFFERENCE

Co-financed by the European Union
Connecting Europe Facility