

# e-Navigation test-bed in Finnish VTS's

Finnish Transport Agency (FTA)

1.2.2017



# Maritime statistics

About

**8,300**

km of coastal  
fairways and

**8,000**

km of inland  
fairways

Finland has

**26**

ports kept open all  
year. About

**80 %**

of the freight traffic  
is handled by 10  
ports.

**25,600**

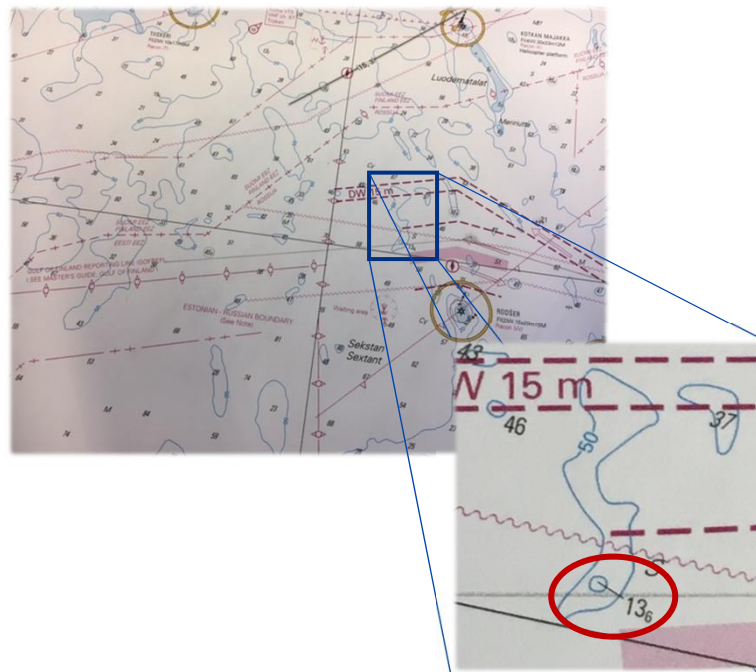
aids to navigation  
(lighthouses,  
buoys and spar  
buoys) in the  
fairways

Total length of  
merchant shipping  
lanes in Finland

**4,000**  
km



# Background – User needs



# Route exchange in practise



ECDIS on board



Routeplan



VTS centre - the route is checked automatically



Information to vessels



# Simple chart UI

Time Prediction Bar

TIME: 7:00 8:00 9:00 10:00 11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00 0:00 1:00 2:00 3:00 4:00 5:00 6:00 UTC

Chart 1:653777 179.0 x 84.2 NM

SHOW ON MAP

Route

Weather Wind Sea level Wave height Sea ice Spray/icing

ACTIONS

Forecast

Pilotage info

Import route

Send to VTS

Update

SETTINGS

My vessel

Auto-update

ENSI Warning 59°41.057N 024°00.192E

Severity: CRITICAL

Valid From: 19.01.2017 10:18:56 UTC , Until: -

Position: 59°41.057N 024°00.192E

NAVTEX:014.Gulf of Finland underwater operations

Route Status Bar

Updated (UTC): 27.01.2017 09:18:52

DESTINATION : UST-LUGA

ETA: 29.01.2017 06:10:10 UTC

STATUS : ROUTE PROCESSED

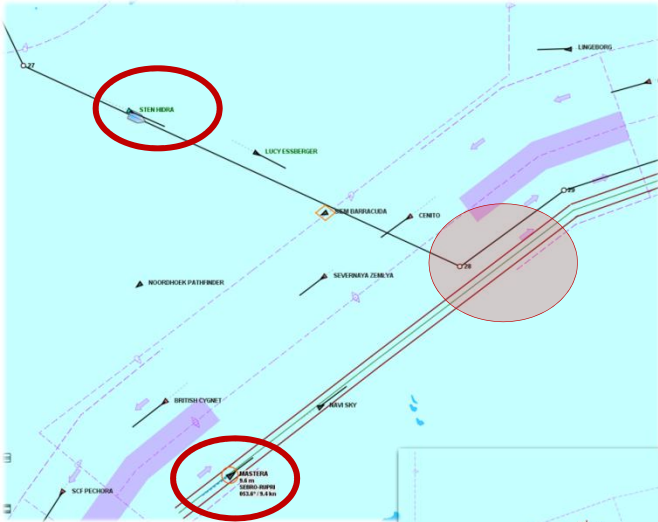


# Experiences - Benefits

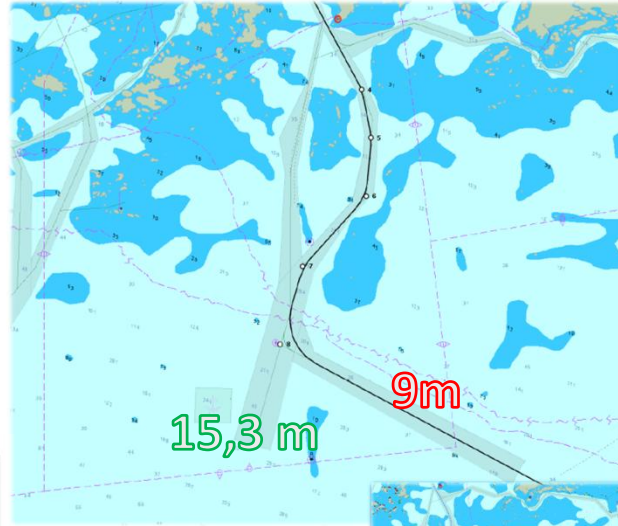
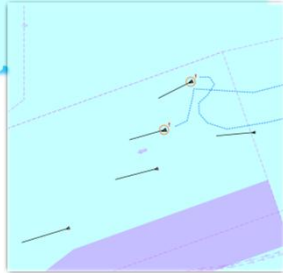
- Route cross check – additional safety measure
  - Enhanced monitoring in VTS operations
- Shared information
- Electronical SRS reports – less VHF conversations
- Information in clear graphical format
  - Navigational Warnings
  - Weather and Ice
  - Icebreaker information



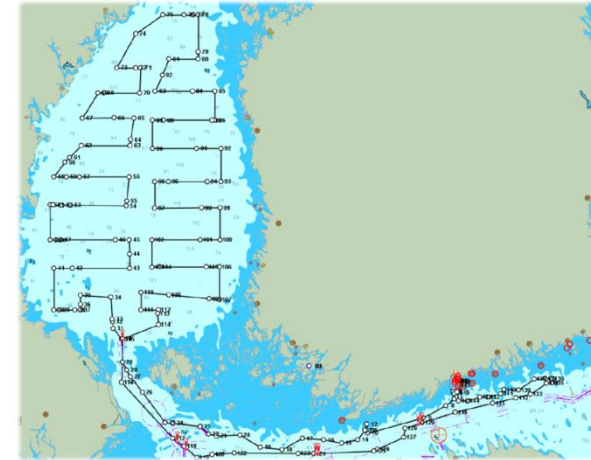
# Service in practise



Early warnings  
Traffic situations  
in advance



Route Monitoring



Survey Plans



# Challenges & Solutions

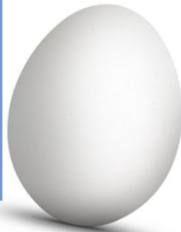
## Systems

Variable IT-systems and environments

Connectivity

Additional e-nav equipment?

Different systems for different users



## Services

Simple, easy to take into operations

Benefits already during testing

Development gradually

Data for development



## Co-operation

- Authorities,
- Service providers,
- Manufactures,
- Shipping Companies







# Co-operation



BalticWeb

**EFFICIENSEA**  
2.0 GETTING CONNECTED



THE MARITIME  
CLOUD

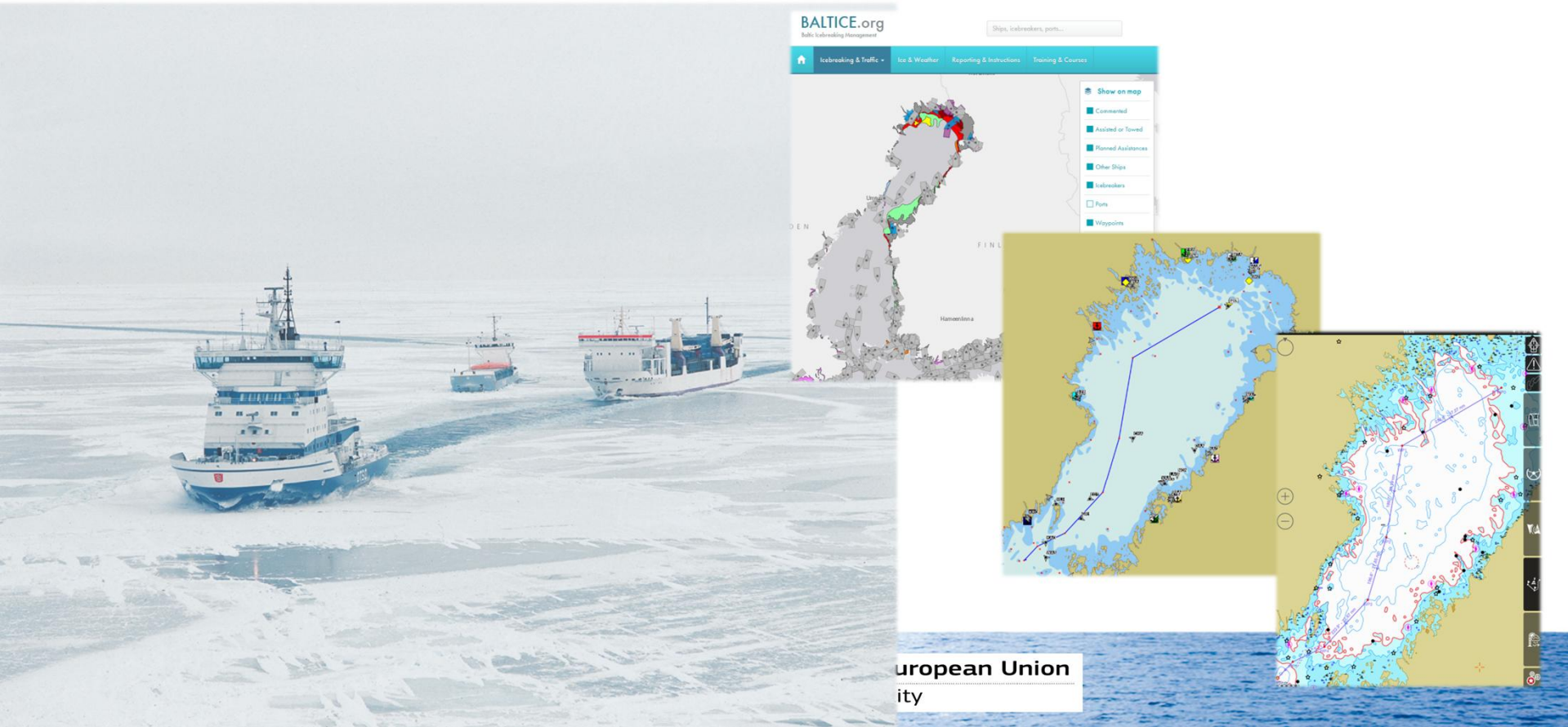


# STM - Winter Navigation Service

- Real time information on icebreaker assistance
- Detailed ice route recommendations
- Assistance information as text messages
- Schedule information to all stakeholders



# Machine to Machine





Thank you!

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