



# EUSBSR PA SAFE Steering Group Meeting Copenhagen 7-8 December 2016

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# WINIMOS II

Winter Navigation Motorways of the Sea



**Co-financed by the European Union**  
Connecting Europe Facility

# WINMOS II – Basics.

- Aims to:
  - further develop and enhance the winter navigation system and its safety,
  - safeguard required icebreaking resources in the future by developing new options and improving old capacity .
- Budget ~19M€; CEF (MoS) funding 6,6M€
- Implementation period: Feb 2016 – Oct 2019
- Partners: Finnish Transport Agency (coordinator), Swedish Maritime Administration, Arctia Icebreaking, Novia University of Applied Sciences, Aalto University, Estonian Maritime Administration and ILS Oy.

# WINMOS II – Activities.

- Environmental benefits, reduction of fuel and emissions
  - Battery hybrid for safer and more environmentally friendly operation
  - Further development of the Common Rail system
- Life extensions and alternative options
  - Life extension of Finnish icebreakers (Voima and Sisu)
  - Study on life extension of Estonian icebreakers
  - Study on removable-bow concept
- More efficient use of resources
  - Implementation and further development of IBNext
  - Development of icebreaker training
  - Study on adequacy of icebreaking capacity and level of service in Baltic Sea during severe winters

# ENVIRONMENTAL BENEFITS, REDUCTION OF FUEL AND EMISSIONS.

- Battery hybrid for safer and more environmentally friendly operation
  - Large variations in power needed frequently.
  - Aims to reduce fuel costs, emissions and maintenance.
  - Data collection ongoing.
- Further development of the Common Rail system
  - All 5 engines of IB YMER have been tested.
  - Fuel reduction around 5% measured during WINMOS.

# LIFE EXTENSIONS AND ALTERNATIVE OPTIONS.

- Life extension of Finnish icebreakers (Voima and Sisu)
  - Works on IB VOIMA completed.
  - IB SISU will be re-fitted 2018.
- Study on life extension of Estonian icebreakers.
  - Procurement ongoing.



# LIFE EXTENSIONS AND ALTERNATIVE OPTIONS (2).

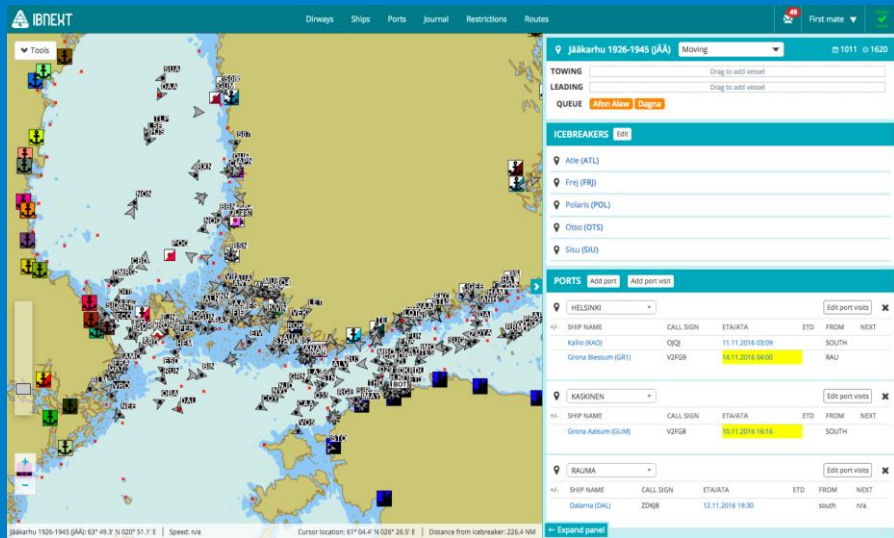
- Study on removable-bow concept





# MORE EFFICIENT USE OF RESOURCES.

- Implementation and further development of IBNext
  - Online, usable also on mobile devices, connected to STM.
  - Gone into production last Friday.



## USING IBNEXT ON SEVERAL DISPLAYS

IBNext can be used with several displays by duplicating the browser tab and dragging the tab to the other display.





# MORE EFFICIENT USE OF RESOURCES (2).

- Development of icebreaker training
  - Training programme for icebreaker officers.
  - Collecting tacit knowledge from experienced icebreaker officers.
  - Study visit to Kalmar, Sweden.
- Study on adequacy of icebreaking capacity and level of service in Baltic Sea during severe winters
  - Further developing winter navigation simulation model.
  - Contingency plan for whole Baltic Sea for severe winters.
    - Will consult Baltic Icebreaking Management (BIM).
    - Try to get approved by all Baltic Sea countries.



[www.winmos.eu](http://www.winmos.eu)



# Thank You.

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