

Project ELINN

Electric INNOvation for emission free Sea Rescue boats

Magnus Wikander

Head of Strategic Development Hydrodynamics

SSPA / Research Institutes of Sweden

magnus.wikander@sspa.se



Project ELINN

Electric INNovation for emission free
Sea Rescue boats

Project Partners:



**MICROPOWER
GROUP**



**ASTON
HARALD**
COMPOSITE



Your Maritime
Solution Partner



Other Partners:

CHALMERS
UNIVERSITY OF TECHNOLOGY



MANTARAY
HYDROFOIL CRAFT



Project funded by:



+ the project partners

Project ELINN

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Sea Rescue boats



Wish list (or project goals....)

- Zero emission rescue boat prototype
- The preferred boat of choice for Swedish Sea Rescue Society volunteers
 - Minimize range anxiety
 - No surprises
 - Excellent manoeuvring
 - Any weather

Project partners:

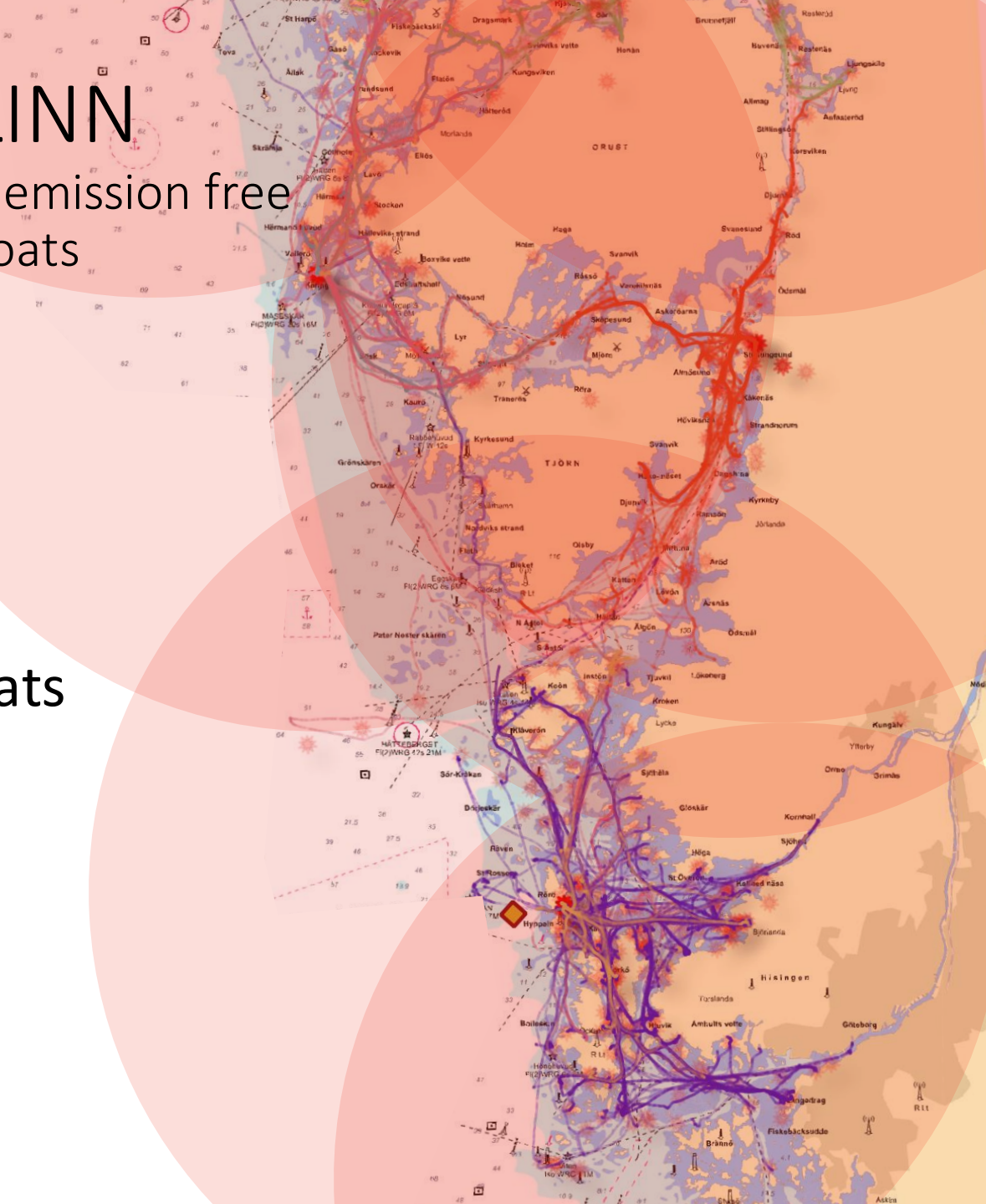


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Project ELINN

ELectric INNovation for emission free
Sea Rescue boats

- 50% of SSRS rescue missions in open boats
- 95% of these:
 - 15 Nm Sprint
 - 15 Nm Towing
 - 5 Nm Rapid return
 - 15% Reserve



Project ELINN

Electric INNOvation for emission free
Sea Rescue boats



- Lower GHG emissions
- Improved working environment
- Less service hours
- Lower energy density
- Complexity of new technology

Project partners:



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Electric INNovation for emission free
Sea Rescue boats

Technical data

Weight inc. rescue gear & crew: 2 500 kg

Weight of driveline inc. battery: 950 kg

Current energy on board: 99 kWh

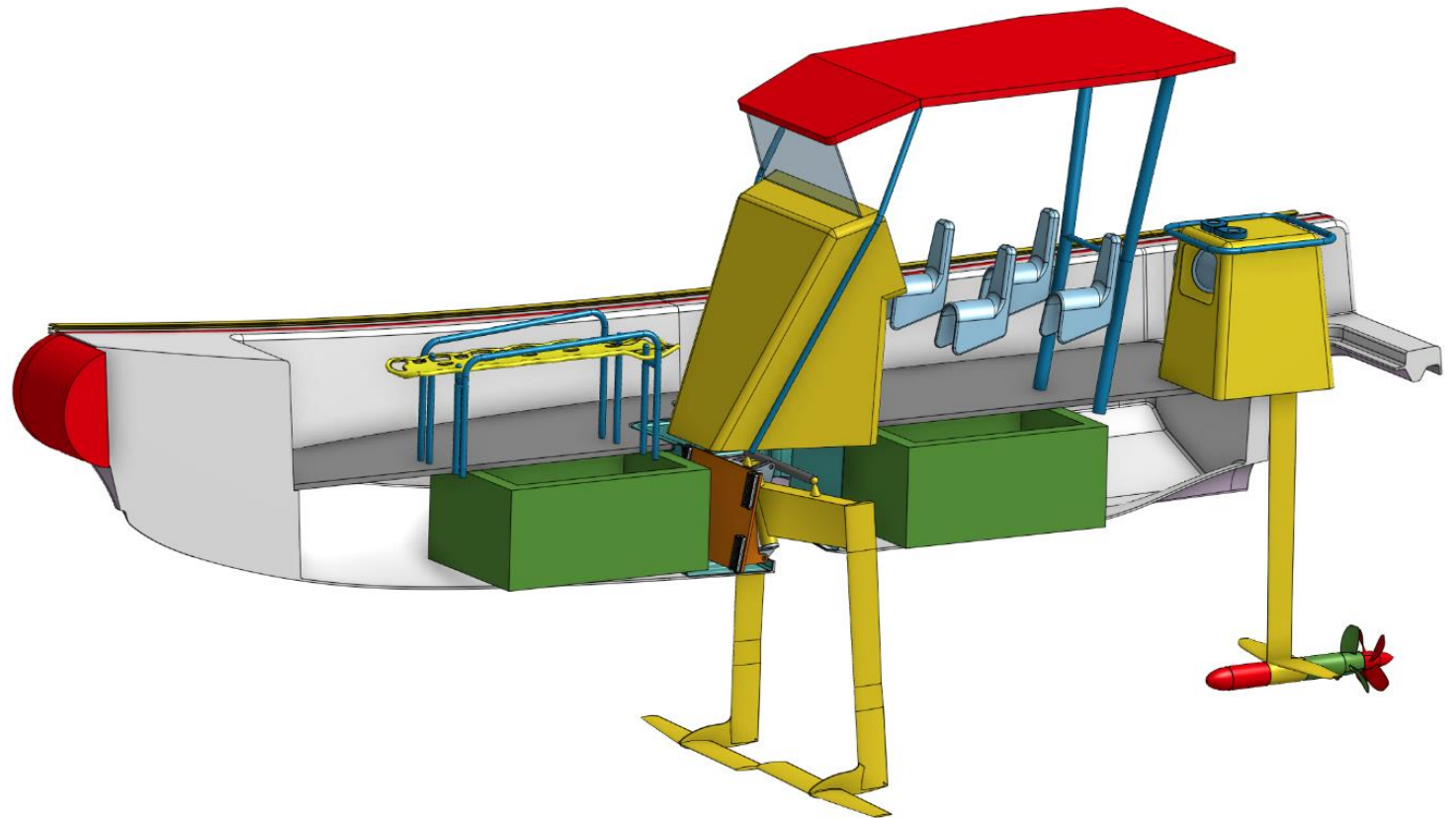
Current battery type: Li-ion brix
(Micropower)

Propulsion: Zparq 2 x 50kW

Charger: 22kW

Charging time 20-80%: 3.5h

Top speed: 35kn

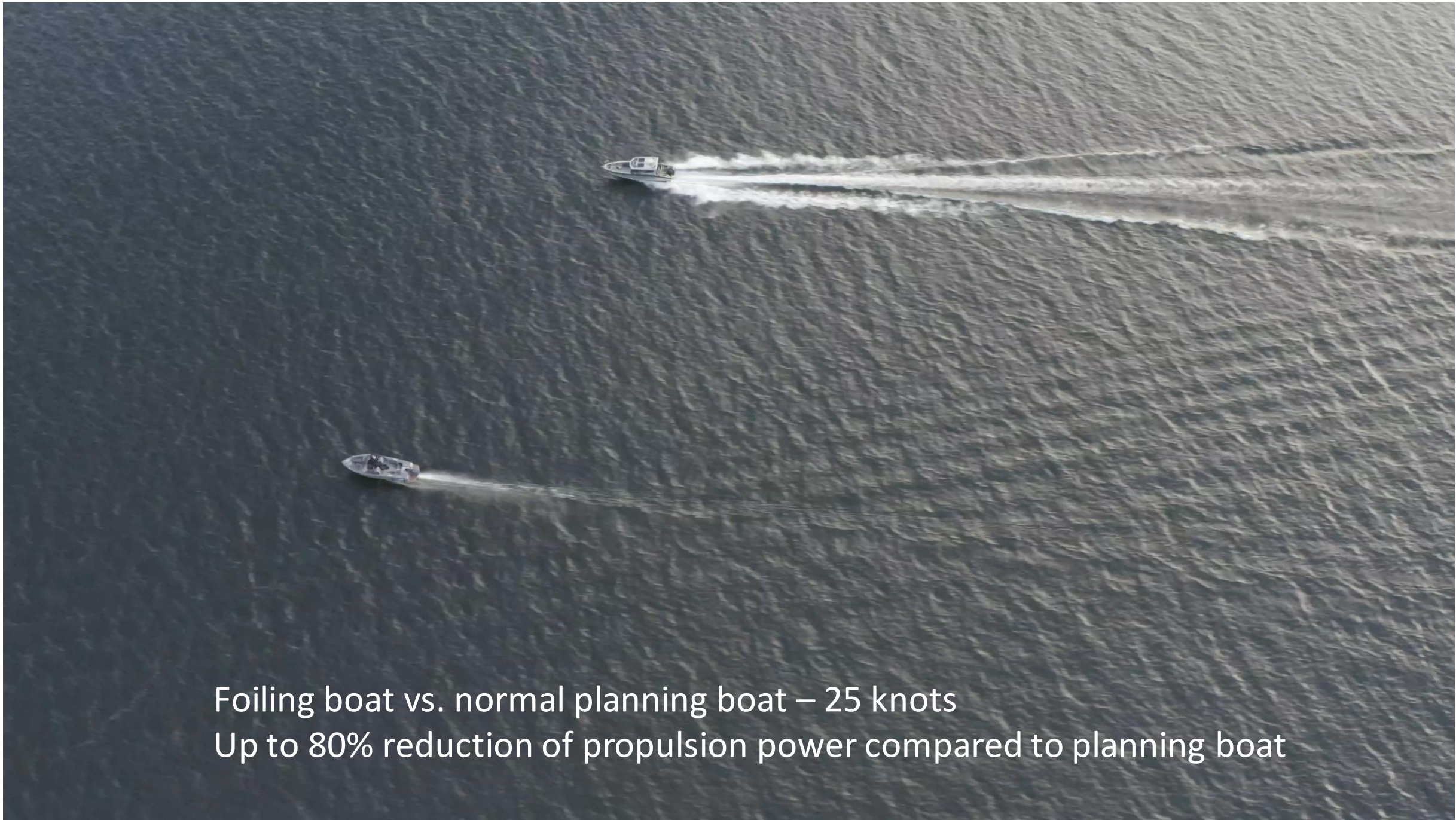


Project partners:

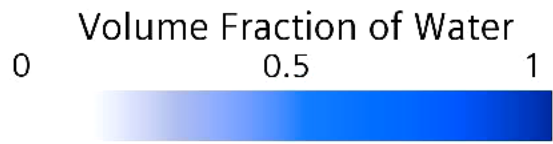


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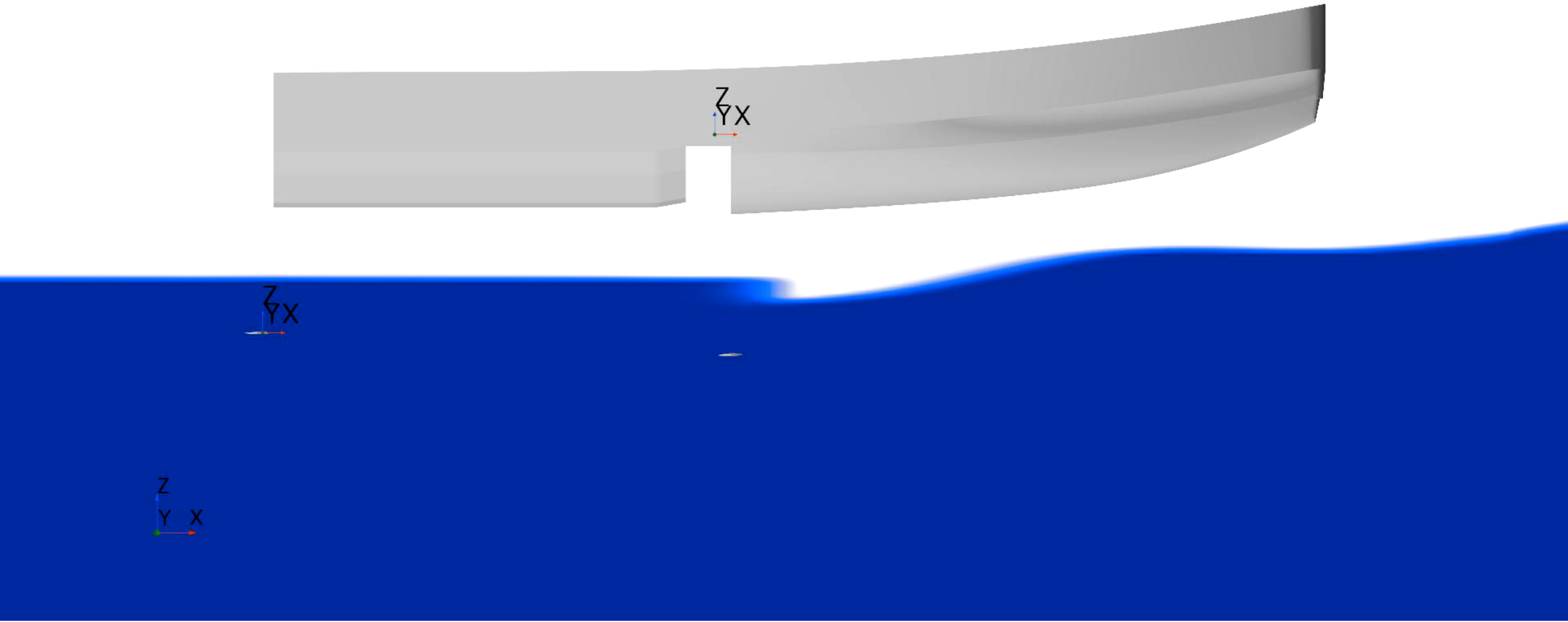


Foiling boat vs. normal planning boat – 25 knots
Up to 80% reduction of propulsion power compared to planning boat

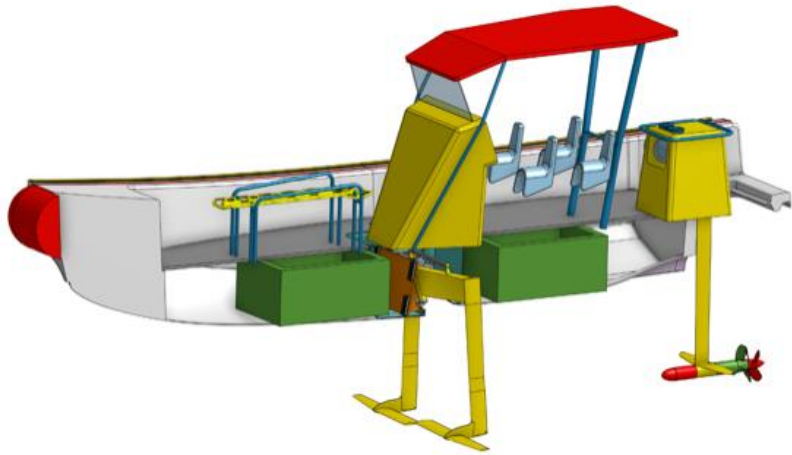


Results, irregular head seas

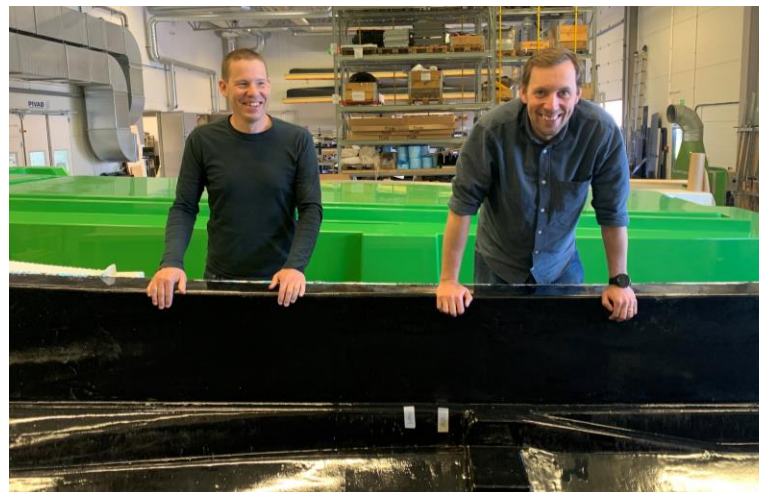
Foiling will reduce harmful accelerations



8 meter electric foiling demo boat –
Launch spring 2023



First prototype - 5.5 meter electric foiling demo boat –
Launch, November 2022



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Take aways to the industry

- Research your operational data
- Hydrofoils + submersible motors + batteries = The way forward
- Make our standards reasonable – new battery safety measures

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Thank you

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