

# Electric fast-ferrries –

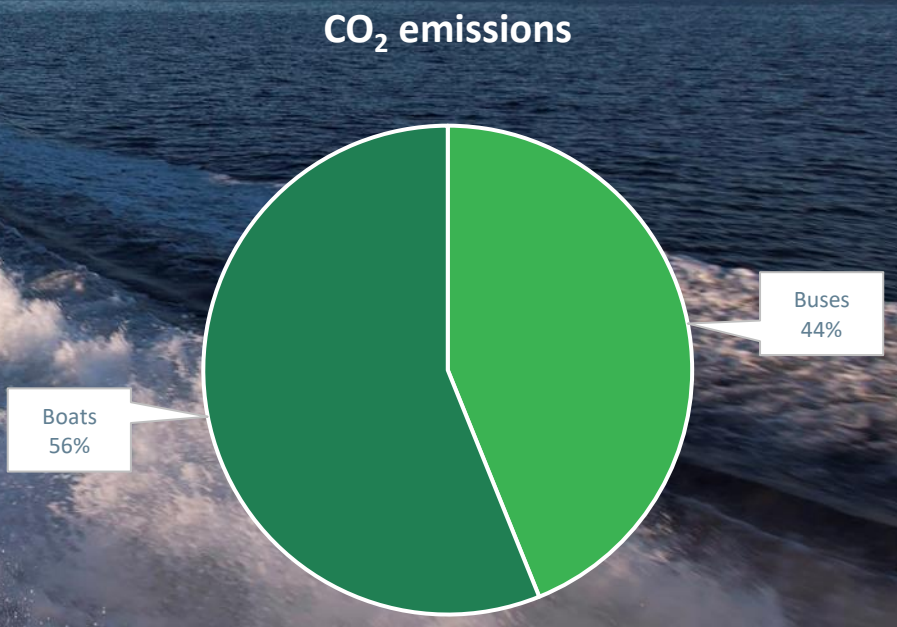
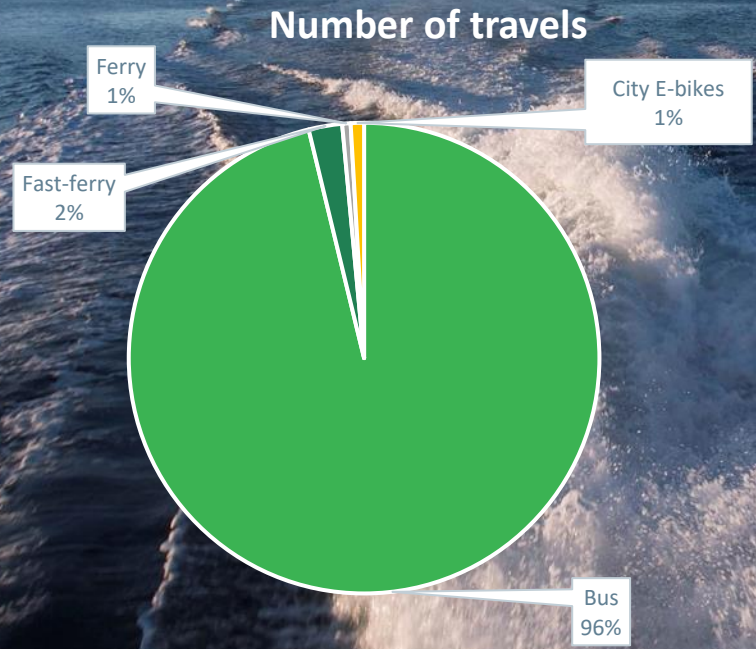
*The TrAM project and future prospects*





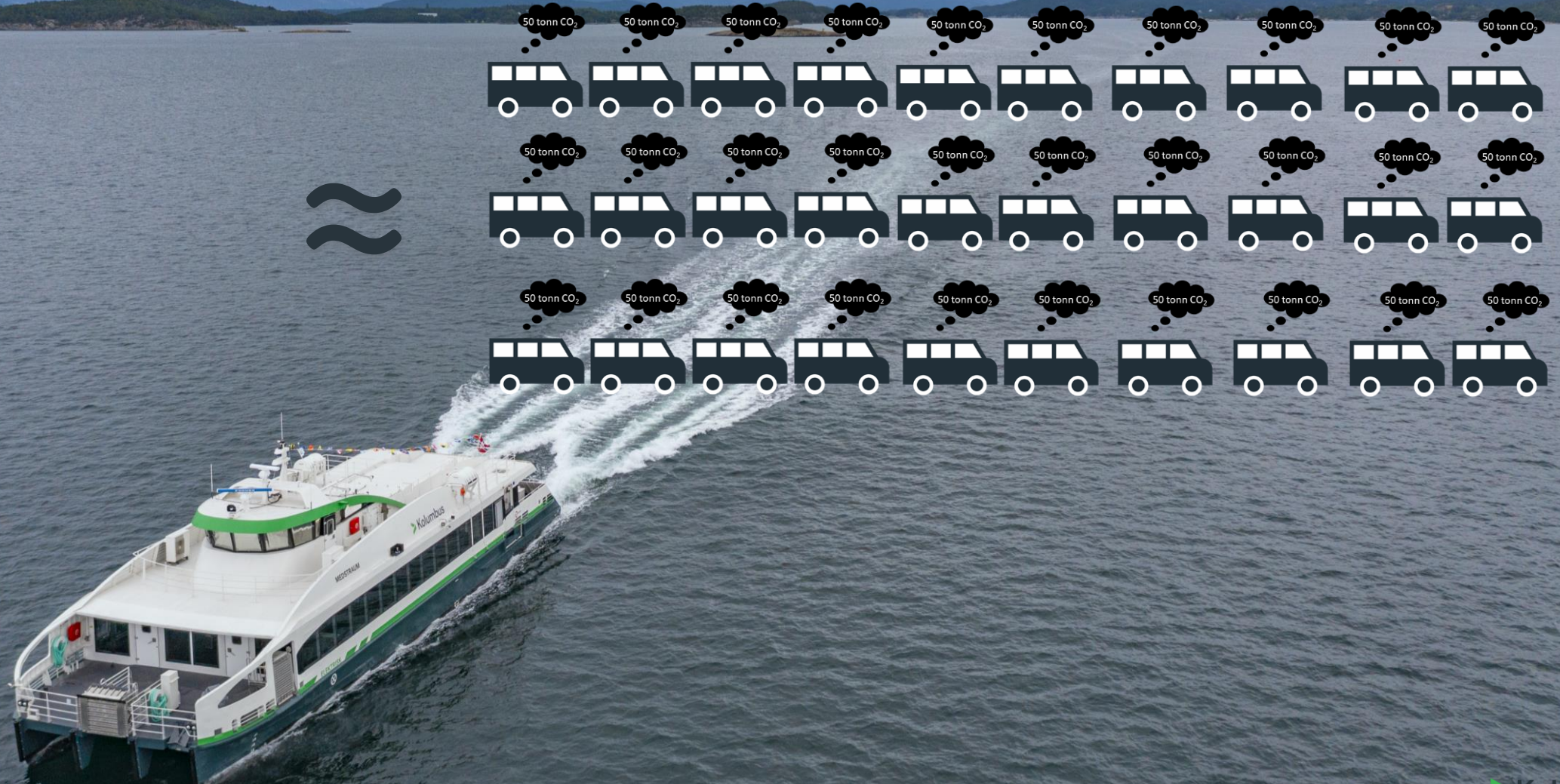
# Introduction

Kolumbus - 2021:





# Environmental impact of Medstraum



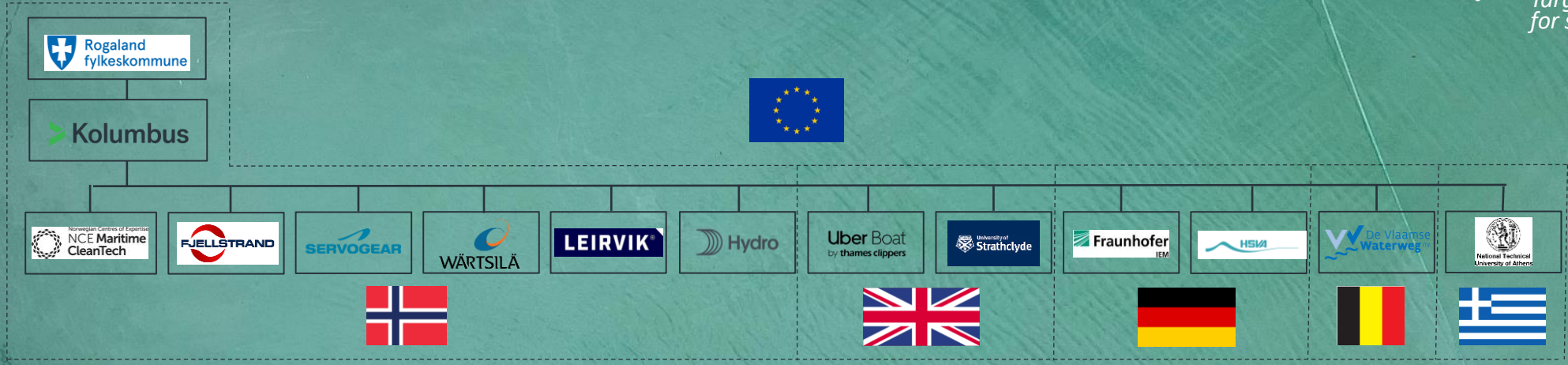


# TrAM - Introduction



## The TrAM project:

- 13 European partners
- Budget is 15 mEUR
- 11 mEUR funding by EU
  - «Medstraum» is funded with 3,5 mEUR
  - Rogaland county council is funding the remaining costs for «Medstraum»
- Main goal to develop modularized methodology for design and production
  - Target to reduce total costs for similar vessels by 25%





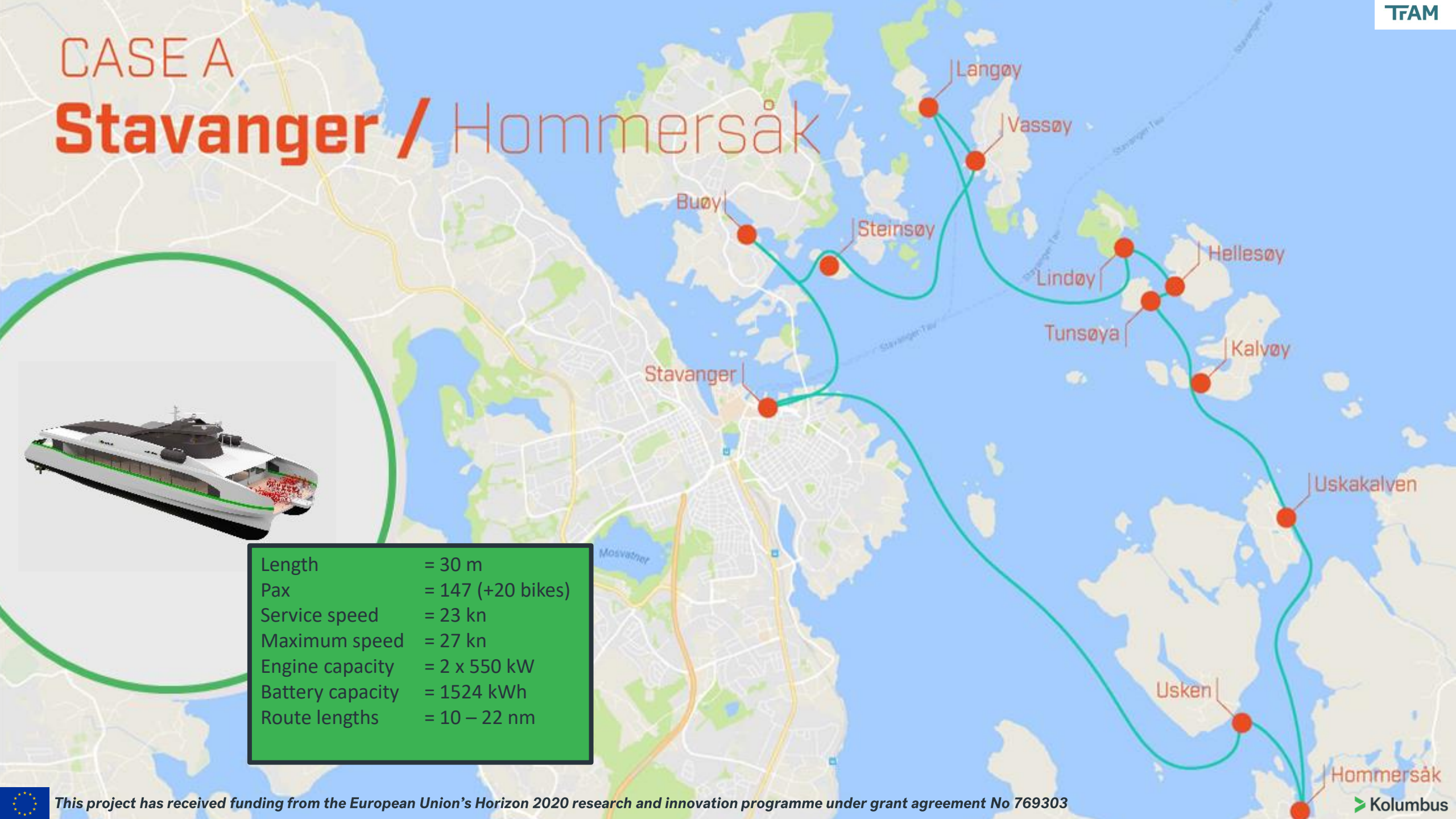


# CASE A

# Stavanger / Hommersåk



Length	= 30 m
Pax	= 147 (+20 bikes)
Service speed	= 23 kn
Maximum speed	= 27 kn
Engine capacity	= 2 x 550 kW
Battery capacity	= 1524 kWh
Route lengths	= 10 – 22 nm

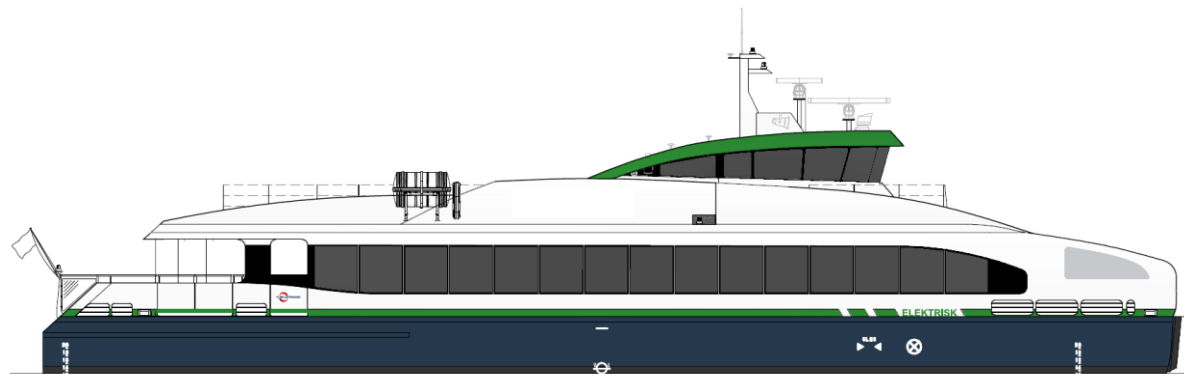




# «Medstrøm»

## Main achievements:

- Extremely high propulsive efficiency achieved (~80%)
  - Hull shape developed through global and local optimisation
  - New propeller developed and propeller tunnel optimised
- Battery rooms placed on deck level:
  - Allows for full optimization of the hull shape for propulsive efficiency
  - Meets all new operational and safety requirements for battery rooms
- The project has proven that electric fast-ferries are possible



Surrogate model

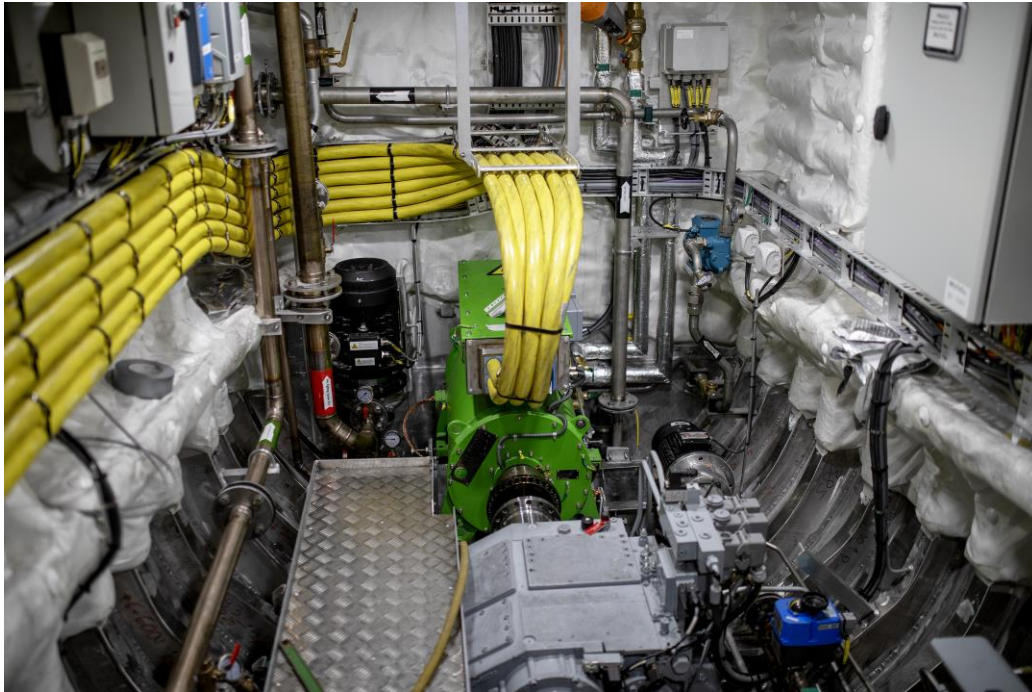
Local optimisation



MAIN DECK

Experimental verification

# «Medstraum»



*Engine room*



*Battery room*



# Charging infrastructure

## Charger:

- Flexible and scalable charging infrastructure
- Total capacity of 8 MW
- Charging capacity for «Medstraum» is 2,3 MW
- Standard CCS2 plugs used to increase flexibility
  - Possible to upgrade to MW charging plugs when commercially available



*New trafo- and converter building*



*Wartsila converters*



*«Medstraum» charging pod at quayside*





## Contacts:

- TrAM project website: <https://tramproject.eu/>
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- TrAM project on Facebook: <https://www.facebook.com/EUtram/>
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- Horizon Europe Horizon Europe | European Commission (europa.eu)
- Waterborne TP: [Welcome to Waterborne - Setting the agenda for Maritime Research in Europe - waterborne.eu](http://waterborne.eu)