**Project:**

**TrAM**

**Transport: Advanced and Modular**

**Funding:** European (Horizon 2020)
**Duration:** Sep 2018 - Aug 2022
**Status:** Ongoing
**Total project cost:** €14,706,790
**EU contribution:** €11,741,431

**CORDIS RCN:** 216016

**Objectives:**

The project will develop and validate a concept for modular design and production of vessels. We combine the advantages of scale and standardisation with customisation options, allowing small-series and one-off vessel construction, using interchangeable modules across vessel types. Even though parts of our work will have a wider relevance, we focus on inshore vessels (operating coastal areas and inland waterways) with electric power systems.

**Methodology:**

The project is divided in three phases: Specification, innovation, and replication.

In the specification phase, we perform a wide meta-analysis of both the user needs and existing technological solutions, coupled with case-studies of needs and technologies for four targeted use cases. In the innovation phase, we develop the modular design concept; combining theoretical approaches, cross-fertilisation of methods from other industries (mostly rail and automotive), deep maritime experience in the relevant areas (including hull design, propulsion and electric power systems) and heavy involvement by operators (including three as consortium partners).

The concept is applied to, and refined through, four demonstrators: Two ferries, a workboat and a vessel for goods traffic on inland waterways. At least one of the demonstrators will be physically built, co-financed by Rogaland County Council and its transport subsidiary Kolumbus, and used to operate a multi-stop commuter route into Stavanger. It will be a fully electric fast passenger ferry, operating in a region that is a substantial exporter of hydropower. In the replication phase, we will further validate the concept through five additional demonstrators (planning and simulation level) together with operators that did not participate in the details of the first two phases.

Our aim is that the modular concept will prove to work as a general purpose toolkit within our market segment, proving that a wide set of vessel types can built in a cost-efficient and environmentally friendly manner.

**Parent Programmes:**

[H2020-EU.3.4. - Horizon 2020: Smart, Green and Integrated Transport](#)

**Institute type:** Public institution
**Institute name:** European Commission
**Funding type:** Public (EU)
**Other programmes:** MG-2.4-2017 Complex and value-added specialised vessels

**Lead Organisation:**

Rogaland Fylkeskommune

**Address:**
ARKITEKT ECKHOFFS GATE 1
4001 STAVANGER
Norway

Organisation Website:
http://www.rogfk.no
EU Contribution: €859,125

Partner Organisations:

Fjellstrand As

Address:
Omavegen 225
5632 Omastrand
Norway
EU Contribution: €2,447,200

Hamburgische Schiffbau - Versuchsanstalt GmbH

Address:
Bramfelder Str. 164
22305 HAMBURG
Germany
Organisation Website:
http://www.hsva.de
EU Contribution: €875,000

Hydro Extrusion Norway As

Address:
GAUSTADVEGEN 136
2240 MAGNOR
Norway
EU Contribution: €610,269

Leirvik As

Address:
STORHAUGVEGEN 130
5416 STORD
Norway
EU Contribution: €1,133,300

National Technical University Of Athens

Address:
Heroon Polytechniou 9 (polytechnic campus)
15780 ZOGRAFOS
Greece
Organisation Website:
http://www.martrans.org
EU Contribution: €314,000

Fraunhofer Gesellschaft Zur Foerderung Der Angewandten Forschung E.v.

Address:
HANSASTRASSE 27C
80686 MUNCHEN
Germany

**Organisation Website:**
http://www.fraunhofer.de

**EU Contribution:** €1,304,478

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Waertsila Netherlands B.v.

**Address:**
Hanzelaan 95
8000GB Zwolle
Netherlands

**Organisation Website:**
http://www.wartsila.com

**EU Contribution:** €1,573,819

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Collins River Enterprises Limited

**Address:**
THE 02 PENINSULA SQUARE
LONDON
SE10 0DX
United Kingdom

**EU Contribution:** €196,306

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De Vlaamse Waterweg

**Address:**
HAVENSTRAAT 44
3500 HASSELT
Belgium

**EU Contribution:** €284,813

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Servogear As

**Address:**
BRUBAKKEN 73
5420 RUBBESTADNESET
Norway

**EU Contribution:** €673,466

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Maritime Cleantech

**Address:**
MEATJONNSVEGEN 74
5412 STORD
Norway

**EU Contribution:** €501,781

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University Of Strathclyde

**Address:**
Richmond Street
Glasgow
Organisation Website: http://www.strath.ac.uk
EU Contribution: €967,875

Technologies:
- Ship design and manufacturing
- Electric ship concept

**Development phase:** Demonstration/prototyping/Pilot Production

**STRIA Roadmaps:** Transport electrification, Vehicle design and manufacturing
- Water transport (sea & inland)

**Transport mode:** Water transport (sea & inland)

**Transport sectors:** Passenger transport, Freight transport

**Transport policies:** Environmental/Emissions aspects, Decarbonisation

**Geo-spatial type:** Other