Objective

The project will develop and validate a concept for modular design and production of vessels. We combine 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.

The project is divided in three phases: Specification, innovation, and replication. In the specification phase, we perform a wide meta-analysis of both 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.

**Fields of science**

> >
> > >
> > > >

**Programme(s)**

**Topic(s)**

**Call for proposal**

H2020-MG-2017-Two-Stages

**Funding Scheme**

IA - Innovation action

**Coordinator**

**ROGALAND FYLKESKOMMUNE**

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<td>Public bodies (excluding Research Organisations and</td>
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Participants (13)

MARITIME CLEANTECH
Norway
EU contribution
€ 501 781,25
Address
Meatjonsvegen 74
5412 Stord
Activity type
Other

LEIRVIK AS
Norway
EU contribution
€ 768 250
Address
Storhaugvegen 130
5416 Stord
Activity type
Private for-profit entities
(excluding Higher or Secondary Education Establishments)

NATIONAL TECHNICAL UNIVERSITY OF ATHENS - NTUA
Greece
EU contribution
€ 314 000
Address
Heroon Polytechniou 9
Zographou Campus
15780 Athina
Activity type
Higher or Secondary Education Establishments

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<td>Hanzelaan 95, 8017 JR Zwolle</td>
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<td>Brubakken 73, 5420 Rubbestadneset</td>
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<td>€ 284 812.50</td>
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HYDRO EXTRUSION NORWAY AS
Norway
EU contribution
€ 610 268,75
Address
Gaustadvegen 136
2240 Magnor
Activity type
Private for-profit entities
(excluding Higher or Secondary Education Establishments)

WARTSILA NORWAY AS
Norway
EU contribution
€ 1 573 818,75
Address
Wichmannvegen 3
Rubbestadneset
5420 Bomlo
Activity type
Private for-profit entities
(excluding Higher or Secondary Education Establishments)

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