

TrAM

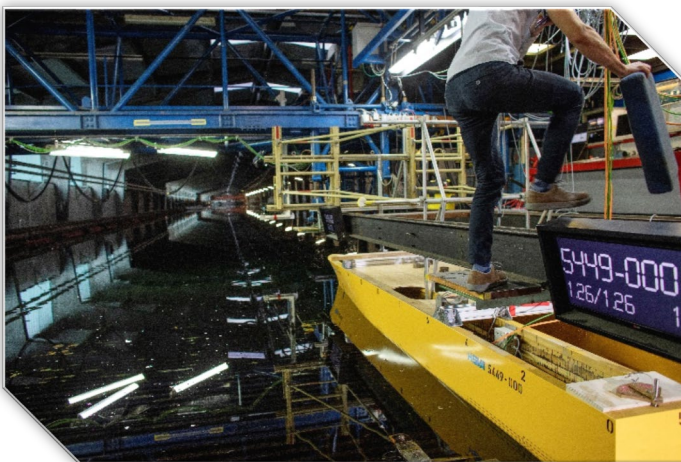
TRANSPORT: ADVANCED AND MODULAR

TTrAM project aims to develop innovative modular design and production methods for fully electric fast ferries. The project is thus a perfect fit for the European Commission's economic policies, where lower cost through working smart is seen as key for the European shipyards to remain competitive.

The Maritime Safety Research Centre at the University of Strathclyde, Fraunhofer IEM and module supplier Leirvik will deliver the modular production core industry and R&D competence in the TrAM project.

In October, the Maritime Safety Research Centre joined Fjellstrand yard, Leirvik,

Fraunhofer IEM, Kolumbus and NCE Maritime CleanTech for a workshop at Fjellstrand's shipyard in Omastrand, Norway. The discussion revolved around potential opportunities for hull modularisation, based on state-of-the-art practices applied to the automotive and aviation industry.



The building of the world's first fully electric fast ferry is progressing well, and the hull model tests of the vessel took place in Hamburg last December. A model of the Stavanger demonstrator was tested for its hydrodynamic performance at the Ship Model Basin in HSVA, one of the largest facilities in Europe measuring 300 meters long and 18 meters wide. The aim was to measure both the resistance and the propeller system of the vessel. The fully electric fast ferry will enter into commercial operation for Kolumbus on January 1st, 2022. The project will also conduct additional studies for the same vessel type in London and Belgium.



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TrAM project partners gathered at the **University of Strathclyde** in Glasgow for a HAZID (Hazard Identification) workshop in February. The key topics were quality issues and risks related to the design, construction and operation of a battery-driven high-speed catamaran ferry and the installation and usage of the battery system.

The HAZID workshop, led by the **University of Strathclyde**, is an essential part of the risk assessment where participants, including ship operators, technology inventors, manufacturers, assessment investigators and regulation makers, sit down and brainstorm all the possible hazards during the ship's holistic life span. The meeting was based on an initial risk matrix based on the existing database, reports, regulations and guidance. The risk matrix was modified during the HAZID workshop to include newly identified hazards, remove unnecessary ones and revise their frequency, consequence and cost-benefit levels.

TrAM HAZID workshop comprised of 15 participants from 10 institutes as follows:

- De Vlaamse Waterweg (Belgium)
- Fjellstrand (Norway)
- Fraunhofer IEM (Germany)
- Hamburgische Schiffbau-Versuchsanstalt (Germany)
- Kolumbus (Norway)
- National Technical University Of Athens (Greece)
- Servogear (Norway)
- Thames Clippers (United Kingdom)
- Wärtsilä Netherlands B.V. (Netherlands)
- MSRC - University Of Strathclyde (United Kingdom)

