

# RESEARCH THEME

XXVII cycle - a.y. 2021/2022

**Title of the doctoral research** SWAM - Smart Water Mobility

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**Abstract**

Smart mobility and smart cities represent a new context in which people and goods are asked to move with a clean and self-sufficient energy, and mobility has to be responsive to the quality and needs of citizens. Mobility in inland and coastal waters will also require boats with zero environmental impact, posing new challenges and opportunities for nautical design in the next future. For this reason, the research project aims to create and analyse scenarios for sustainable mobility on water. The design of new water transport systems will be an opportunity to rethink the whole boat from a sustainable perspective: environmental sustainability in the use of new materials and technologies, energy sustainability, social and cultural sustainability. The research project will have an impact not only in the academic field, for the creation of scenarios and the experimentation of integrated methodologies, but also at the industrial and governance level, in the definition of innovative solutions and roadmaps for future development. Specifically, the research is divided into three phases: a first phase of development of the sustainable mobility scenario through literature review, case studies analysis and future technology forecasting, a second phase characterized by the design of all of one or more water transport systems, and a third phase with the analysis of the various impacts on the environment.

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**Keywords**

Vessel & yacht design, smart technologies, sustainability for all