



**Politecnico  
di Torino**

## **Honors Thesis**

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**Master's degree Science in Sustainable Architecture**

### **Abstract**

**Floating platforms: solutions for new resilient urban development.  
From the study of the current state of the art, to the definition and application of  
design guidelines.**

**Tutor/Correlator**

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**July 2024**

This thesis explores the hypothesis that building settlements on water can be an effective and sustainable solution towards urban expansion. As a response to challenges posed by accelerated urbanization, overpopulation and climate change, the research focuses on the potential of floating platforms as new forms of urban development.

Through a collaboration with Floating Solutions Research Group, a research group of the Polytechnic University of Turin that specializes in modular, scalable, and sustainable floating land creation, a practical context for the investigation is determined. The research aims to identify urban challenges that could be mitigated by the intervention of Floating Solutions Research Group's technology, and to study the potential of floating technologies compared to traditional ones, thus also understanding the obstacles related to the feasibility of floating urban development. Furthermore, the main objective is to establish design guidelines for the application of development of floating settlements in different contexts.

The thesis is structured into nine chapters, covering an overview of urban challenges, a review of existing technologies and solutions, a detailed analysis of floating technology and its potential, and an examination of the challenges and factors to be considered for the implementation of a floating urban development. Ultimately, design guidelines are established, and a vision of a possible urban development situated in Monaco is proposed.

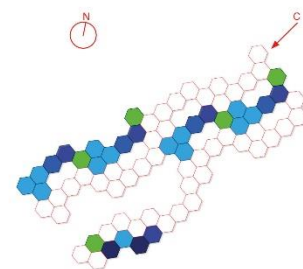
The methodology adopted combines a detailed literature review with a clear practical application of acquired knowledge. The ultimate goal is to contribute to the understanding of how floating platforms can be used to create new forms of urban development, identifying their potential and challenges.

#### Context Guidelines



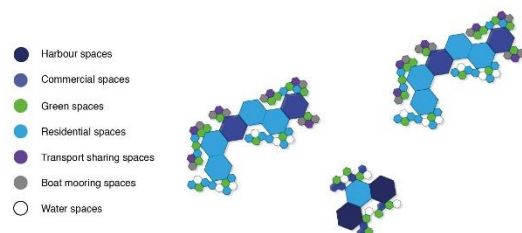
#### Context and Design Guidelines

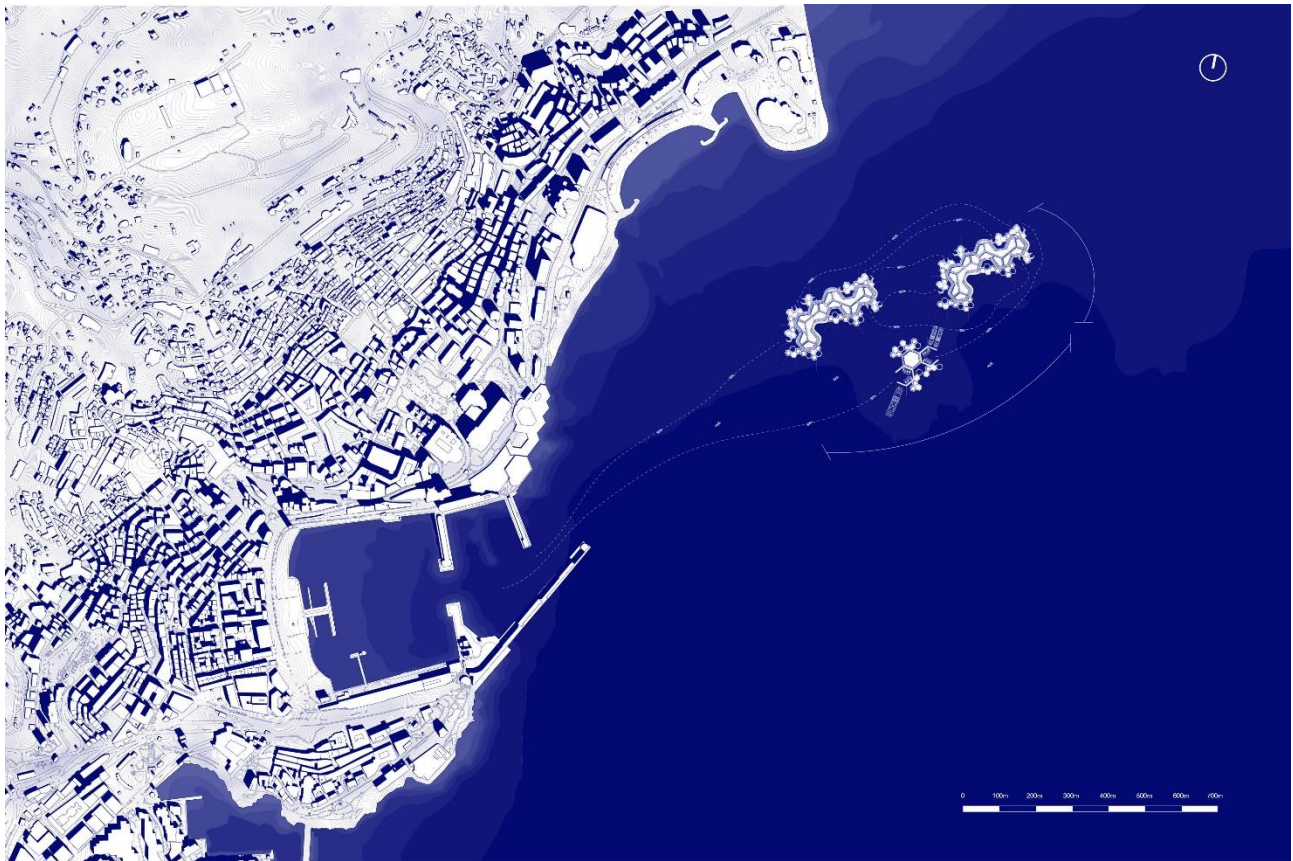
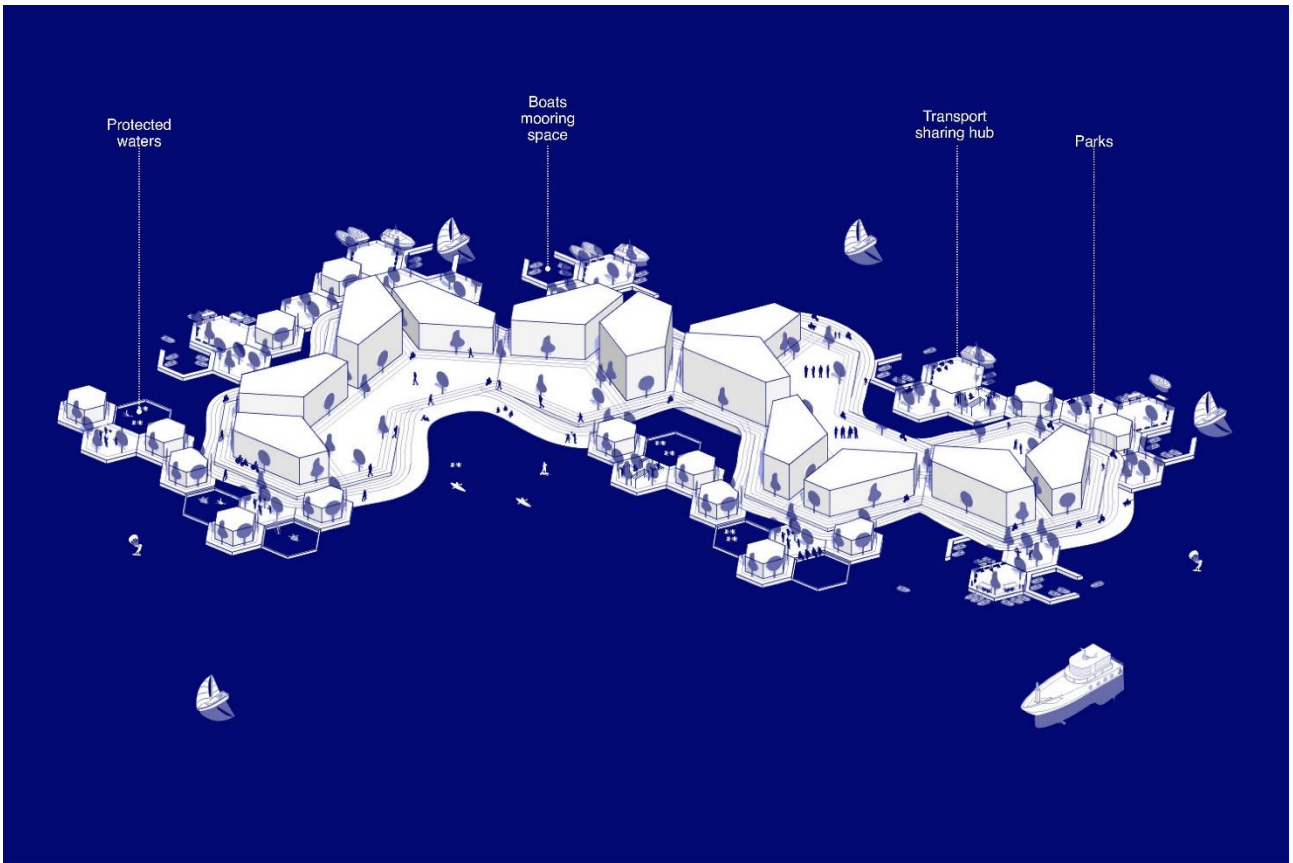
- Narrow and elongated shape
- NE and current orientation
- 'Ramified' aggregation
- Ensure air-water interface



#### Guidelines for Urban Quality

- Urban density
- Diversification of spaces
- Diversification of functions





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