



**Politecnico
di Torino**

Honors Thesis

Master's degree Science in Architecture Construction City

Abstract

In-Between.

Bridging Earth to the Moon with the architectural project.

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“In-Between” investigates the theme of space architecture, with a particular focus on the design process and the creation of a lunar settlement.

For several years, numerous studies have supported the idea of humans returning to and potentially permanently residing on the Moon.

This has brought about the need to explore the architectural aspect of the endeavor.

Within an engineering-focused context, I attempted to shift the perspective from a general and finite view of space projects to an analysis of the lunar settlement as a composition of specific processes culminating in an architectural design.

In this context, the thesis is structured as an investigative journey to establish a connection between the technical and engineering aspects and the socio-cultural dimensions inherent in architectural design.

The thesis aims to explore how human beings, in such a rigid and highly engineered context, can once again become a fundamental factor and not just a tool of science, through the lens of architectural design.

To overcome engineering influences, a broader and more strategic vision is proposed, which integrates them, along with a transversal and open approach to different scales. This work strives to establish a methodological framework to guide upcoming projects within lunar environments. It introduces an array of innovative tools to comprehend, interpret, and oversee lunar initiatives, encompassing geopolitical, technical, and architectural dimensions.

Significantly, the thesis provides guidelines derived from an exhaustive documentary study covering both macro and micro-scale considerations. This involves a thorough examination of the interaction with concurrently planned projects in the same lunar area, the necessary technical infrastructures, and the topographical features of the lunar terrain. (Figure 1)

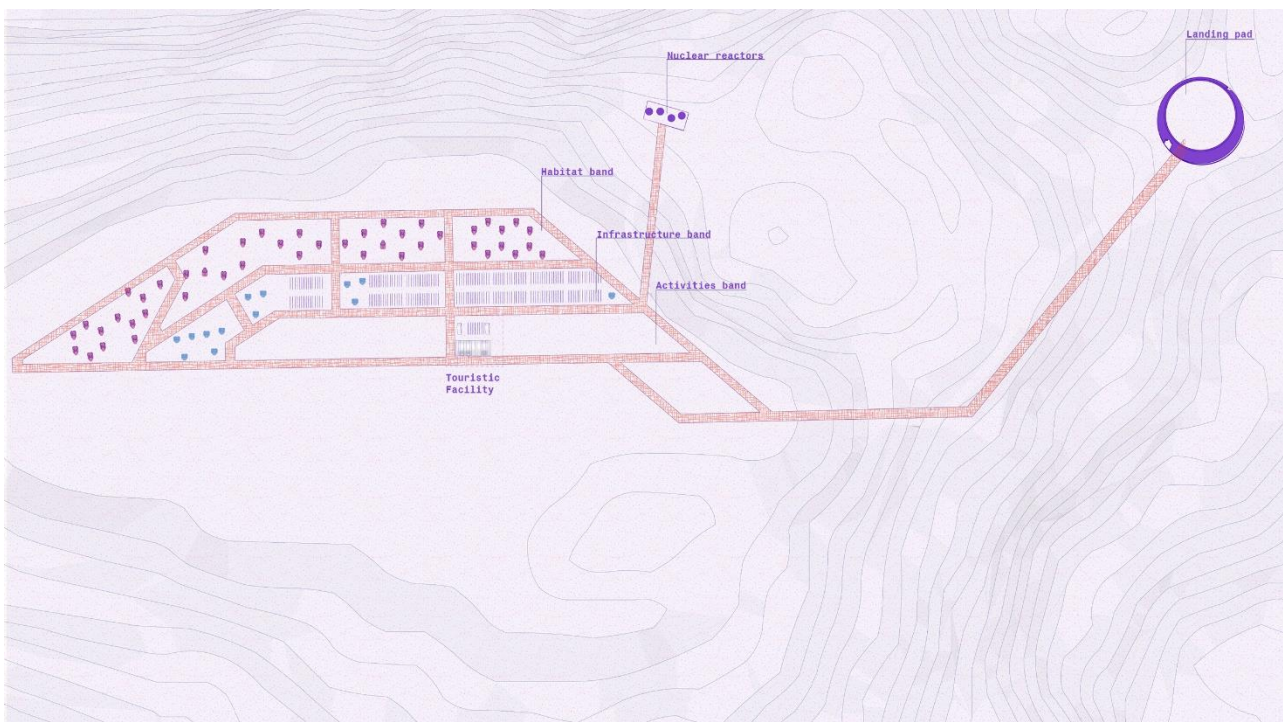


Figure 1. Masterplan

Architectural analyses are also conducted, presenting technical details such as dimensions for individual environments, while simultaneously delving into reflections on the human factor. (Figure 2)

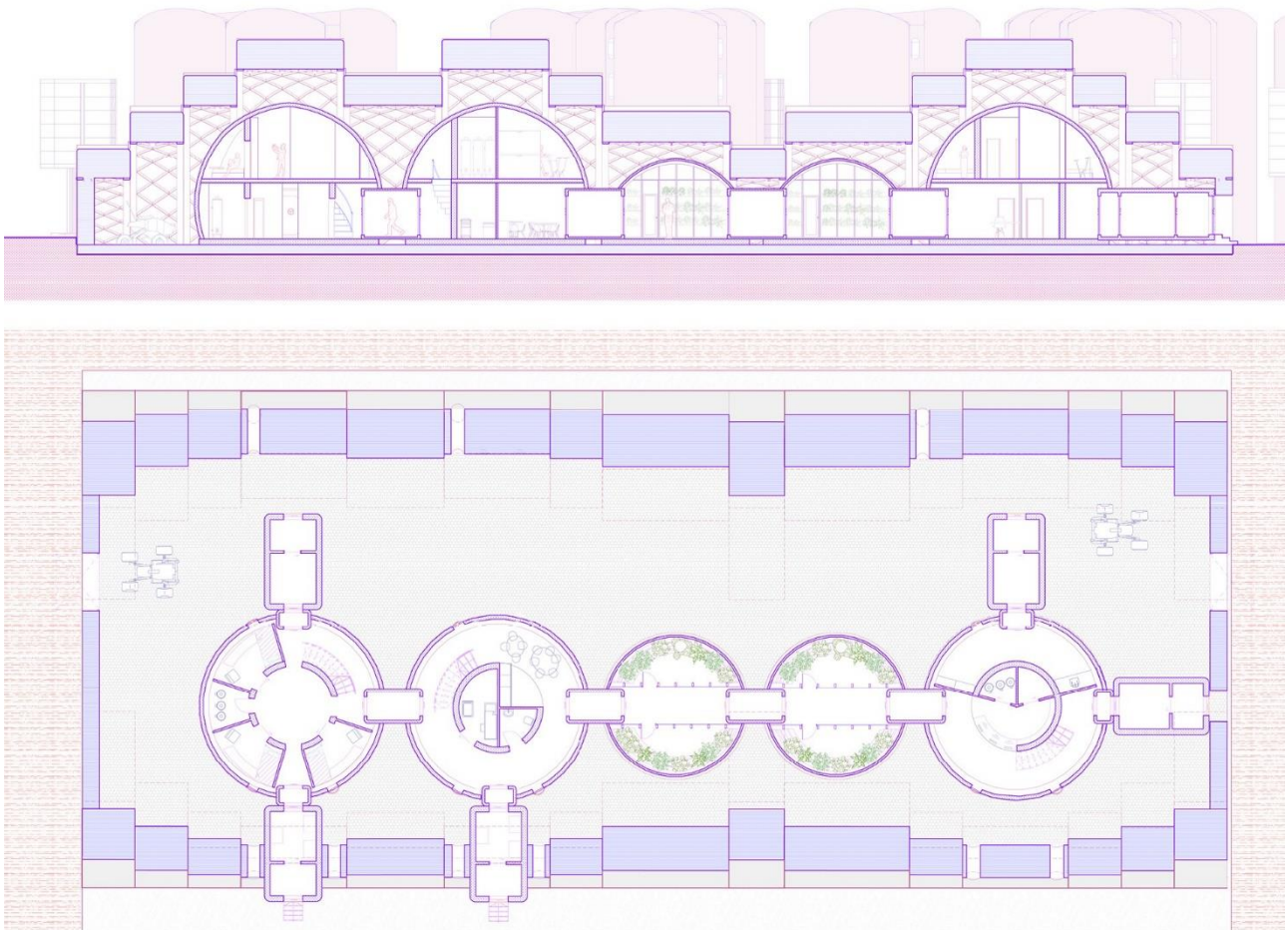


Figure 2. Floor plan and section of the final design

This necessitates a reassessment of concepts that are clear and well-defined on Earth but require reconsideration in the lunar context. Nevertheless, the investigation remains incomplete, with certain questions left open for potential future discussions.

Mapping has been a vital tool for spatializing the emerging issues, demonstrating how each choice emerged from intrusions and negotiations. (Figure 3)

This is because the project's purpose is not to recognize itself in the authorship of the designer but in their ability to continuously engage with the issues inherent to the location. Space architecture provides the opportunity to critically rethink the design and architectural conventions we unwittingly adopt on Earth. Creating an atlas that narrates not only the final design of a lunar tourist infrastructure, but also all the intermediate steps necessary to arrive at the final proposed project. The thesis is viewed as an infinitely implementable tool that establishes specific points, providing a novel set of instruments that aid in understanding the design.

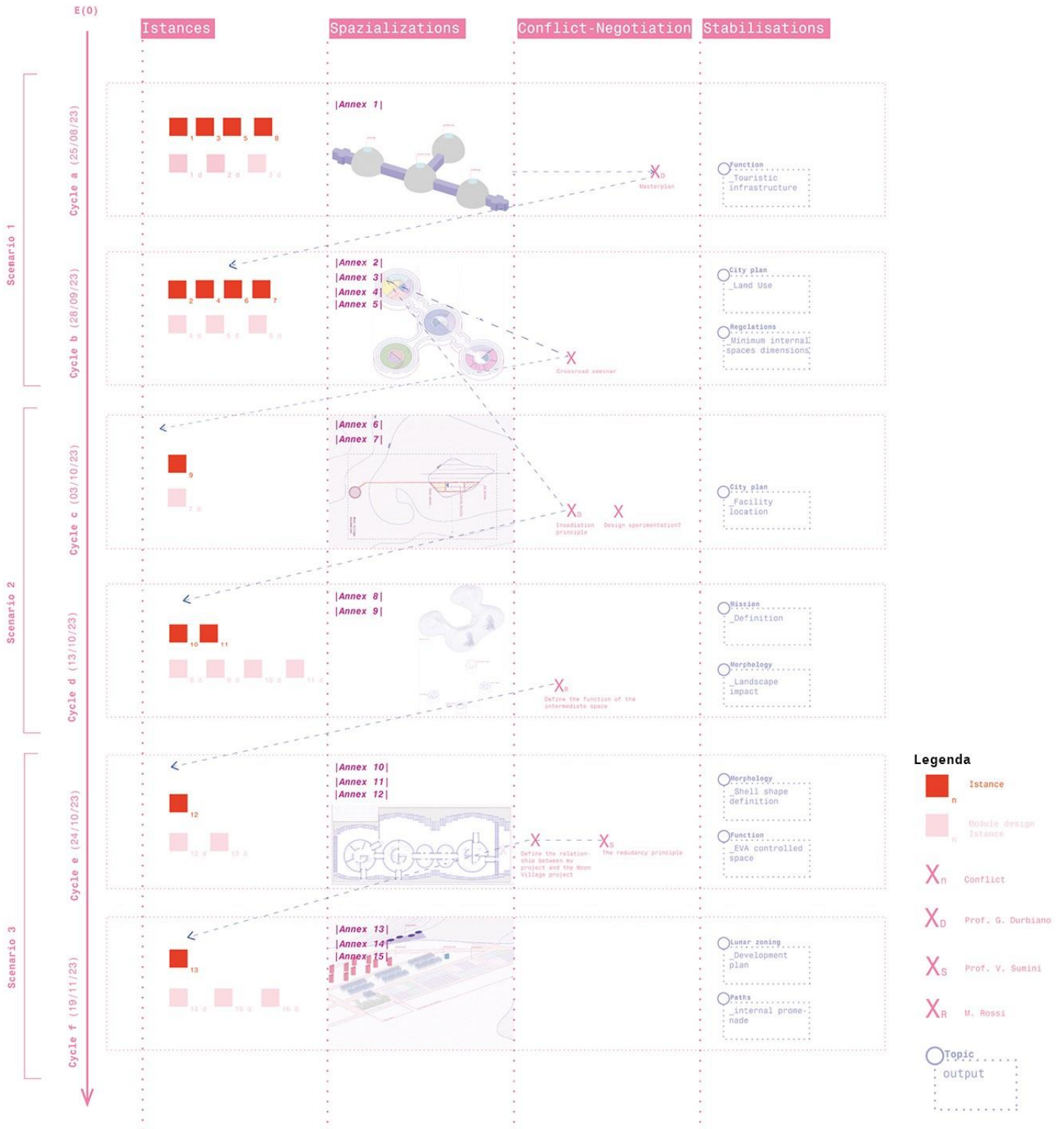


Figure 3. Design process diagram

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