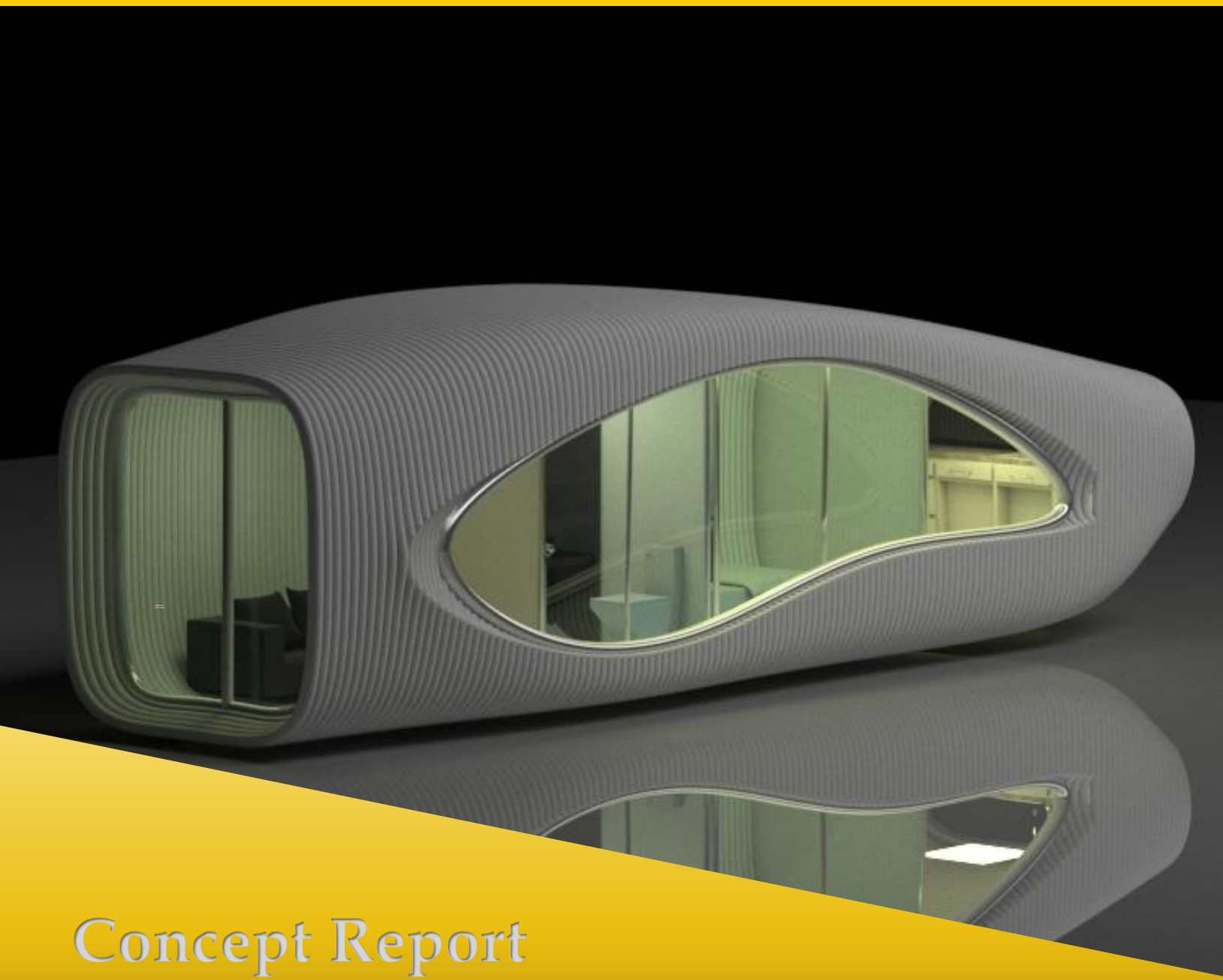
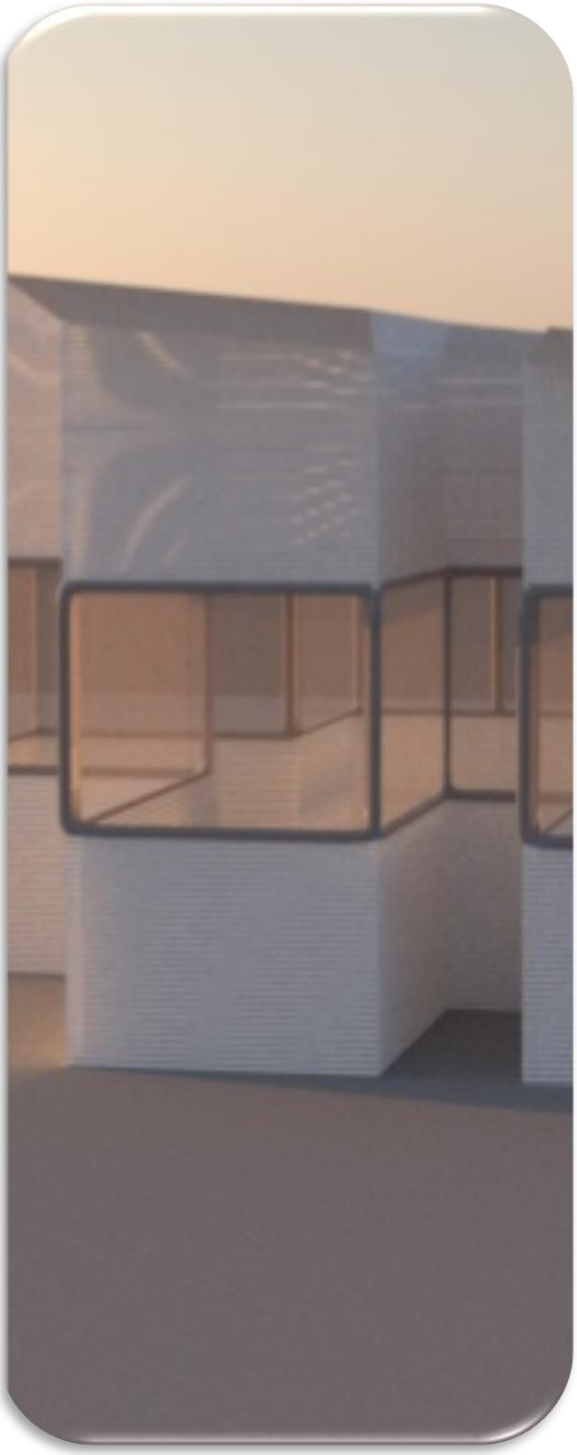
Portable Small House Designs
3D Printed Concepts



Concept Report
"AUG 2024"

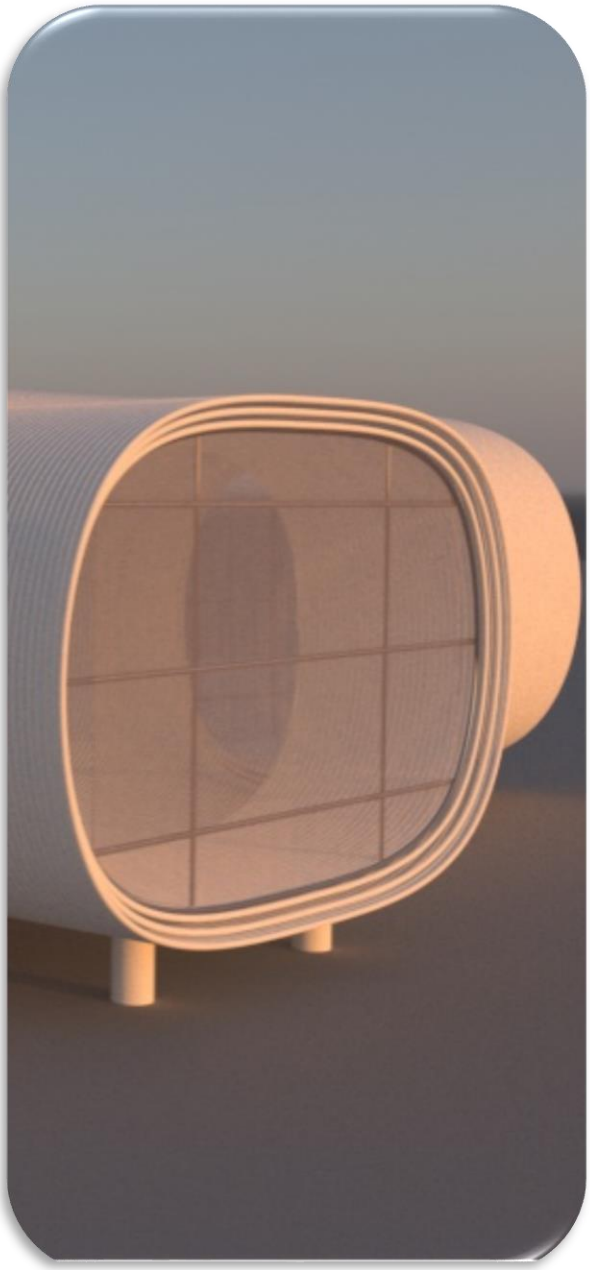
INTRODUCTION

The consideration of designing 8 innovative concepts for constructing small homes with mobility, customization, and adjustable dimensions. At the core of project is the innovation of creating small homes that combine functionality, sustainability, and aesthetic appeal through the utilization of 3D printing. Each home design is meticulously crafted to reflect the distinctive tastes and requirements of the homeowner, ensuring a one-of-a-kind living space.



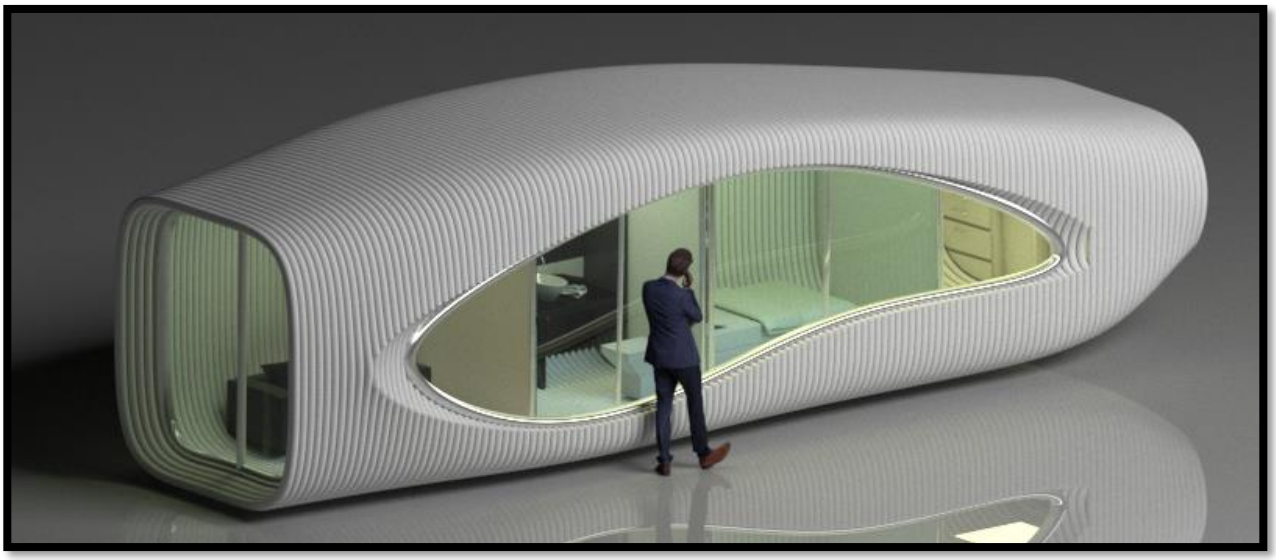
By merging advanced technology with bespoke architectural solutions, we strive to provide a new dimension to small home construction, offering a harmonious blend of creativity and practicality. Our commitment to excellence and innovation drives us to deliver homes that not only meet but exceed expectations, ushering in a new era of modern living.

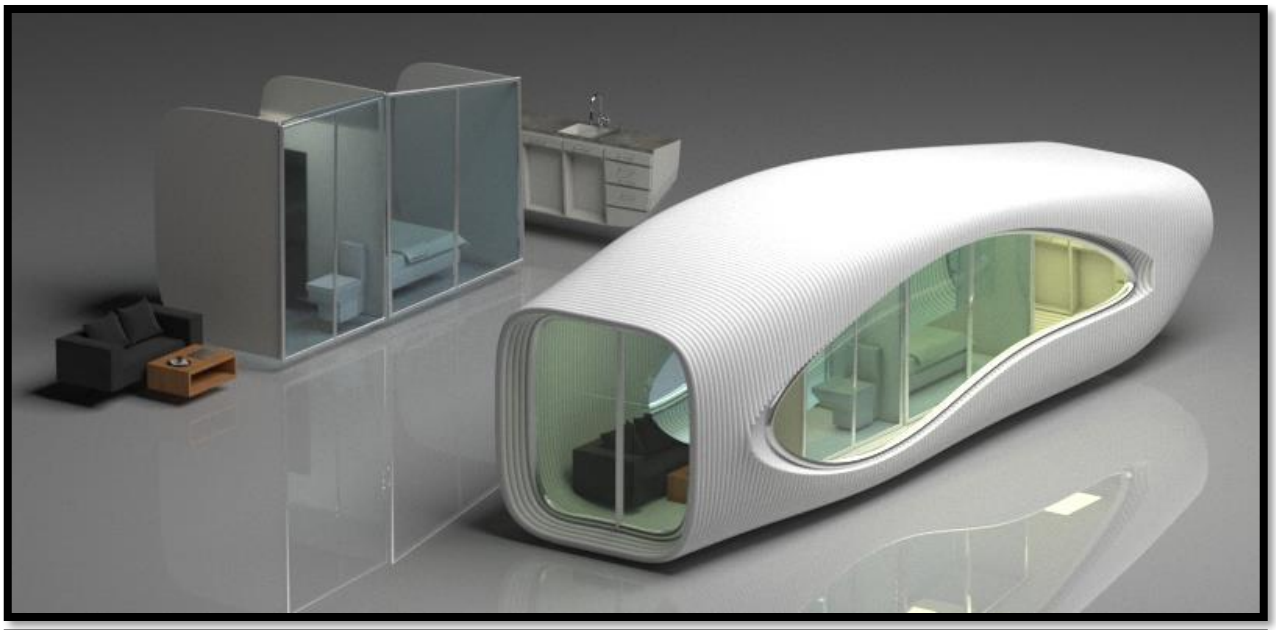
Below are 8 design concepts, each pursuing a unique construction feature from modern shapes to disassembled components.

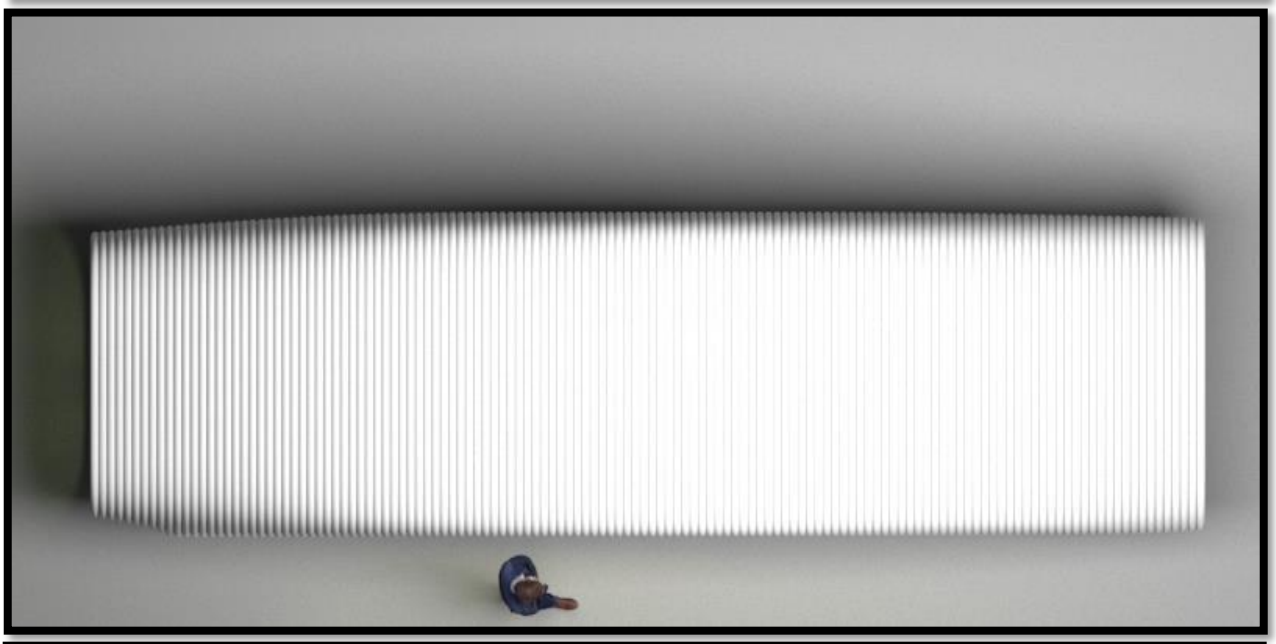


Concept 1

introduction:
This design features a modern appearance, seamlessly integrating essential living spaces such as the kitchen, bedroom, bathroom, and toilet. The design is compact and portable, adhering to standard dimensions for easy transport. One of the standout features of this is its customizable dimensions, allowing customers to tailor the space to their specific needs. Additionally, the design can be 3D printed as a single piece, offering benefits such as streamlined production, reduced assembly time, and potentially enhanced durability.
Possible problem: long duration of 3D printing, dimensions that the printer cannot implement.
Solution to the problem: Splitting the model into two parts, top and bottom.

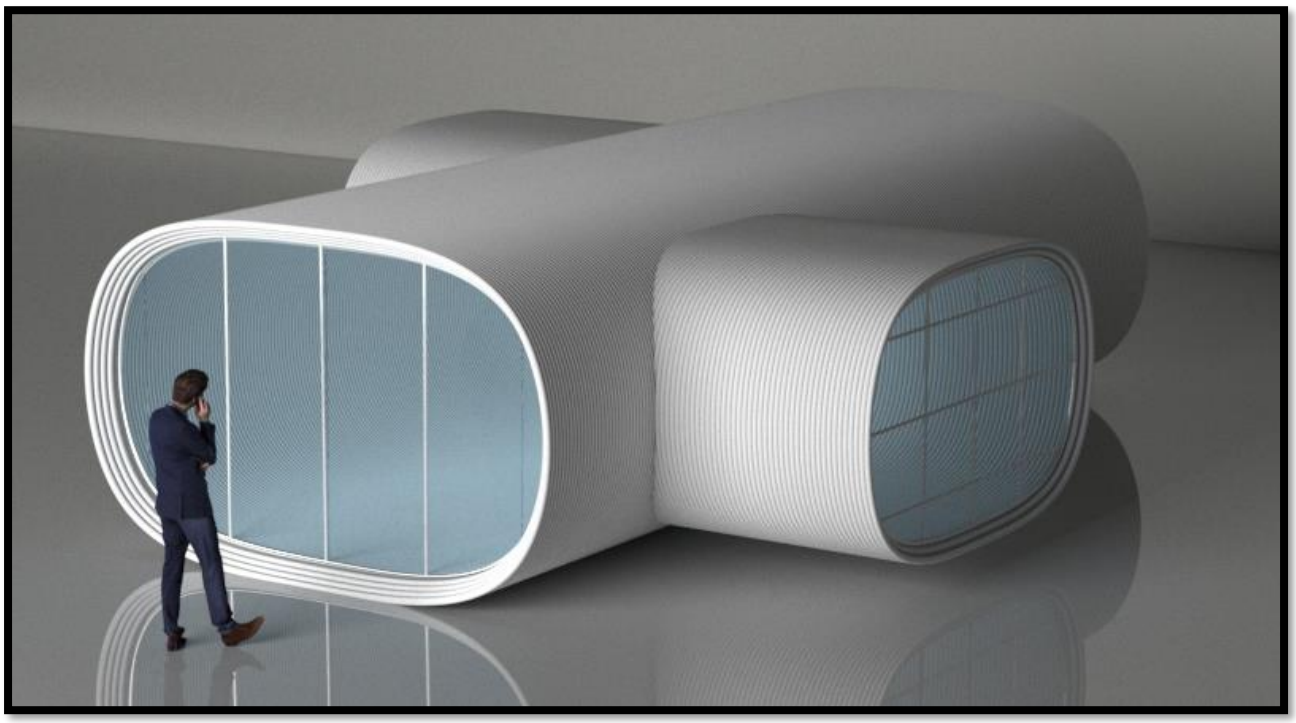


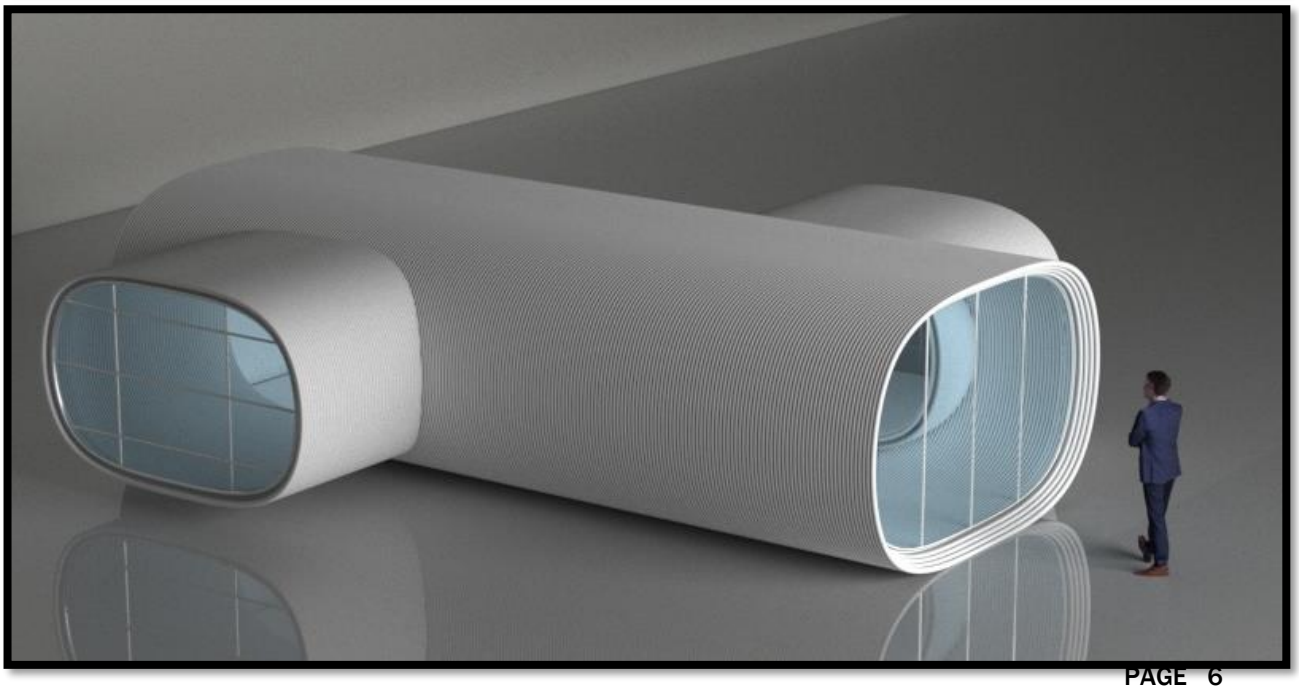


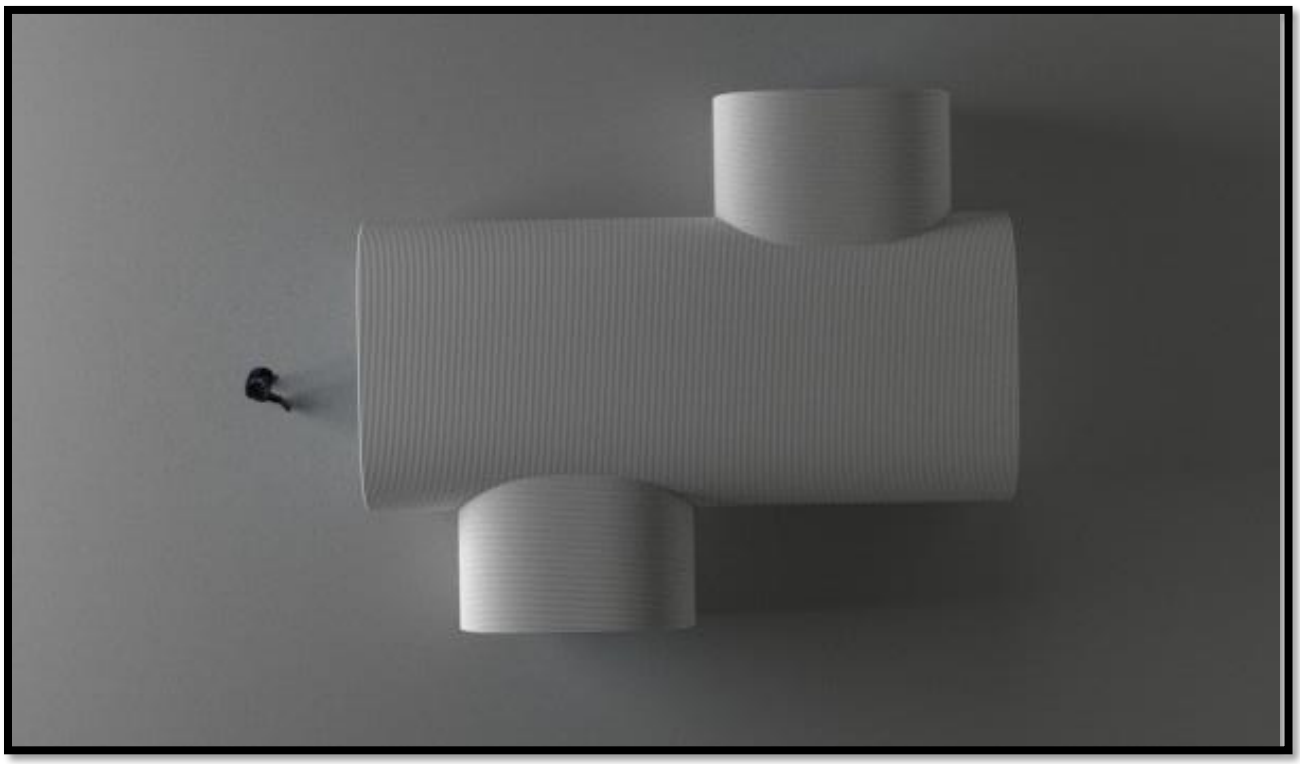


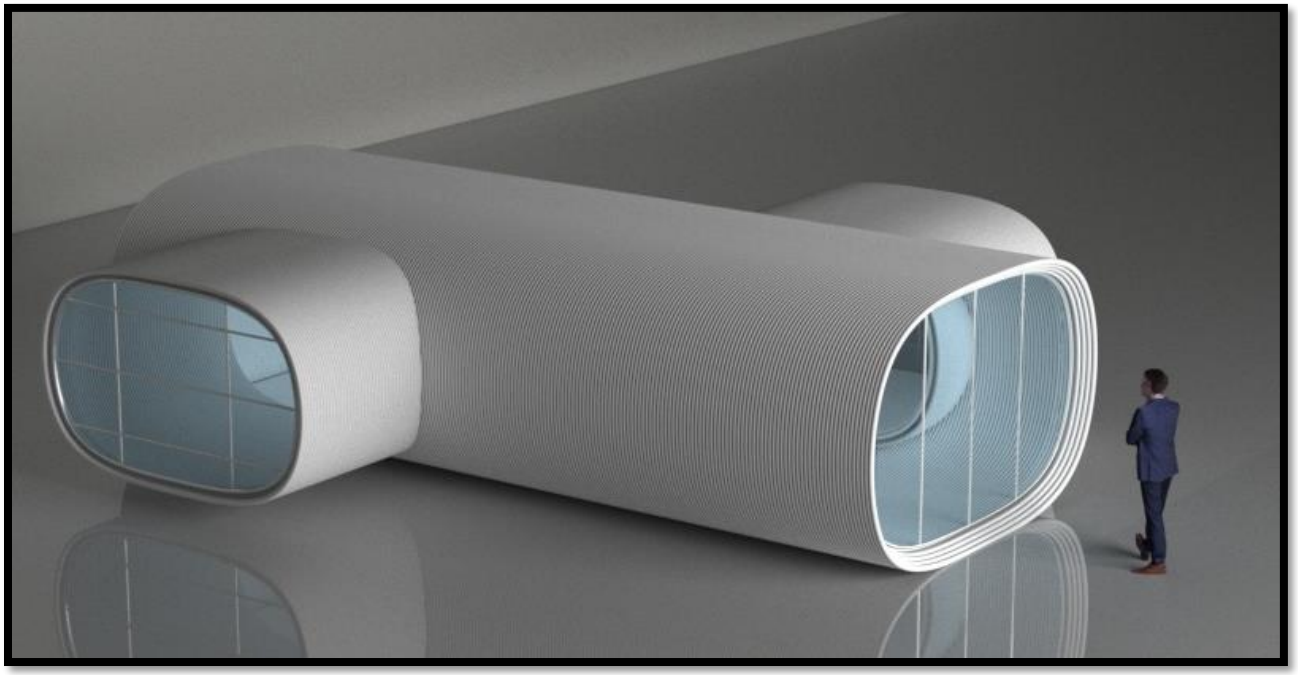
Concept 2

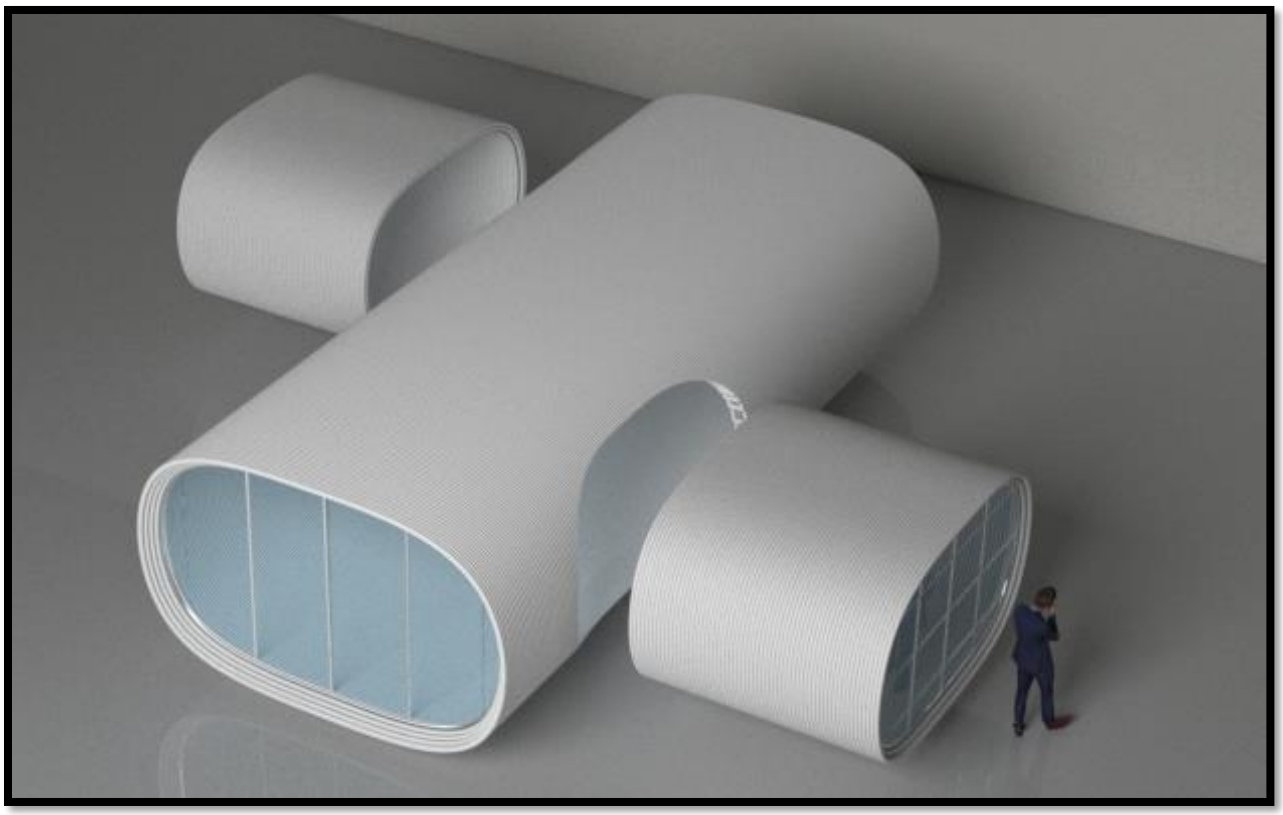
Features:
Introducing a design concept that combines modern aesthetics, modular construction, portability, and adjustable sizing.

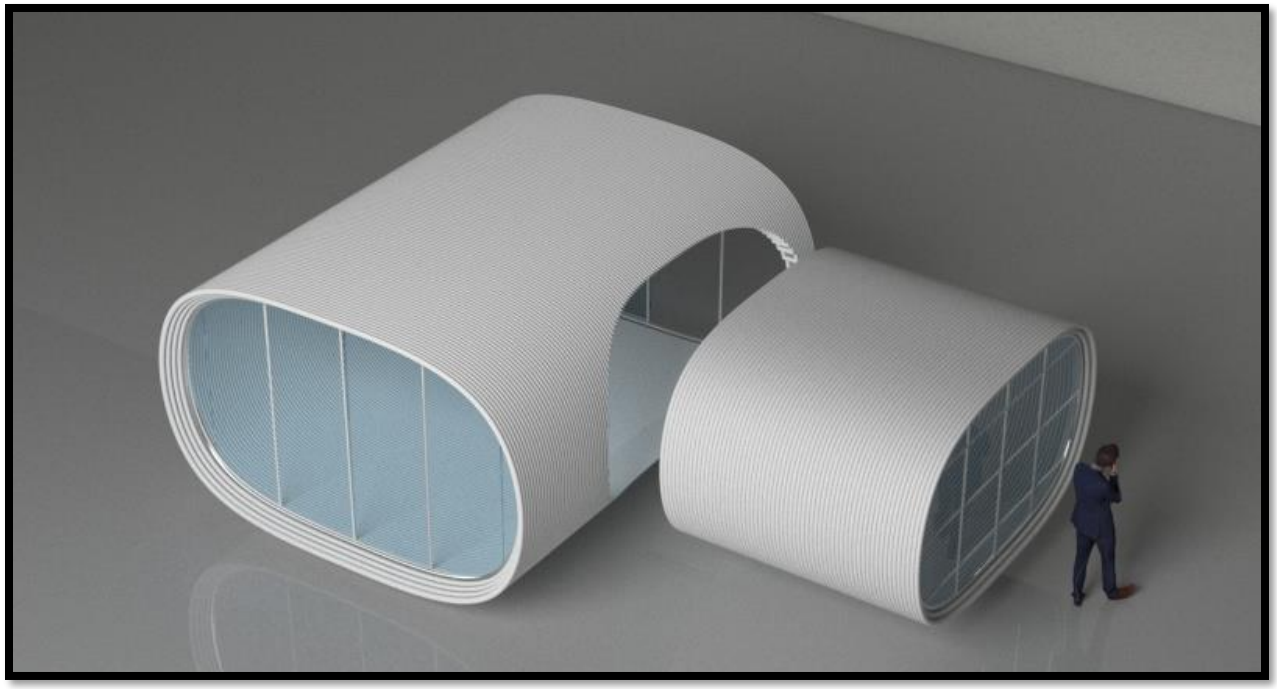






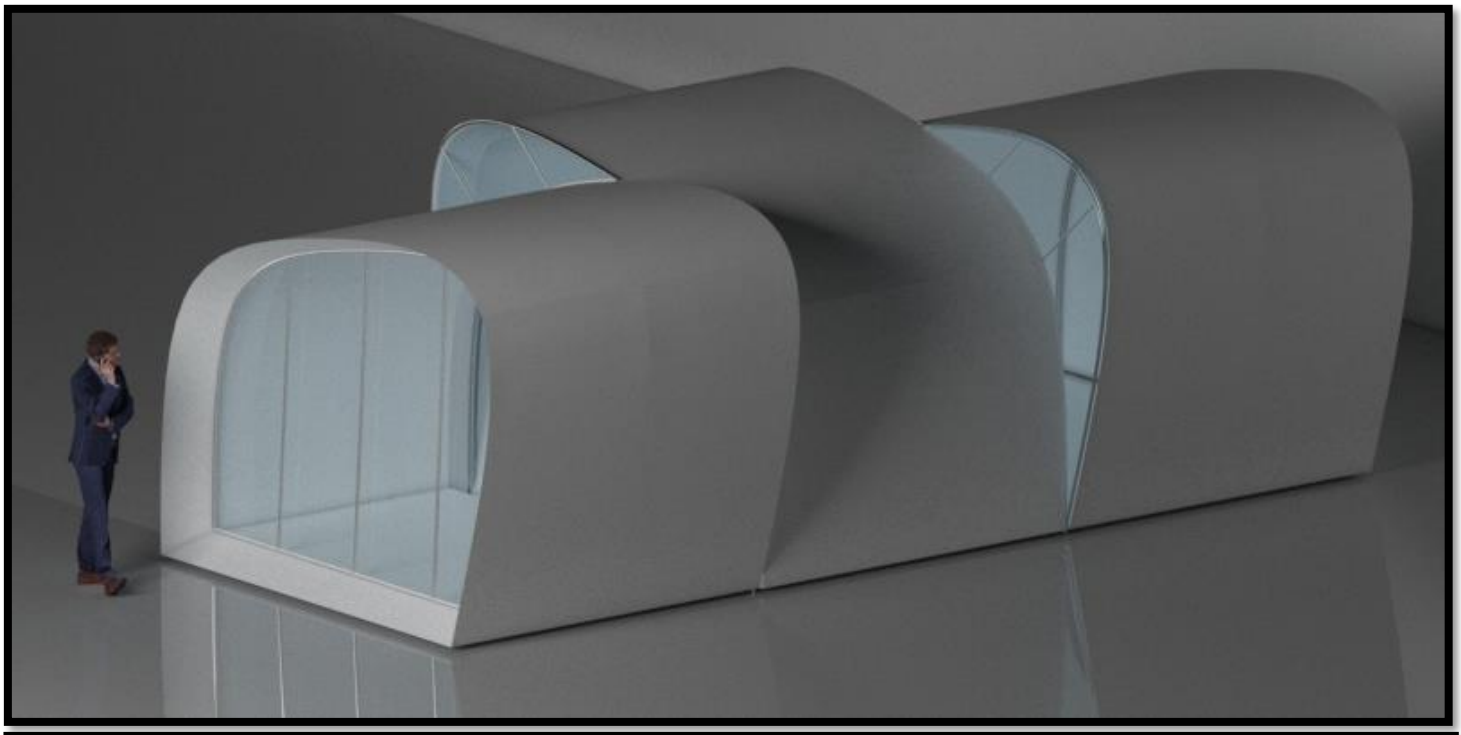


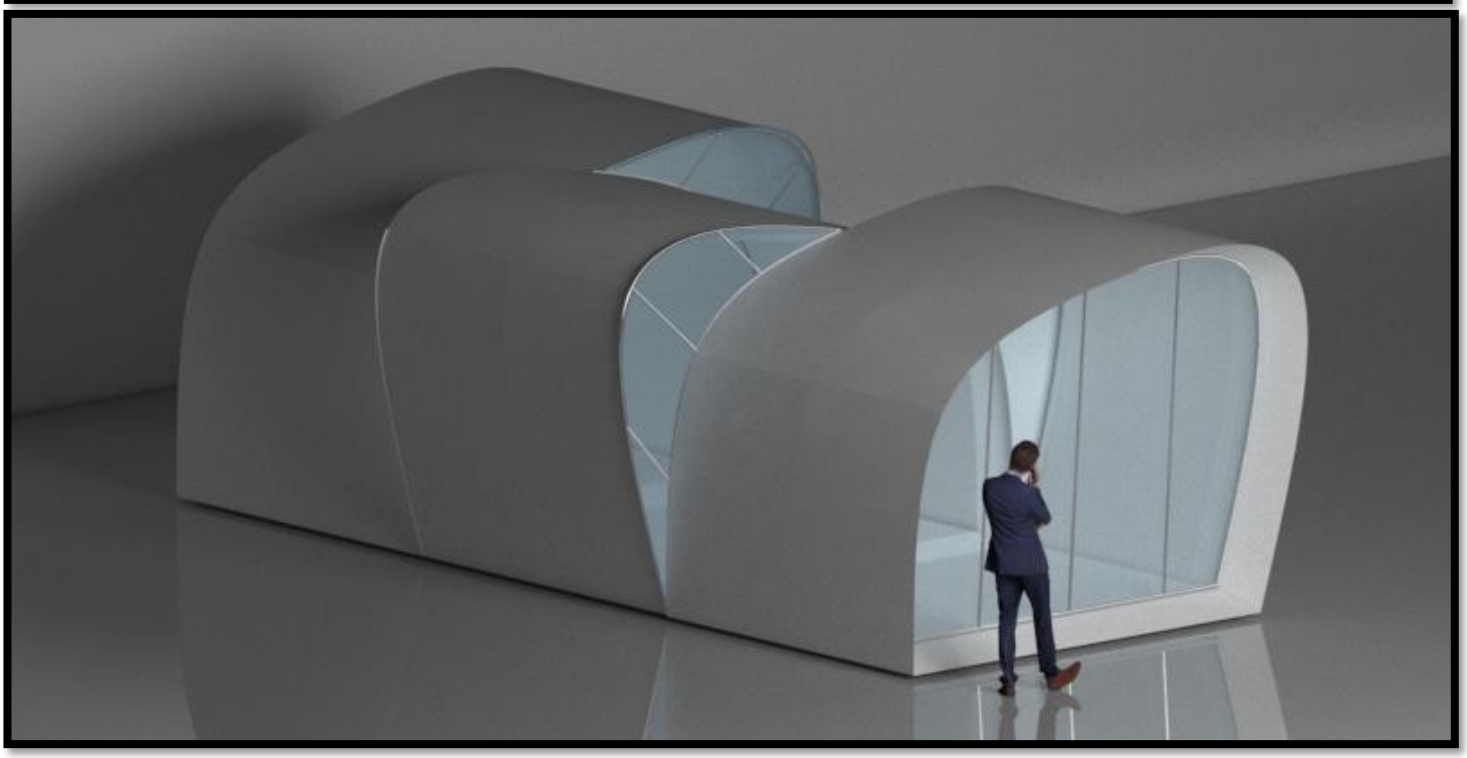


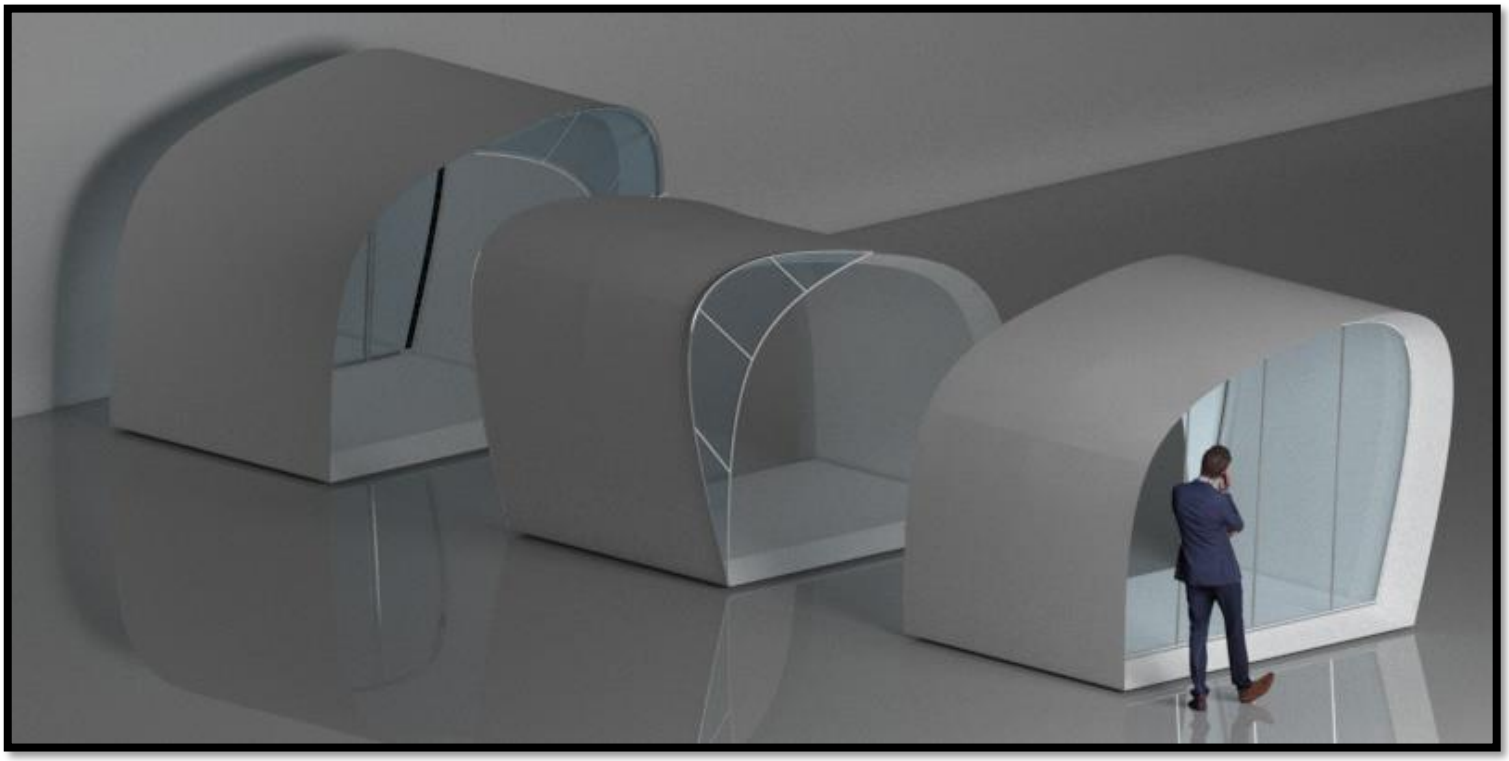


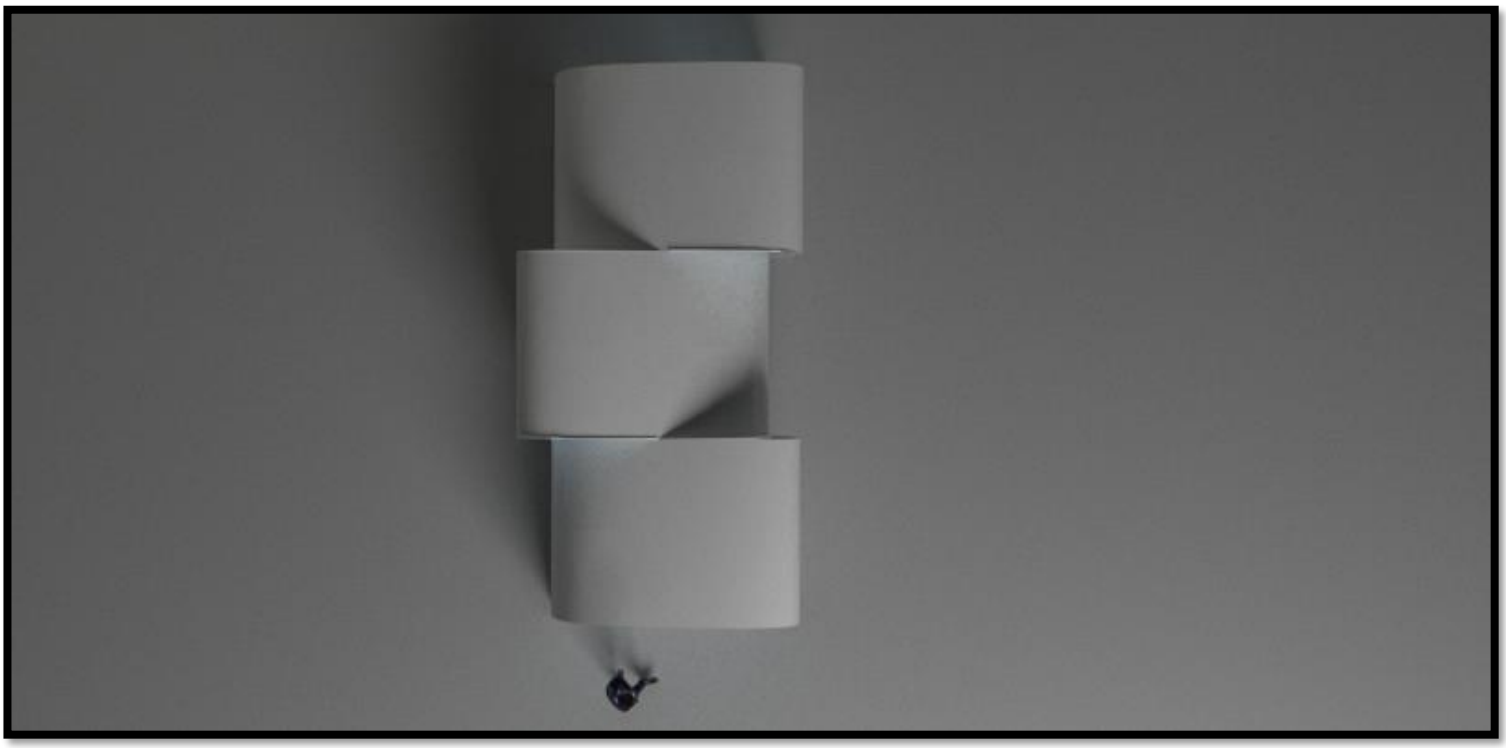
Concept 3

Features:
Introducing the third concept of a small house designed for 3D printing with the following features: modularity, reducing printing time, printing ability and variable dimensions, easy transportation.



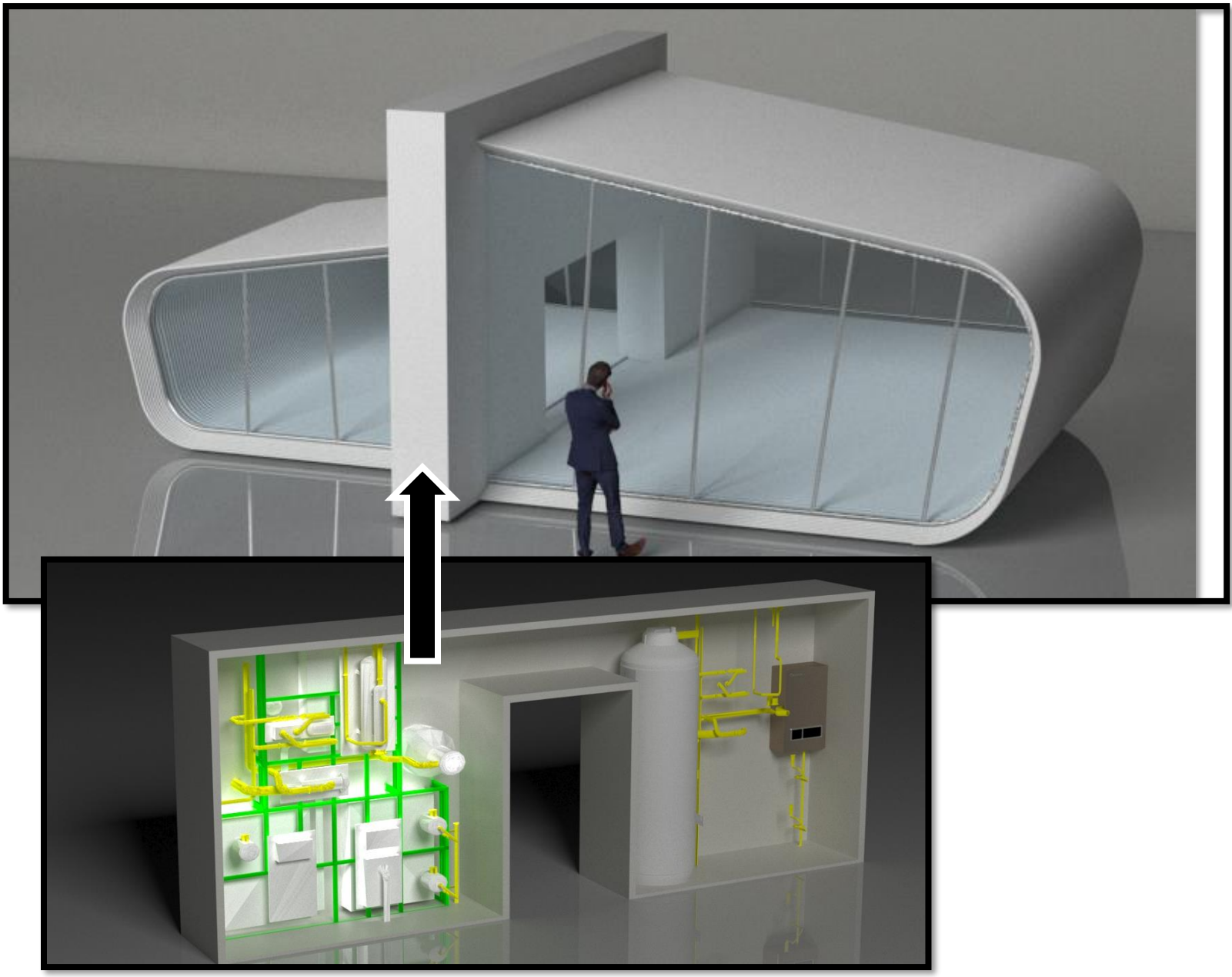


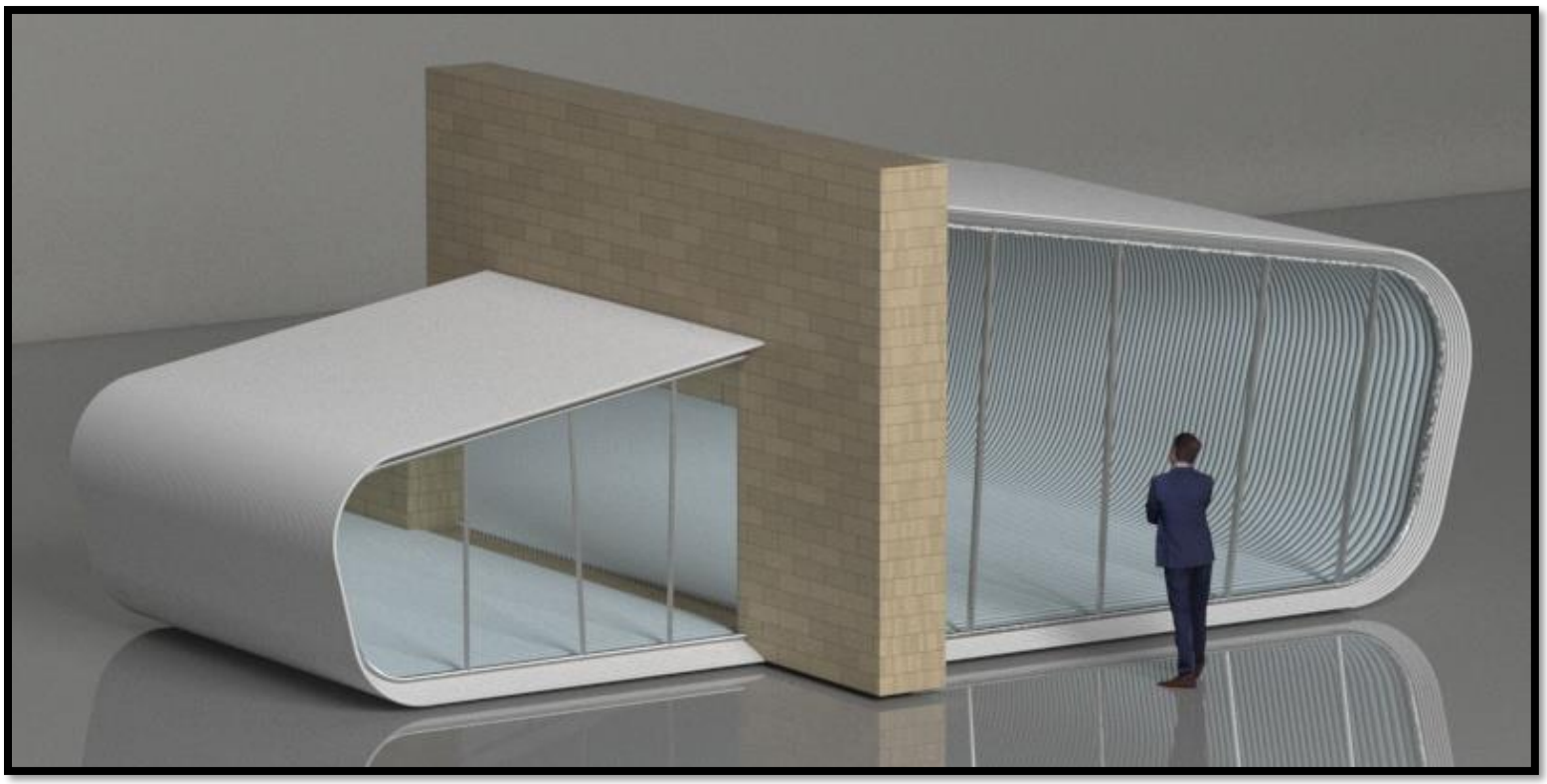


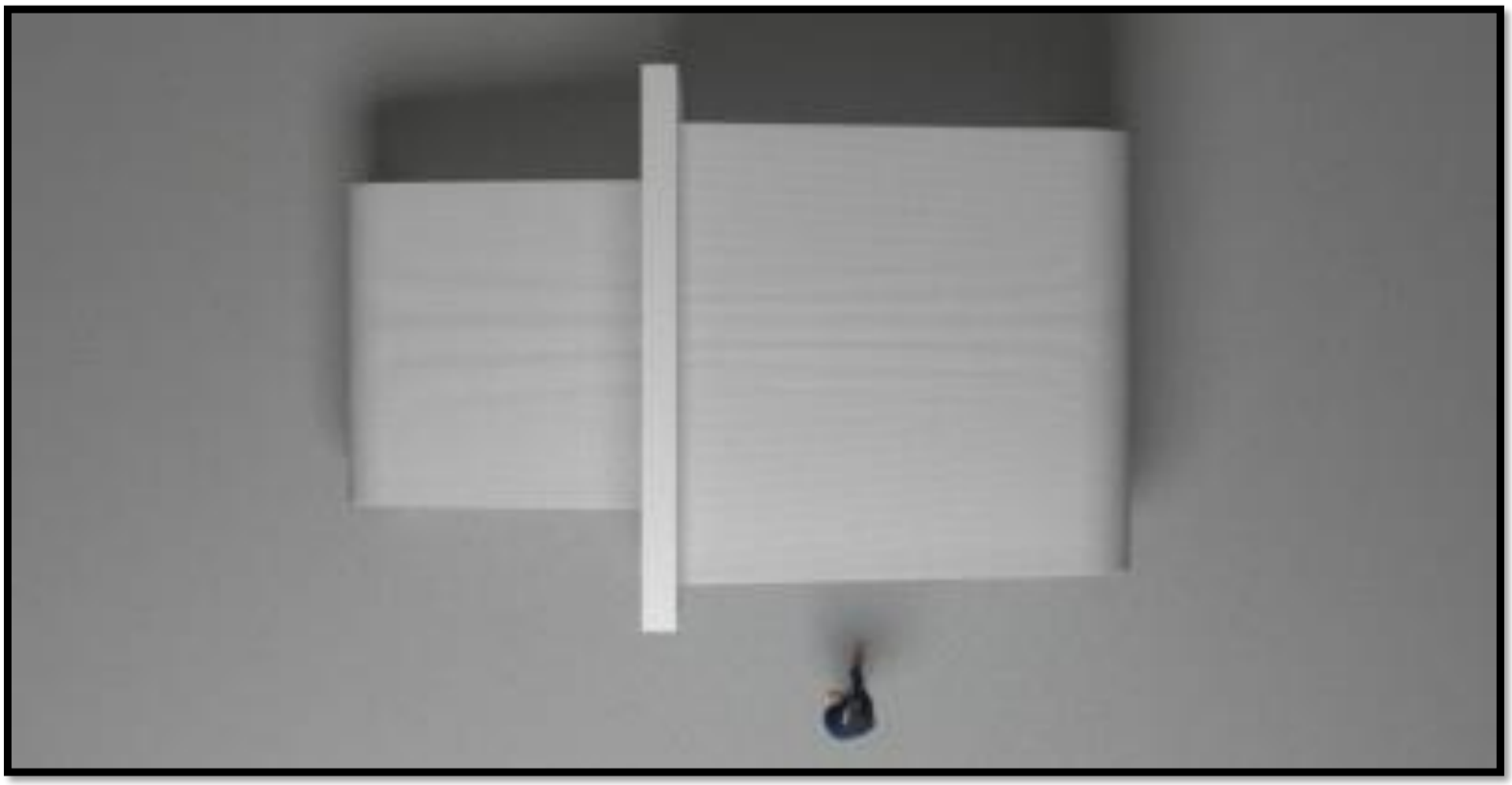


Concept 4

Features: Equipped with a central panel to place the required installation components. It has a separate wall that can be ordered from the utility company where all the facilities needed for the building are located.



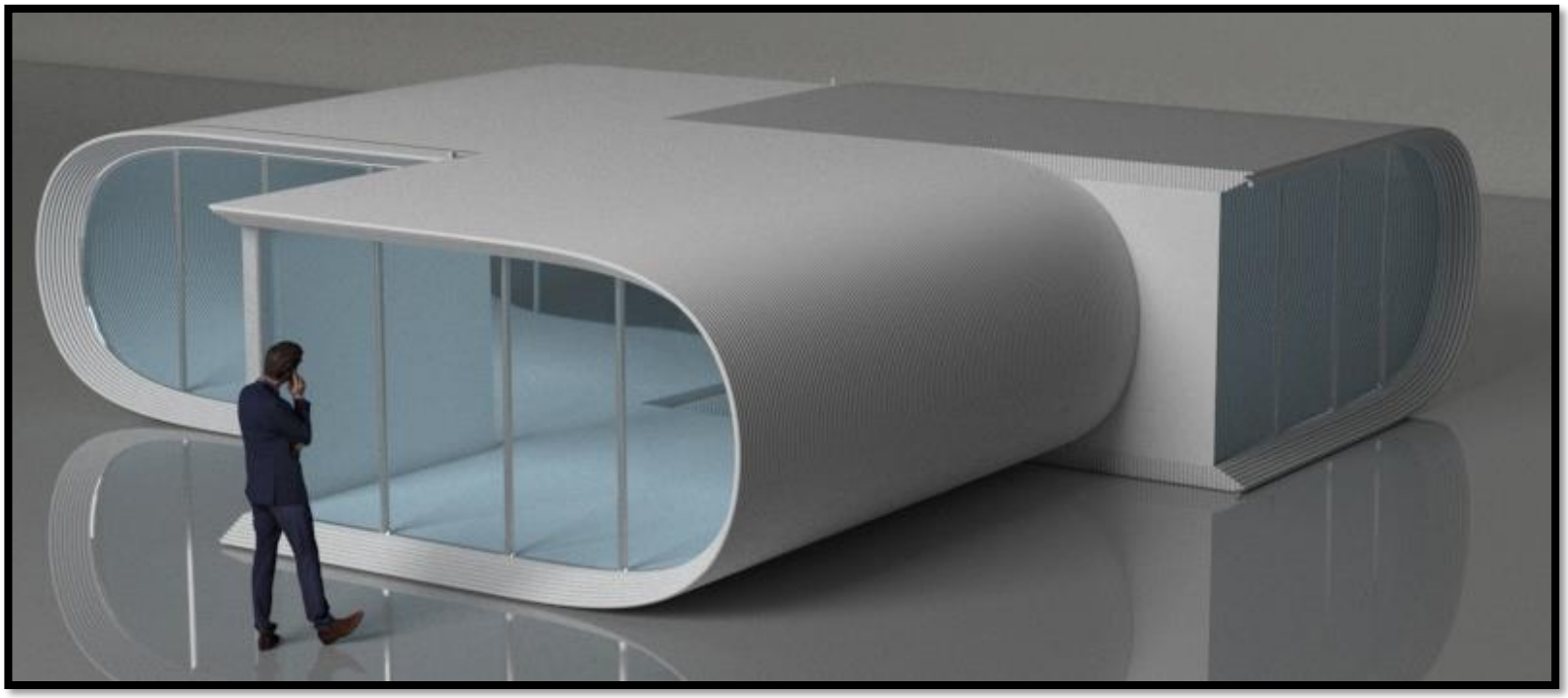


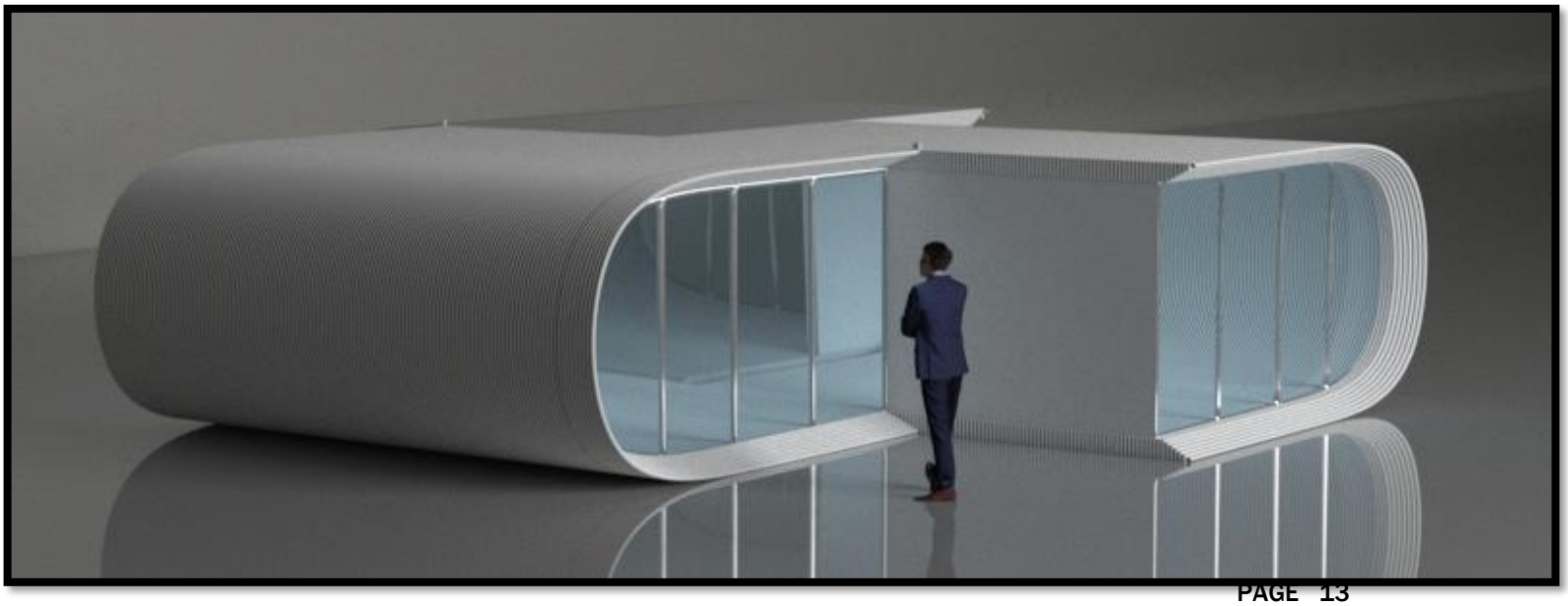


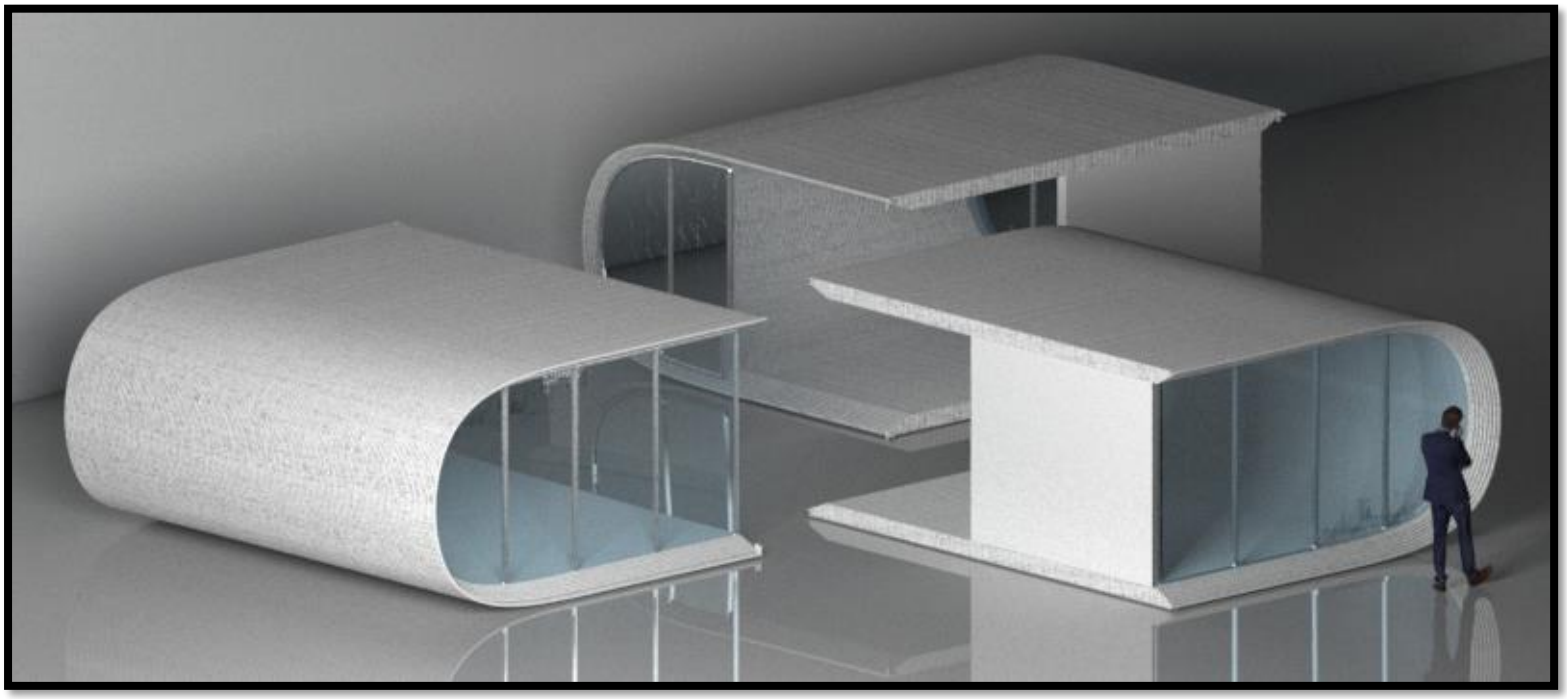
Concept 5

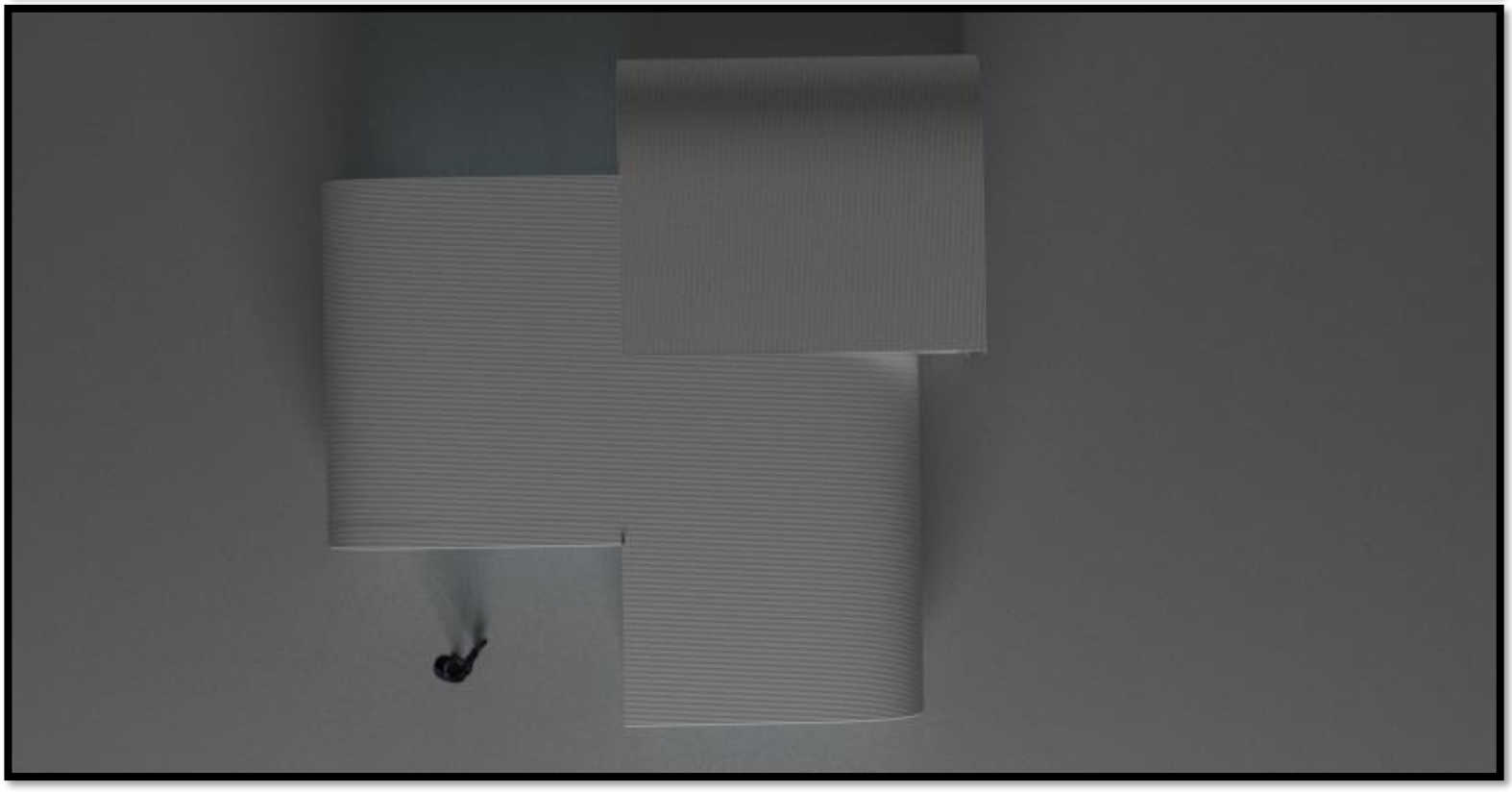
Feature: Modularity, Separate Components

Introducing a model of a small designed for 3D printing, highlighting the characteristics of modularity and separate components for enhanced customization and versatility.





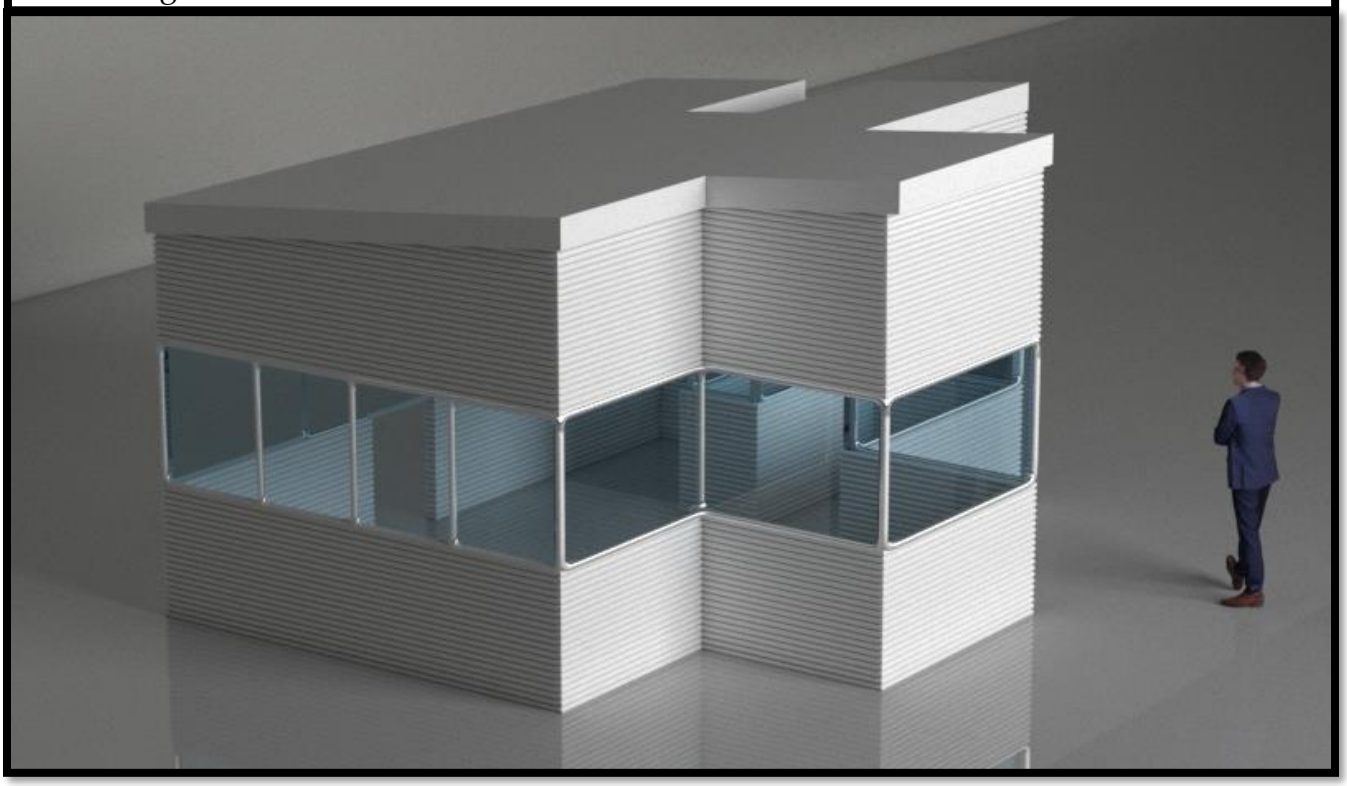


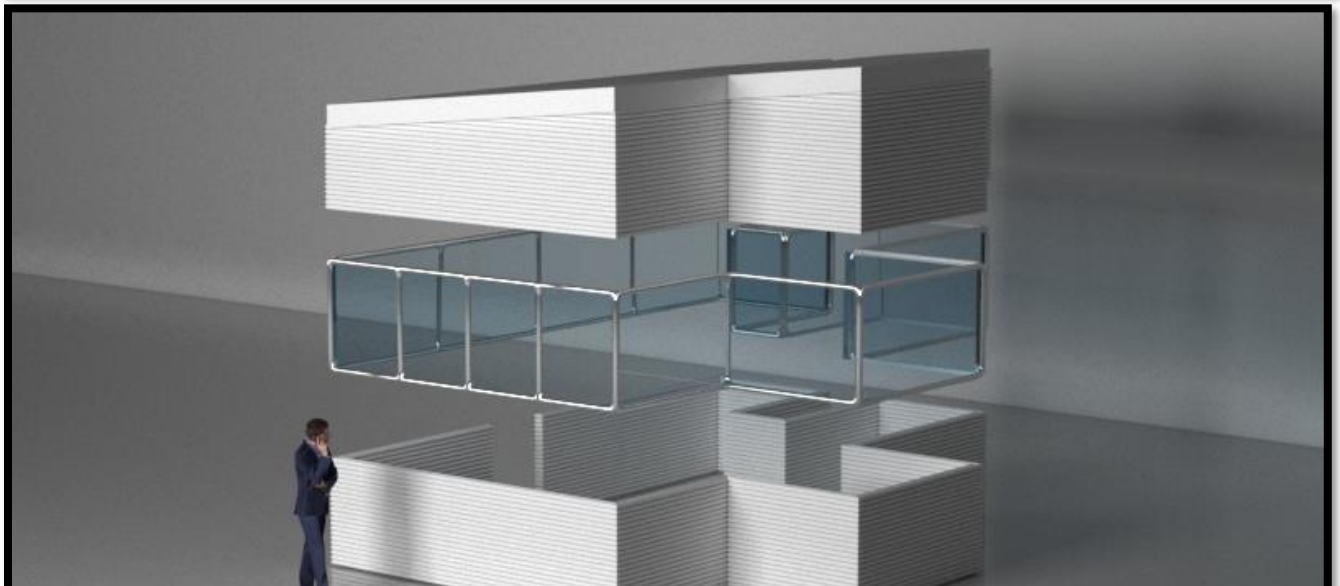


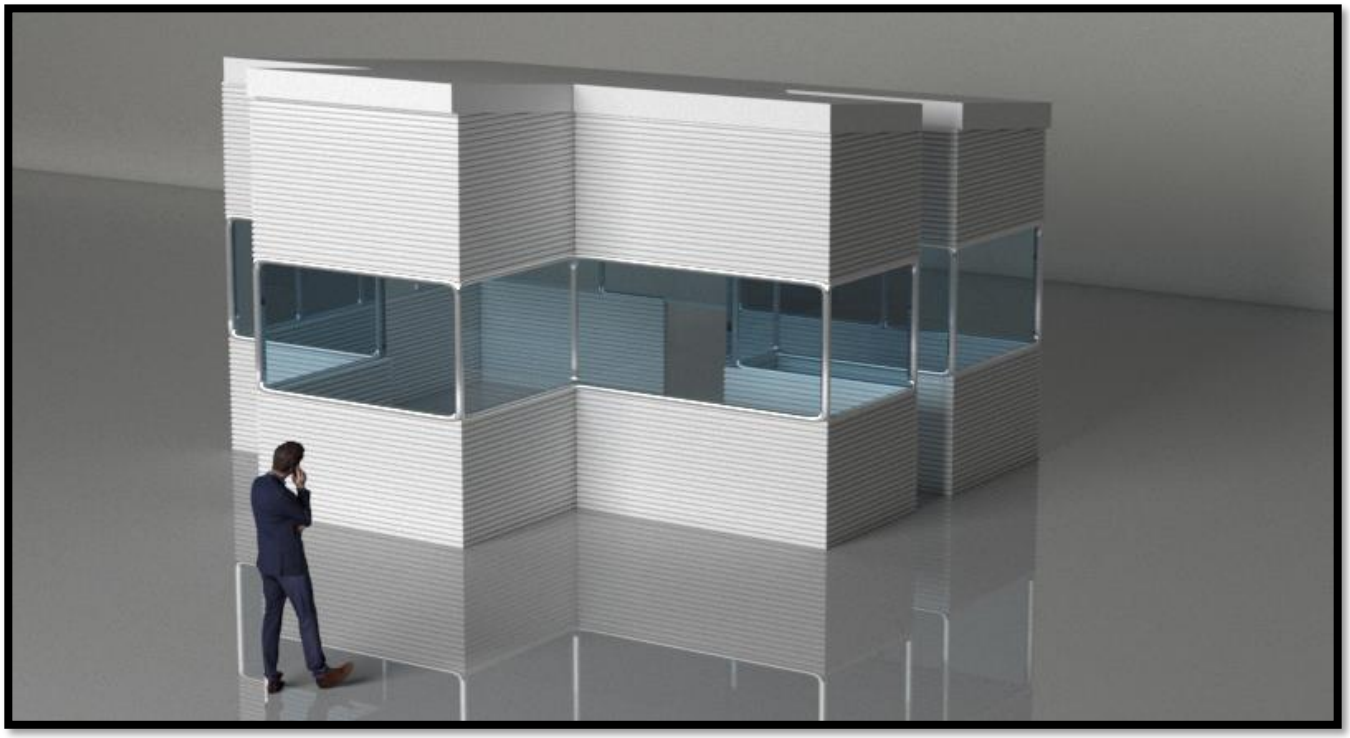
Concept 6

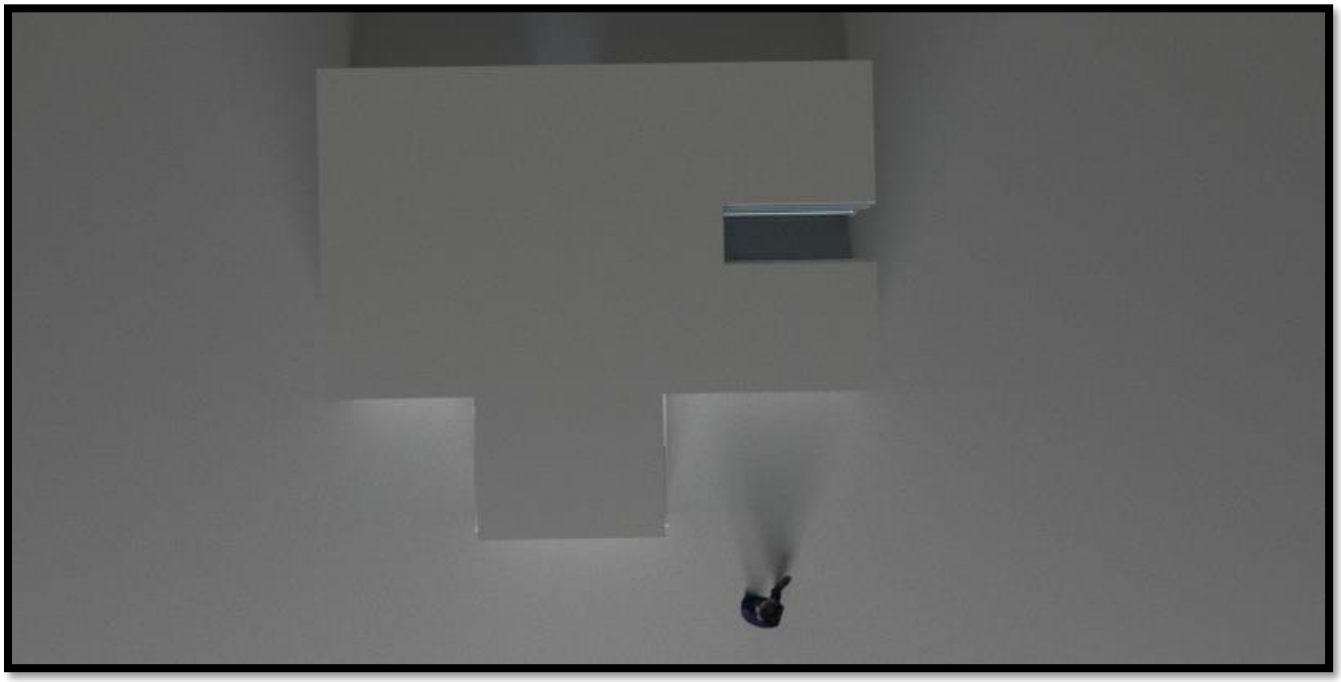
Feature: Printing in three separate, low height per printing stage, multi-component design, design form adaptability, use of different materials for the ceiling.

Introducing a model of a small house designed for 3D printing, characterized by the aforementioned features for printing in three separate stages, low printing height per stage, multi-piece design, design adaptability, and the utilization of varied materials for the ceiling.





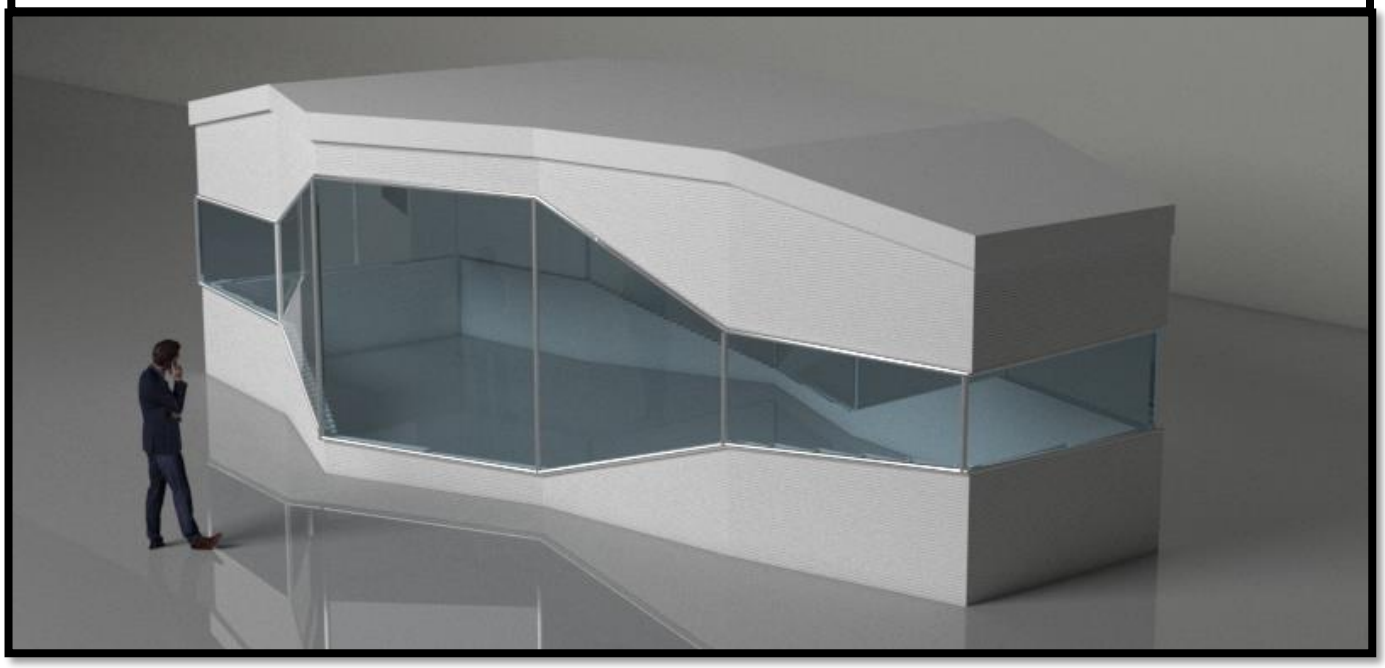


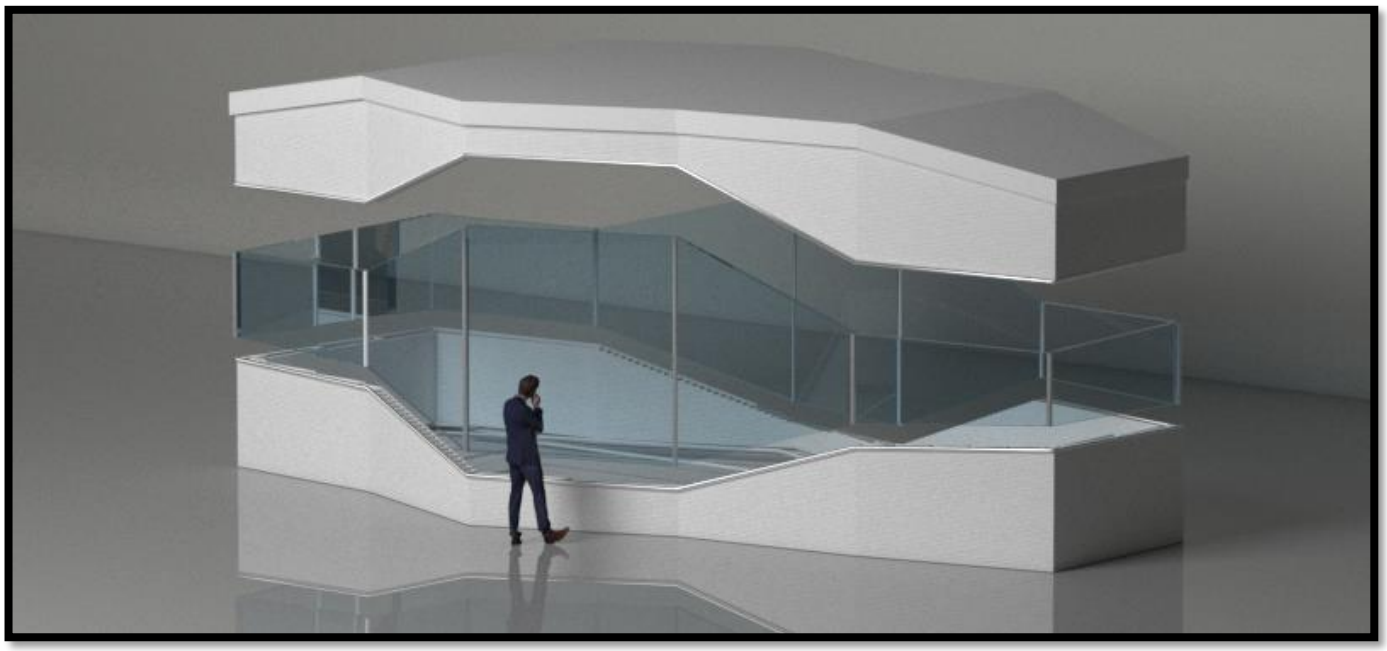


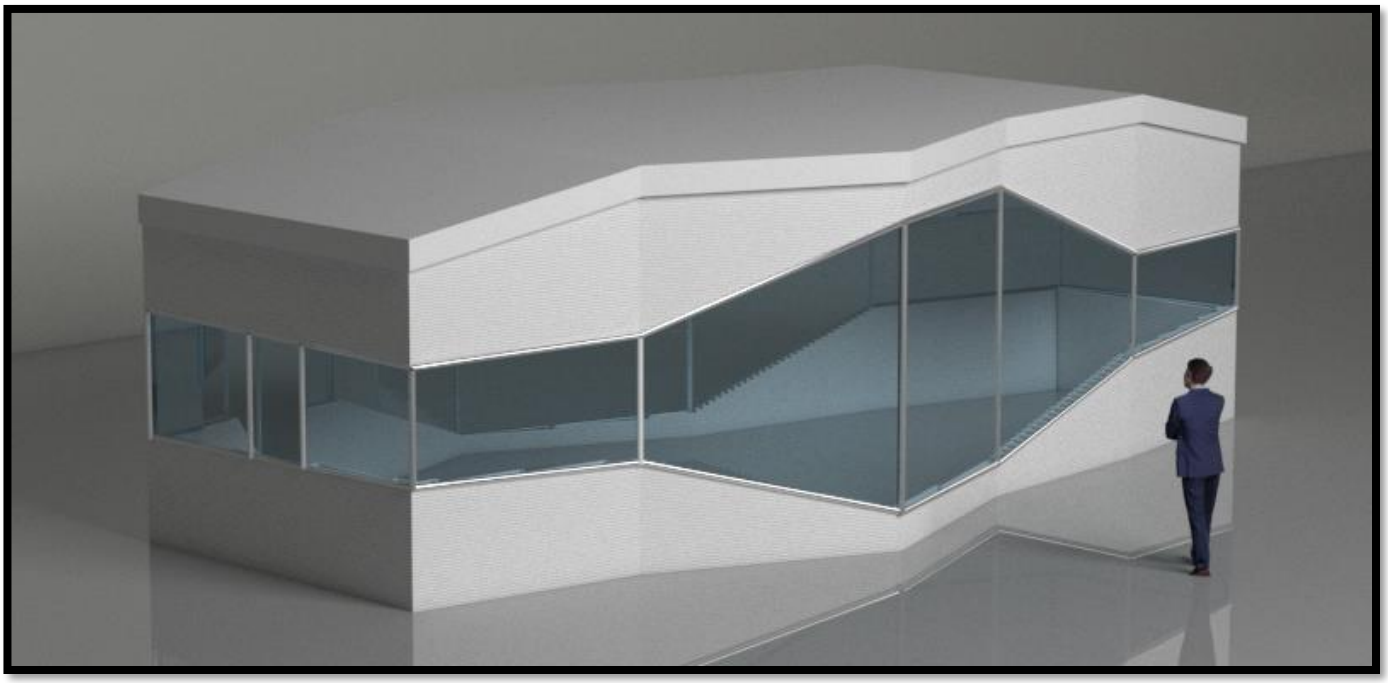
Concept 7

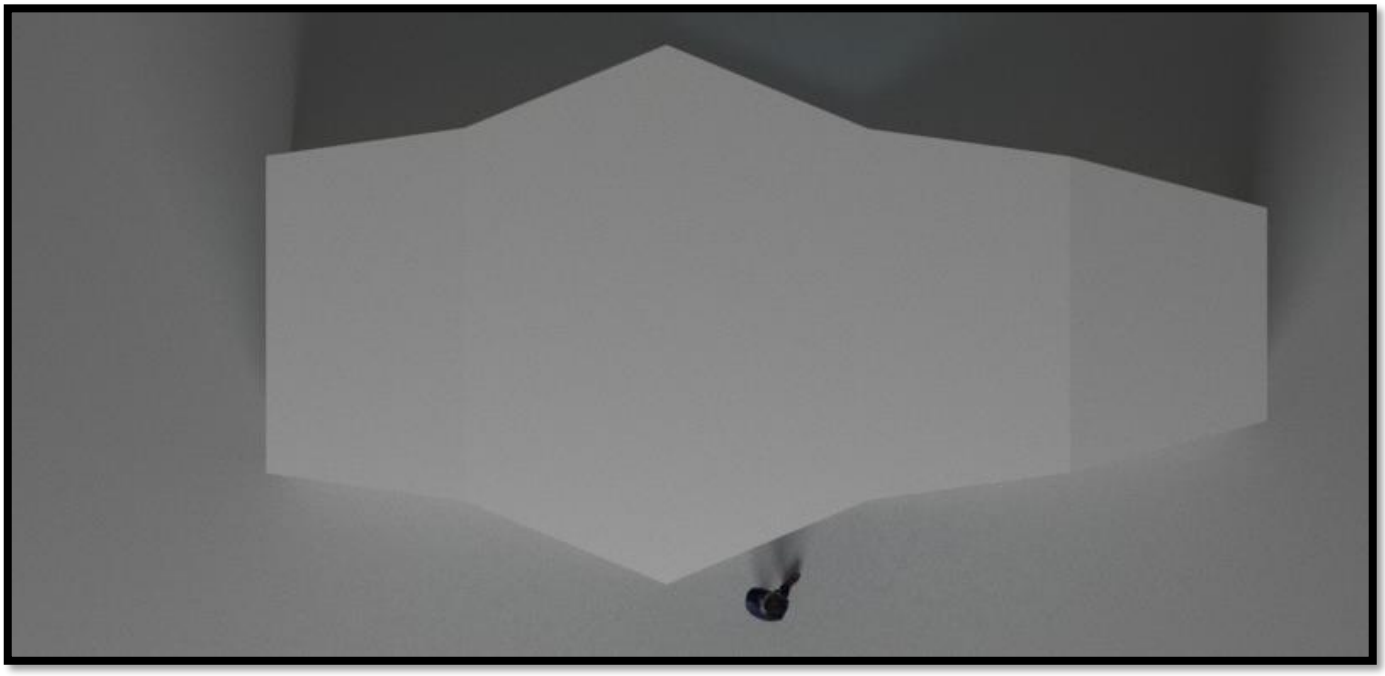
Feature: Printing in three separate, low height per printing stage, multi-component design, design form adaptability, use of different materials for the ceiling.

Introducing a model of a small house designed for 3D printing, characterized by the aforementioned features for printing in three separate stages, low printing height per stage, multi-piece design, design adaptability, and the utilization of varied materials for the ceiling.









Concept 8

Feature: Triangular appearance, use of multi-piece modules, incorporation of a separate central panel for housing utilities.

Introducing a model of a small house designed for 3D printing, characterized by a triangular appearance, utilization of multi-piece modules, and inclusion of a separate central panel for accommodating utility equipment.