Adaptable Micro Unit

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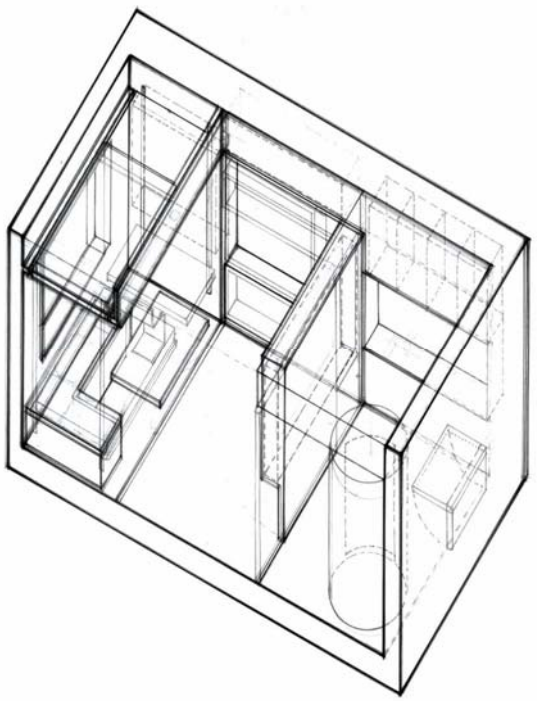
THE PROBLEM

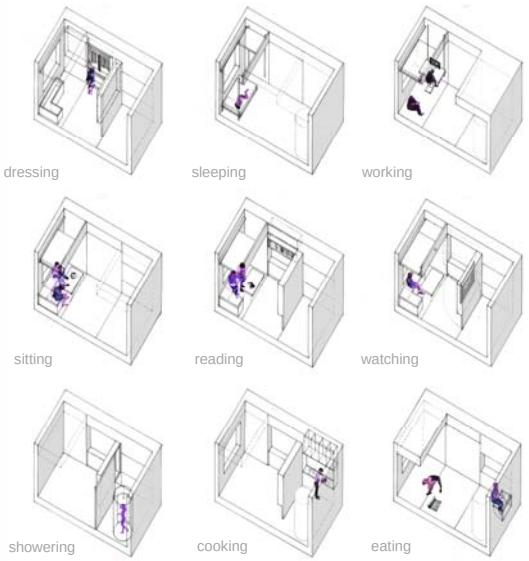
Over the past 40 years, the average home size in the US has increased by 61.4% while the average household occupancy has decreased from 3.01 persons, to a now record 2.54 persons. As we face the consequences of our unnecessary material expansion and increased carbon footprint in our building systems, the need for smaller living spaces is incredibly relevant. As part of a trend and necessity to save our environment, people are seeking out simpler ways of living.
Houses have become astonishingly large and expensive. Micro houses provide a positive alternative to these problems by providing the necessities that ensure a high quality of life while also being economically and environmentally responsible.

THE PROJECT

A prototypical 288 ft^2 living unit with transformable and adaptable components fulfills all the basic requirements of a house allowing a high quality of life. This started with in depth research into the wide range and variety of micro housing projects done previously which included living pods, off the grid structures, urban units, and prefabricated units in the city.

This unit is meant to be a part of an aggregation of units that would create a denser urban condition which would allow for the possibility of shared amenities that would justify the miniaturization of the living spaces within the unit. Shared amenities encourage a sense of community and dependency in an urban environment which supports the social interaction as a necessary component to human life. The different configurations of the unit facilitate a range of actions and activities one could perform as part of a daily routine. The transformable and adaptable walls and furniture, as well as the efficient storage solutions provide a living unit that challenges the social paradigm and provokes a change in the building industry.





SUSTAINABILITY

Micro houses and micro housing allow for a new way of living that requires less space, produces less carbon dioxide, is less expensive, and encourages social interaction. What started as a trend takes us back to earlier generations' living spaces and the way many people around the globe live out of necessity. I see this project as a way into answering an even larger problem. How to provide high quality living spaces to people in need, people who can't afford, in money or land, the typical large houses now being built in our cities. The tiny homes movement has aided in the provision of temporary homes for homeless people in many cities across the country and with the right tools, the qualities and characteristics of micro housing can be a platform for the betterment of our communities.

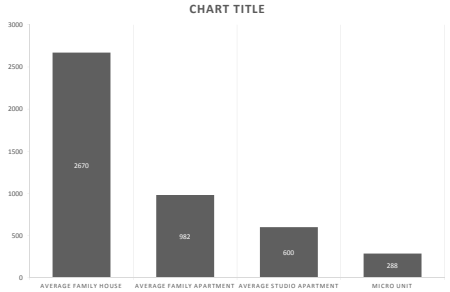
SUSTAINABILITY

This exercise of rethinking the way we live and providing an alternative is the beginning of a life long process as I apply the concept of micro housing to the imminent problem many countries face with a shortage of housing and a growing population. This will help challenge the norm and provide solutions that will consider how our building environment can minimize the damage done to our environment while providing for a high quality of life.

By having transformable and adaptable features in a house, spaces have more than one function. Some of the transformable features include:

- Storage within the thickened wall
- Rotational wall with storage and sliding door
- Adjustable (vertical) bed frame and table
- Folding tables into the wall

The miniaturization of spaces leads to a complexity in them. This dynamic manipulation and interaction between the person and their home creates a machine that adapts to specific functional needs.



AEI Ideas information based on the Census Bureau

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