



# PLUGIN HOUSING CHALLENGE

'20

Students Housing Design Competition

<http://competitions.uni.xyz>





Img\_1: Urban population explosion - A concept

# Premise

Humankind has lived and worked primarily in rural areas. But now, more than half of the globe's population, will be living in towns and cities. The number of urban dwellers is rising, reaching almost **32%** of total world population, and **68%** by **2050**. It is estimated that 900 million urban dwellers and over one billion rural people now live in overcrowded and poor quality housing without adequate provision for water, sanitation, drainage or the collection of household waste.

Even renting affordable houses in world's largest cities is impossible and people have to resort to long commute hours to reach their workplace. A remedy for such conditions is required on a large scale that tackles with the issue of housing for low income groups residing in urban areas. In the coming decades, cost of constructible land will increase, making the situation worse.





Img 2: Plugin houses - A concept

# Plugging in

Working individuals and young migrants who move into big cities are constantly in search of affordable living options in the vicinity of their workplace or institution. They often stay for a temporary basis and hence rent a house.

A possible long-term solution would be to design compact housing units that are affordable for construction as well as usage.

**Compact Housing** can also be referred to as **micro** or **capsule housing**. This concept has been derived from the necessity of providing a shelter along with basic facilities for its users. It is a small, self-contained, single or double occupancy unit, typically in urban crowded areas. The interiors of such apartments, units are also compliant with the concept itself and kept **flexible** enough to have **adaptive furniture** that reduces the need of more space.





Img\_3: Various configuration in different housing units - A concept

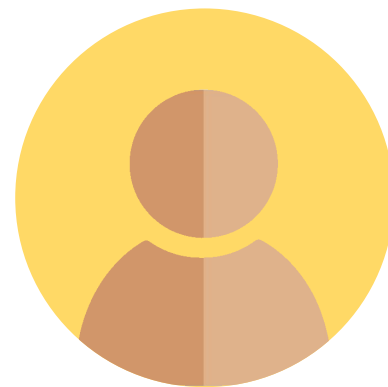
# Brief

A well designed affordable house reflects the need of user. The spaces are defined by functions which vary depending on the need. Some basic necessities like **food, sanitation, and resting area** are inevitable requirements of a house. **Micro Housing** aims to compose these basic necessities by optimized space usage and create common interactive spaces for communication and recreation of the residents. These common areas can include recreation as well as break out spaces for the users.

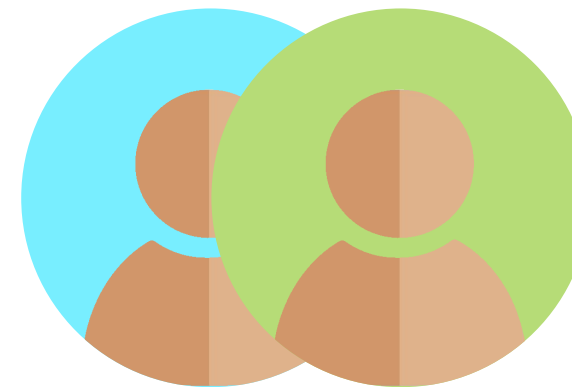
**Challenge:** The challenge is to design micro/compact housing units of single and double occupancy that can be plugged in together depending on the demand of the urban locality. These units must be modular in nature ready to be plugged in together to form blocks of not more than 100 units each.

The participants are expected to conceptualize complete functional blocks which would include interactive areas/common service areas and corridors for circulation. The units can be technology driven and added or subtracted from one block to another depending on the demand of the locality.

# Modules & Users



**Single Occupancy**  
Carpet Area : 25-30 m<sup>2</sup>



**Double Occupancy**  
Carpet Area : 65-70 m<sup>2</sup>

The design of houses/units would be based on two kinds modules namely Single or Double occupancy for User Groups mentioned below. The blocks created from these units can be a combination of different units with common areas for interaction and services.



## Youngsters

**AGE : 18-25 Years**

User group from this age category may be full time or part time workers or students depending on their occupation and education.



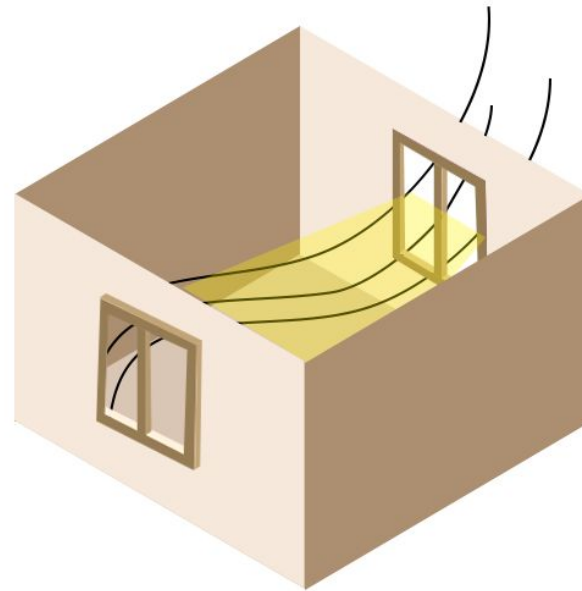
## Working Professionals

**AGE : 25-40 Years**

User group from this age category would have different kinds of occupations (creative freelancers, healthcare, software developers etc). However, the house units are expected to be universal and not specific.

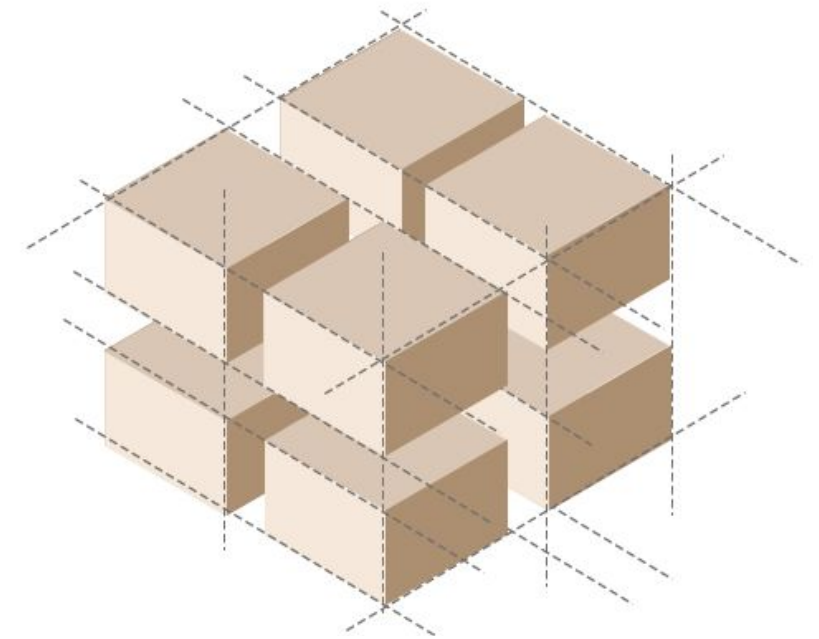


You have to create a housing complex/tower of about **80-100 units** on the site details as given on the following pages. The following objectives can be a point of beginning for the participants to initiate brainstorming their design ideas.



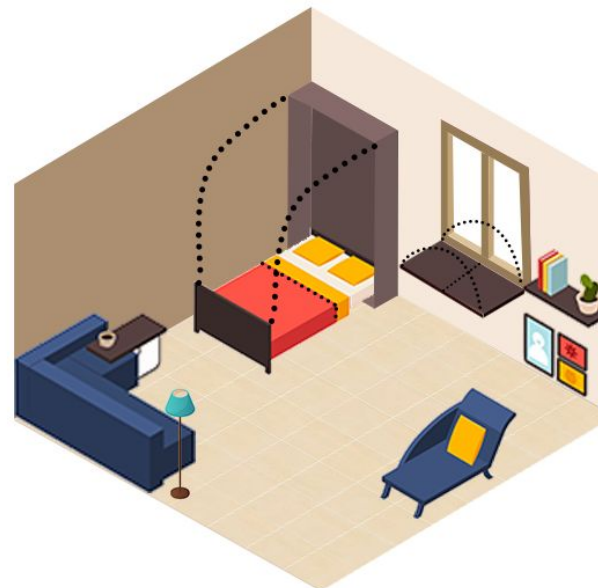
### Lighting and Ventilation

All living spaces must have optimum natural lighting and ventilation



### Modular

Housing units should be modular and fabrication friendly with minimal variations.



### Optimization

Furnitures of the house units must be optimized according to space use.



### Customizable

The house should be customizable according to various users in perspective.

# Objectives

# Submission Requirements

**0**

## Cover image

A graphically well composed 3D view of your design outcome.

The cover image is different from the boards. The Board distribution is indicative, students can tweak the recommendations below as well.

**A**

## Vision

The fundamental thought behind your plug-in housing.

**B**

## Design Principles/Objectives

Fundamental objectives you wish to achieve in your design

**C**

## Case Studies

Preliminary study of Built (Web, Book or Onsite)

**D**

## Site Studies / Design Concept

Site studies (If any) and the design concept

**E**

## Design Development/Iterations

Design experimentation (Model photographs and Sketches)

**F**

## Exploded Views / Sections / Drawings

Design details in drawings, illustrations and sketches.

**G**

## 3D Views

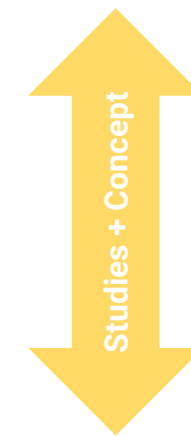
The fundamental ideas behind your Plug in houses.



Pre Design

**1**  
STAGE

About  
**1 Board**



Studies + Concept

**2**  
STAGE

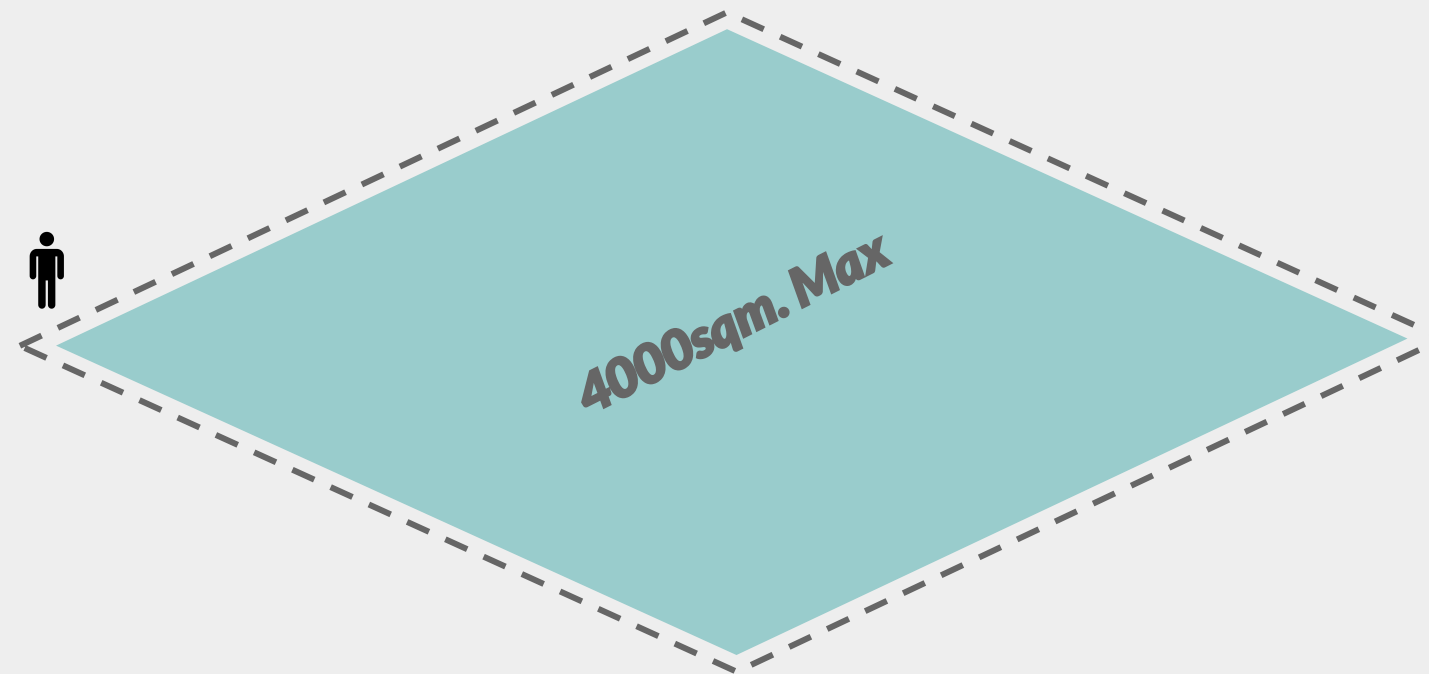
About  
**2-3 Boards**



Development + Outcomes

**3**  
STAGE

About  
**4-5 Boards**



Img 4: Max site area - A schematic sketch.

# Site Area + Limits

Participants can choose a site for this housing concept anywhere around the world (Suggestively in an urban area). The chosen site is not needed to be necessarily empty/undeveloped. If the site has built forms/buildings/construction on it, you can consider it as an empty lot and build your design on it for this design exercise.

Write to us on **contact@uni.xyz** for queries related to site selection.

Max Site Area: 4000sqm.  
Max Ground Coverage: 50%  
Max FAR: 3.25

Following of local development  
guidelines is optional



# Submission

You have to deliver an architectural outcome on the following site, based on the given outlines.

- A maximum of 8 boards / sheets. – [ **2480px x 3508px** ] or [ **420mm x 594mm (A2) in 150 dpi** ] in portrait digital format (JPEG). **Do not increase the DPI beyond 150.**
- Each image should be less than **15MB**
- You can find the preset PSD, AI and INDD template files in the '[additional resources folder](#)'.

**This additional resources folder contains:** FAQ Questions

Minimum requisites in the sheets are 4 sheets/boards + Cover image containing:

- Site plan (Compulsory)
- Key conceptual sections x 1 (Minimum)
- 3D views x 4
- Cover image/Thumbnail of size 2000 x 1000 px or larger in aspect ratio 2:1.
- Floor plans, images, sketches (if any) can be added to support the entry in the form of additional images.
- Answer 6 FAQ questions in the discussion section as given on the '[additional resources folder](#)'.

- 
- + The team limit for this competition is 4 members maximum.
  - + Use exploded views to discuss multi levelled conceptual models better.
  - + Ensure that the final sheets which are submitted do not include your name or any other mark of identification.
  - + Mention sheet number on corner of every sheet.
  - + This is a design ideas challenge only. There is no built commission/realization is associated with the problem
  - + Plagiarism of any idea / form / design / image will be disqualified with a notice.

**Registration page here:** <http://competitions.uni.xyz/plugin-housing-challenge>

**Submission Deadline: December 08, 2019**

Submission closes this day.

**Public Voting begins: December 18, 2019**

Submitted entries are open for voting.

**Public Voting ends: January 08, 2020**

Voting ends on this date.

**Result Announcement: January 18, 2020**

Result day!



## Rewards

Grants of up to a total of **15,000\$** can be won on this challenge. Learn more about the full conditions on the competition page [here](#).

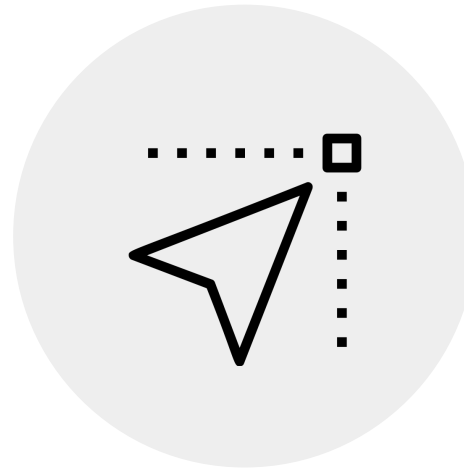
## Eligibility

Currently enrolled students in any design related field (Eg. Architecture, Interior, Product Design, Graphic Design) can participate in this challenge. The enrollment status should be valid at the time of registration of the competition. You can still submit to this challenge if you have registered as a student and your curriculum has ended.



# Judging Criteria

The entries will be judged by an international jury of the competition on the following criteria:



## Presentation

The fundamental to a good entry is a good presentation.



## Concept/Idea

Quality of thought and intent in pre-design phase.



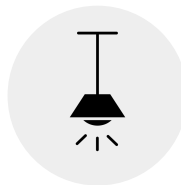
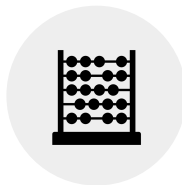
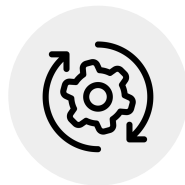
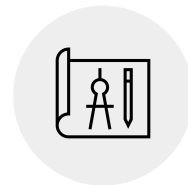
## Spaces/Programme

How the spaces are calculated and ordered.



## Design Output

The final architectural outcome of the solution.



The judging panel can also add other criteria based on their internal discussions - which will be in line with the problem statement. Eg. Ease of Fabrication, Efficient space use, etc. Participants are advised to fulfil above given criteria first in their design.

(Ad) Institutional access:

## We believe in a world more collaborative.

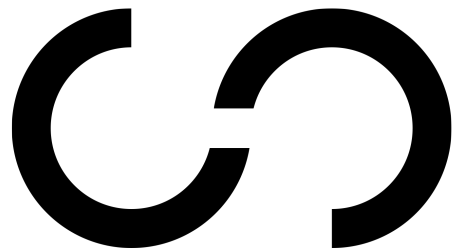
And we think academia is where it can begin.

Institutional Access™ is world's only cross institution competition programme. You can make this challenge more meaningful by bringing it to your classmates and professors working together. There are a lot of perks by entering this challenge with your institution. Follow the link to learn more.

Institutional Access™



### About:



**Classroom Competitions™**

**Classroom Competitions** serves as a part of UNI in the realm of **learning and portfolio building oriented design exercises**. It intends to give opportunity to young students to explore their design skills in refreshing problems similar to their curriculum. It aims to bring in challenges based on fundamentals of design education. Classroom Competitions embarks on the idea of creating fundamental design challenges to enhance the learning experience and education. It is a research initiative dedicated to providing opportunities for students of design schools from all domains to explore the ideas that go beyond the restrictions of usual architectural discourse.

Queries: support@uni.xyz

Discover other competitions: <http://competitions.uni.xyz>

Facebook: <https://www.facebook.com/unidesigntogether/>

Instagram: <https://www.instagram.com/uni.xyz/>

Discover FAQ's about this competition on our help forum here: <http://help.uni.xyz/>





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Towards a **more efficient future of housing.**



Available on:  
Institutional **Access**<sup>TM</sup>  
This competition is available for students only.

<http://competitions.uni.xyz>