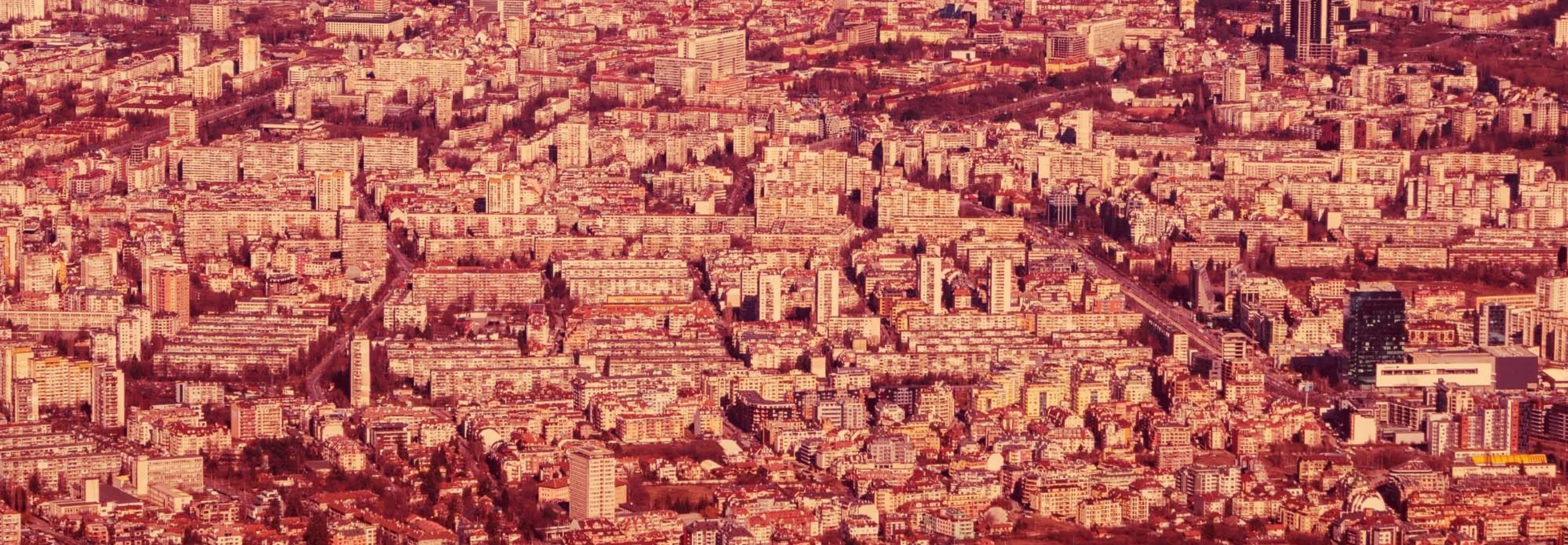


Form Follows Climate

Climate Responsive Architectural Competition

<https://competitions.uni.xyz>



Img_1: Harsh climate that our future cities would face - An impression

Premise

The first man-made structure was a basic shelter built for protection, made from the materials available in the vicinity. In time, these structures became more refined and humans began constructing a widespread built environment. Its impact on the environment was fairly less due to a limited population, therefore, it did not impact noticeably and was not measured.

After centuries now, humans and their actions have left an irreversible mark on the planet, its resources and its inhabitants. We consume valuable resources at the break neck speed from a skewed perspective of near future. Such practices that were unleashed in the race of advancement and are now a threat to human existence.

It has led to depletion of resources, irreversible damage to the environment, pollution, waste generation and **climate change**.



Img_2: Achieve a greener future.

Buildup

With the development in technology and growth in economies, the standard of living improved, stating more demanding requirements on health and comfort, the urge to control indoor temperatures increased. To resolve this, mechanical control systems were implemented. The designs for the built environment were hence conceived by providing these “necessary” facilities that eventually set up a convention of standards for all the buildings built henceforth.

What we failed to realize is that a structure that is insensitive to the environment costs much more to the planet in the longer run than we can imagine. The relevance of such buildings in a **sustainable** future, constructed without the context of climate and other environmental factors (*site, material availability etc.*) would become obsolete.

How can we as designers re-think this notion for a **sustainable** future, to set new standards that create an impact?



Img_3: Building facade that has surrendered to external cooling methods.

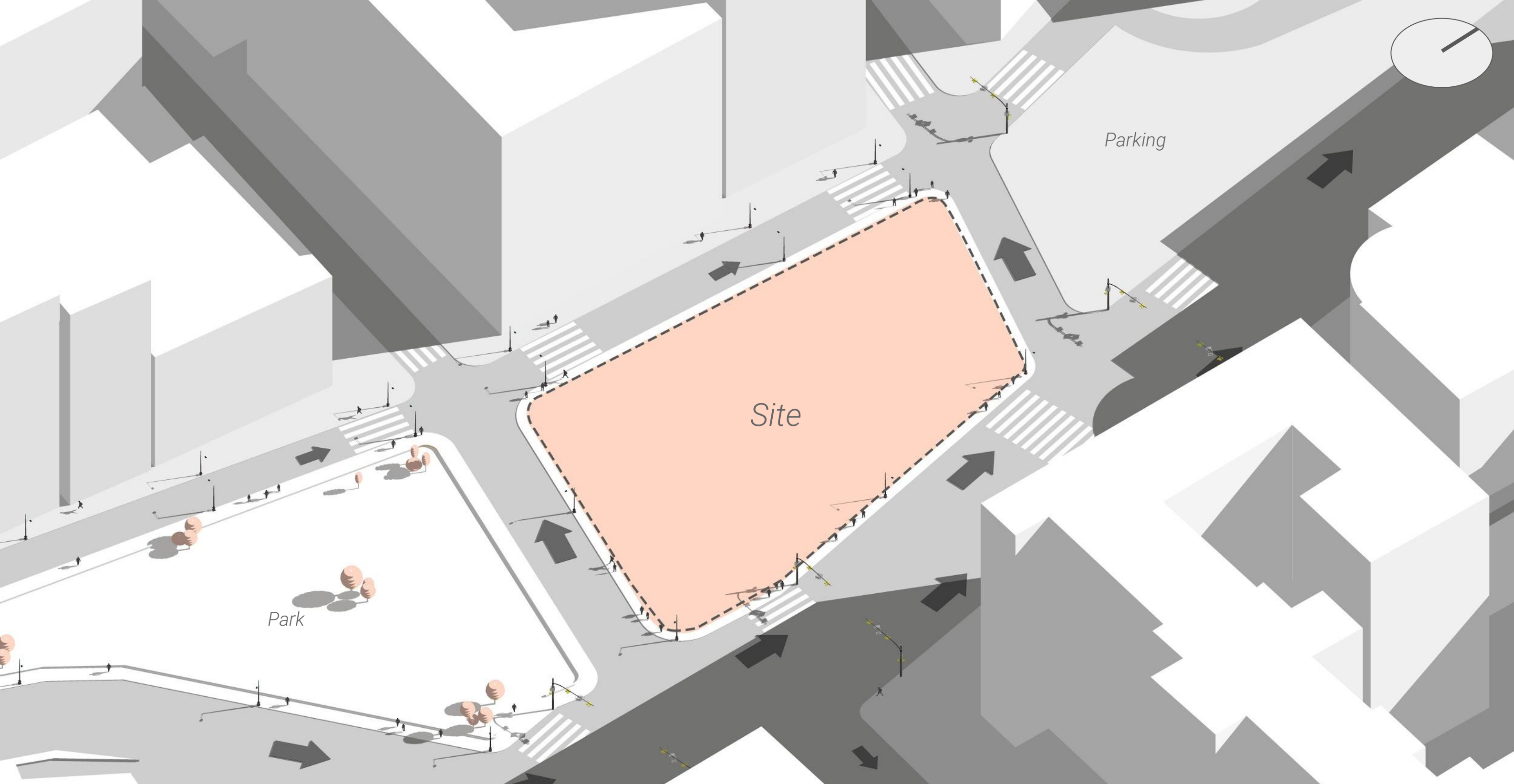
Sustainable Shift

The standards of having pleasant environment have set a convention for all infrastructures that are being built now. The requirements have reflected on the designs as well, forcing them to resort to mechanical/artificial methods of cooling/heating. To re-state the rigid grade that has been set to achieve the requirements, we need to explore the design dimensions that play with **climate and environment as central facet in design**.

Such ideas aim at a reduced primary energy use in comparison with conventional structures. It incorporates **passive and active** techniques in the construction and planning to develop spaces which can inherently keep the surroundings to comfortable temperatures. These can also be a combination of strategies subjective to the type of climate the infrastructure resides in.

A shift to alternative methods for the way our designs are conceived is required, it may be aimed at designing one **sustainable** infrastructure at a time, aspiring to set new standards altogether.

Most buildings in an urban scenario take mechanized **heating/cooling for granted** and does not take into account the actual local climate in the context of today. How can buildings today actually be sustainable and climate responsive while **reducing dependence on these systems which are depleting energy and planet in the longer run?**



Img 4: Aerial view of a generic urbanscape with the site

Site

The above image is a rendition of a generic urban streetscape in a central district of a city, surrounded by commercial and government offices, eateries, and retail stores in its neighbourhood. The presence of offices in close proximity makes it approachable for parents/visitors to access the facility before or after their working hours. A plot area of about 3278 m² has been marked, where the participants can begin to conceive their structure.

Area: 3278 m²
Height limit: 12 m (39.37ft)
Ground Coverage : 25%
FAR (Floor Area Ratio) : 1
Minimum Built up Area : 2650 m²

The site can be considered as empty, where the type and amount of vegetation is subjective to each design.

Objectives



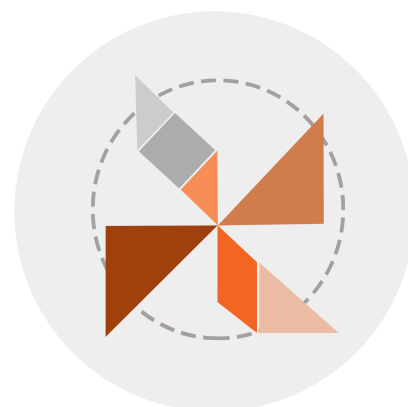
Planning

Efficient planning execution



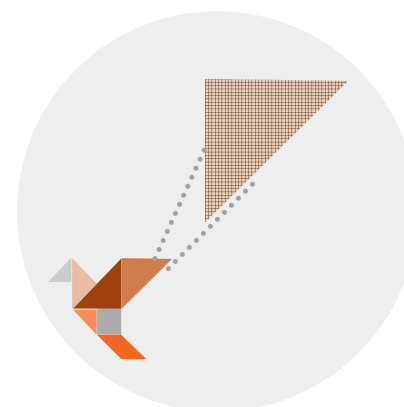
Form

Form and orientation of the structure with respect to climatic data chosen



Function

Programmes adapted must be reasoned with the urban context of site.



Material

Choice of material, and its application for better designs.

Design Challenge : The challenge here is to design a public use daycare facility : **Creche** for kids in an urbanscape for about 100 kids aged 0-7 Years. The design strategies adapted for this infrastructure must be complacent with any one of the **local climates** as chosen by the participant (*as listed on pg 9*). *The building codes/regulations must be followed according to the chosen location.*

They can include these objectives in the beginning and add other objectives as per their design.

The design outcome must respond to not only people and their surroundings but also to nature.

Programmatic Outline



The programme of the **Creche** must include the above mandatorily. However, the participants are free to add other programmatic facilities depending on their design.

Climate Types



Tropical
(Mega Thermal)



Dry - (Arid & Semi Arid)



Temperate
(Meso Thermal)



Continental
(Micro-Thermal)



Polar

The participants can consider **any one** of the 5 broad types of climate for their design. They can specify the subcategory of climatic conditions to explain the strategies adapted in the project.

Submission

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

- A maximum of 4 boards / sheets. – [**2362px x 3544px**] or [**400mm x 600mm in 150 dpi**] in portrait digital format (JPEG).
- Each image should be less than **15MB**
- You can find the preset PSD, AI and INDD template files in the 'additional resources folder' and [here](#).

This additional resources folder contains: FAQ Questions, Sketchup Model of the site and CAD file of the site plan, additional data about types of climate..

Minimum requisites in the sheets are 3 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: <https://competitions.uni.xyz/form-follows-climate>

Submission Deadline: February 11, 2020

Submission closes this day.

Public Voting Starts: March 3, 2020

Voting starts on this date.

Public Voting ends: March 28, 2020

Voting ends on this date.

Result Announcement: April 09, 2020

Result day!

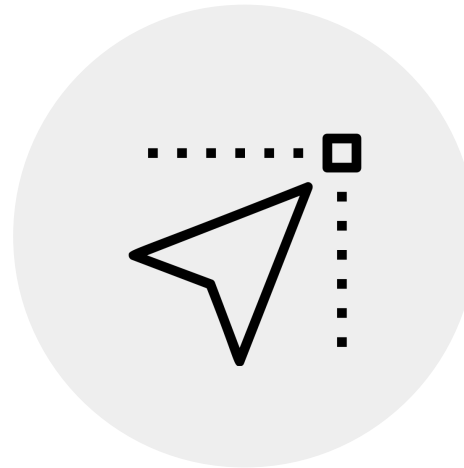
Rewards



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](#).

Judging Criteria

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



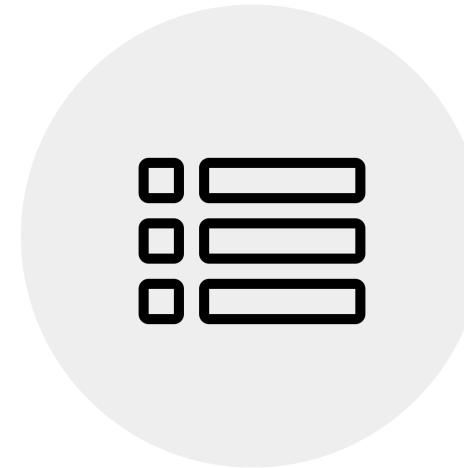
Presentation

The fundamental to a good entry is a good presentation.



Concept/Idea

Quality of thought and intent in pre-design phase.



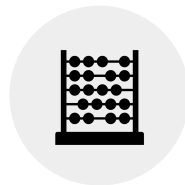
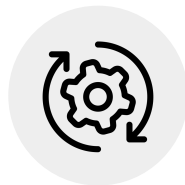
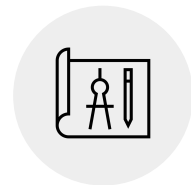
Spaces/Programme

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. Landscape Design, Sustainability, Functions added. 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 COMMUN

Commun serves as a unit block for **UNI** in the field of Urban Design. It intends to break the fusion of traditional design barriers and methodologies by making it a platform for experimentation and conceptual exchange of ideas in **urbanism, society, culture and ecology**. It is a research initiative dedicated to provide opportunities for designers from all domains to explore ideas that go beyond the boundaries of the discipline and enrich our built environment holistically; thereby opening up possibilities for promotion of urban design thought at a global level.

Queries: support@uni.xyz

Discover other competitions: <https://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/>

An aerial photograph of a building's rooftop, showing numerous HVAC units and large circular fans. Several of these units and fans are marked with a large red 'X', indicating a critique or a point of failure in the design. The surrounding urban environment, including other buildings and a street with cars, is visible in the background.

Form Follows Climate^{COMMUN}

Making **architecture** that **is** really **sustainable**.

Available on:
Institutional **Access**TM

<https://competitions.uni.xyz>