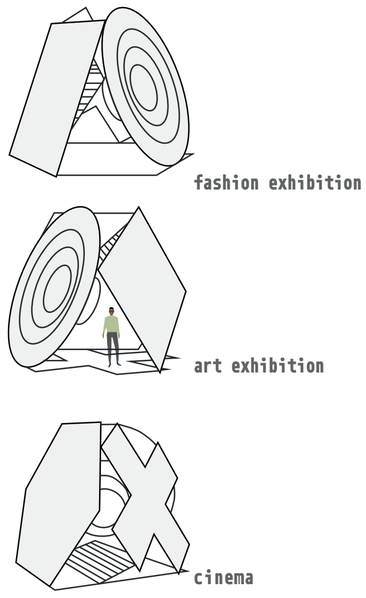
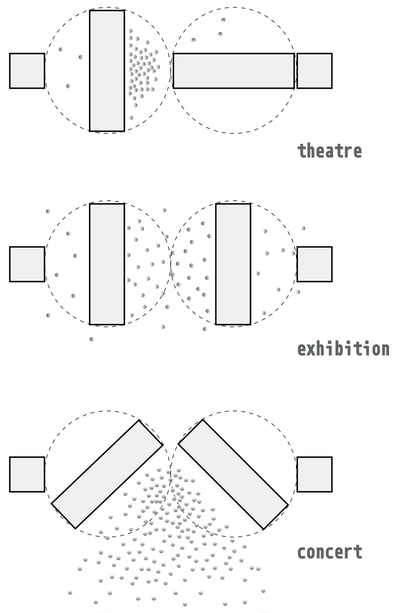
[what?]

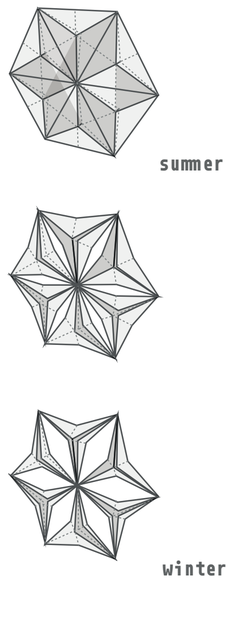
Hi, i am Arav. i am from Delhi, india.
With an urban population of more than 20 million people, its urban fabric is fairly packed and claustrophobic. Growing up in the city one could see people making many changes to the built environment based on their needs and desires often breaking the urban codes and regulations.
This observation stuck in my mind and drove my fascinaion in understanding the kinetic nature of a building in response to specific programmatic needs and environmental conditions, like the Prada Transformer in Seoul by OMA architects where the building rotates to change the function as needed similar to Penda architect's proposal of Bauhaus museum in Dessau.Bauhaus museum proposal is also an example of environmental function as the form rotates to close itself during winters to keep the warmth in and opens up during the summer, exactly opposite of Al-Bahar's tower kinetic facade.



[Prada Transformer]

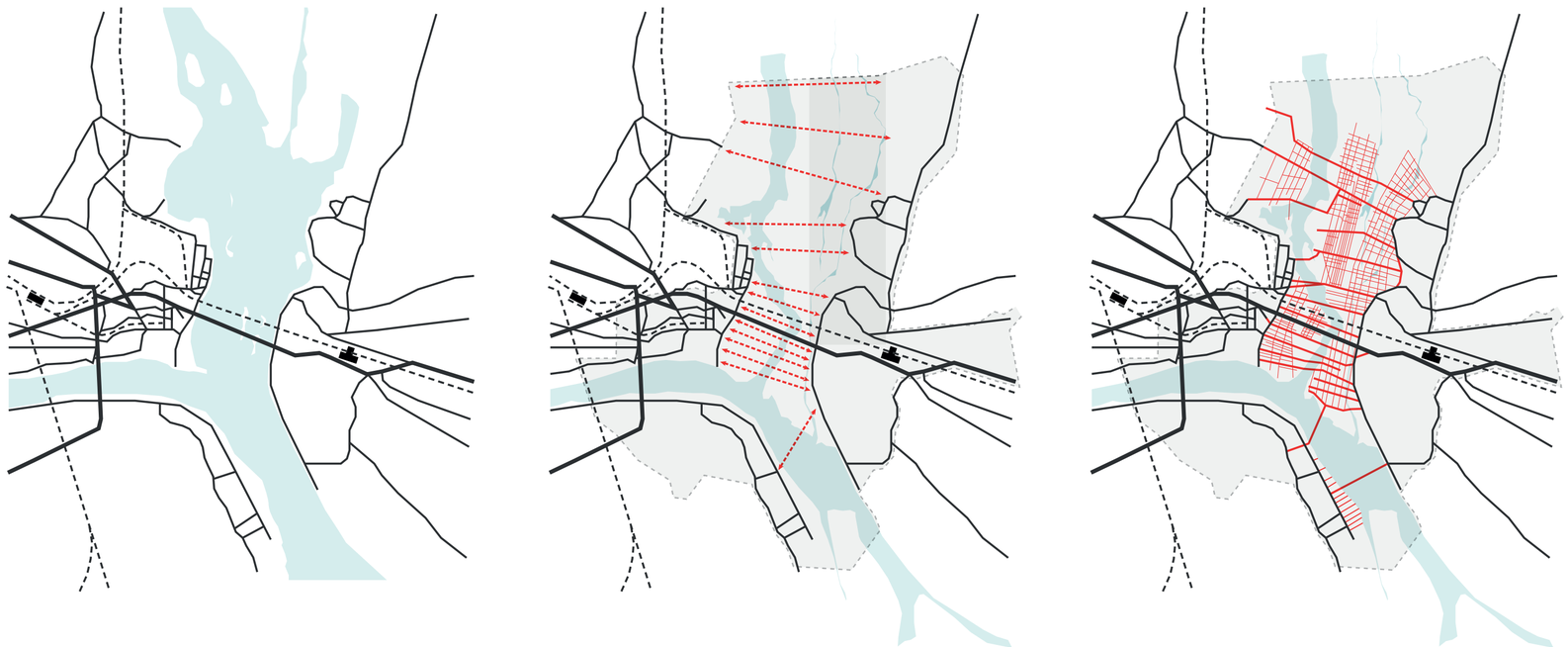


[Bauhaus Museum]



[Al-Bahar]

[where?]



The site is situated in the northern city of Allahbad at the confluence of two river, Ganga and Yamuna respectively.

[July - Monsoon/Rainy Season] → [October - Masterplaning Stage] → [November - Construction]

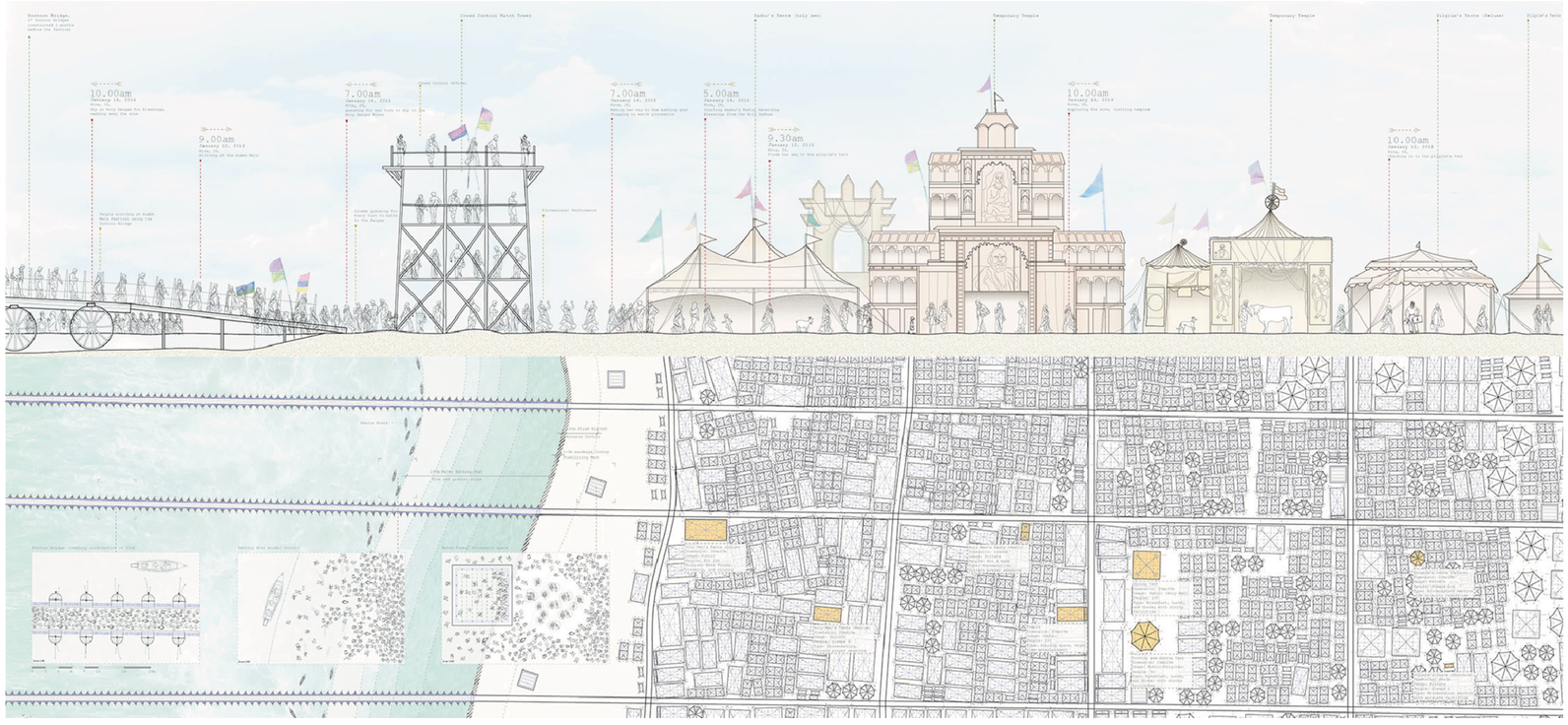
[May - Dismantling Stage] ←

[why?]

[Temporary Pop-Up City]

The site facilitates the gathering for religious festival called "The Kumbh Mela". it is the largest public gathering in the world, drawing 150 plus million pilgrims over the course of three months.The site is dynamic in nature being under water during the rainy/monsoon season.When the water subsides after the monsoon, the site materializes in the form of the reclaimed river bed. The urban grid materializes by december with a complex layer of road/sanitation/services and other infrastructure.

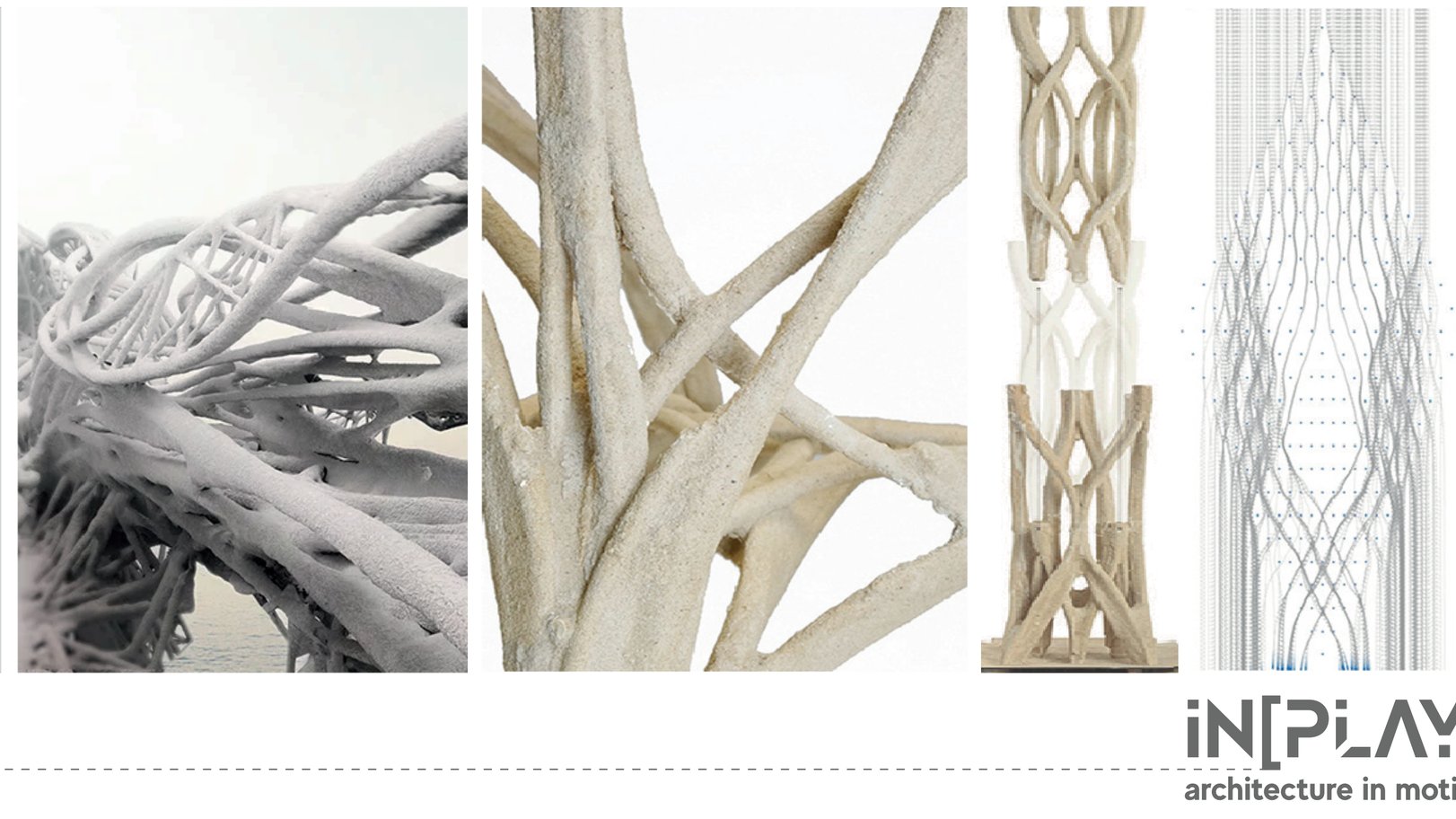
The Kumbh Mela could serve as a rich case study to examine the working behind a temporary pop up city. Understanding the spatial, social, and logistical elements of the Kumbh Mela can lead to understanding and deployment of these systems in a variety of places and situations, in particular camps for refugees of war and natural disasters.



[how?]

3d[Sand Printing]
[Additive fabrication]

The design needs to be temporary/ demountable system which can easily adapt to the ever changing boundaries of the site each year. The current construction system uses a lot of plastic as tent material. The idea is to limit this material and use sand instead as the primary material for bridges and temporary dwelling structures. 3d printed sand structures can degrade naturally if treated in a certain way. This property would be usefull in the design idea where the structure will be constructed from the sand retrieved from the river bed and after the event is over when water level rises, the structure would slowly degrade returning to the river as sand hence closing the material cycle. This material dynamism goes hand in hand with the kinetic nature of the site.




Arav Kumar
4738268
Robotic Building Msc3

iN[PLAY]
architecture in motion