

Maker Housing

निर्माता गृहनिर्माण **Nirmata Grihanirman**

Research Plan

Olivia Dolan

5379245

Global Housing Graduation Studio:

Navi Mumbai

Tutors:

Dr. Vanessa Grossman

Dr. Rachel Lee

Ir. Harald Moojj

Dr. Nelson Mota

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Image 01: Aerial View of Navi Mumbai

Background

Keywords

Navi Mumbai, Housing, Design, Craft, Making, Art Background

Context

Mumbai is one of India's most heavily populated cities, ranking as the biggest metropolitan region in the country. In reaction to this overwhelming mass of people Navi Mumbai was formed, a dual city urban development that expanded from the suburbs of Bombay. Although having the intentions to control Mumbai's growing population, Navi Mumbai is now situated in a similar position.¹ Due to lower land prices in comparison to Mumbai many migrated to the 'planned city' however the issue of commuting back and forth occurred, leaving Navi Mumbai to reside as a dormitory capital.

Many communities operate in the production and distribution of local goods such as retail vendors, hawkers and street sellers. Trade has an essential presence within public space providing essential services to almost all the population alongside direct

employment for the local society.² However, a percentage of this trade such as hawkers can also be grouped alongside other informalities like slum dwellings being that there is regulation surrounding them. Trading and production are key factors within Indian culture, many arts and crafts manufacturing has derived from small communities producing sellable goods to produce an income for their family.

Homo faber (Latin for "Man the Maker") is the concept that human beings can monitor their fate and their environment as a result of the use of tools. 'The human being as the maker or creator' (Merriam-Webster Dictionary 2021). India is a nation recognised for its craft and celebration of traditional art, many of these skills and techniques origin from domestic space. Indigenous craft such as Rangoli are key elements to an Indian home, ornate designs are placed as a welcoming entrance to the dwelling and are a part of a daily practice.³

This research will focus on mass housing design for low-income groups and how artisan lifestyle can be incorporated and revived within the Indian community.



Image 02: Traditional Rangoli pongal special kolam design drawn with flowers and deepams with 13 dots

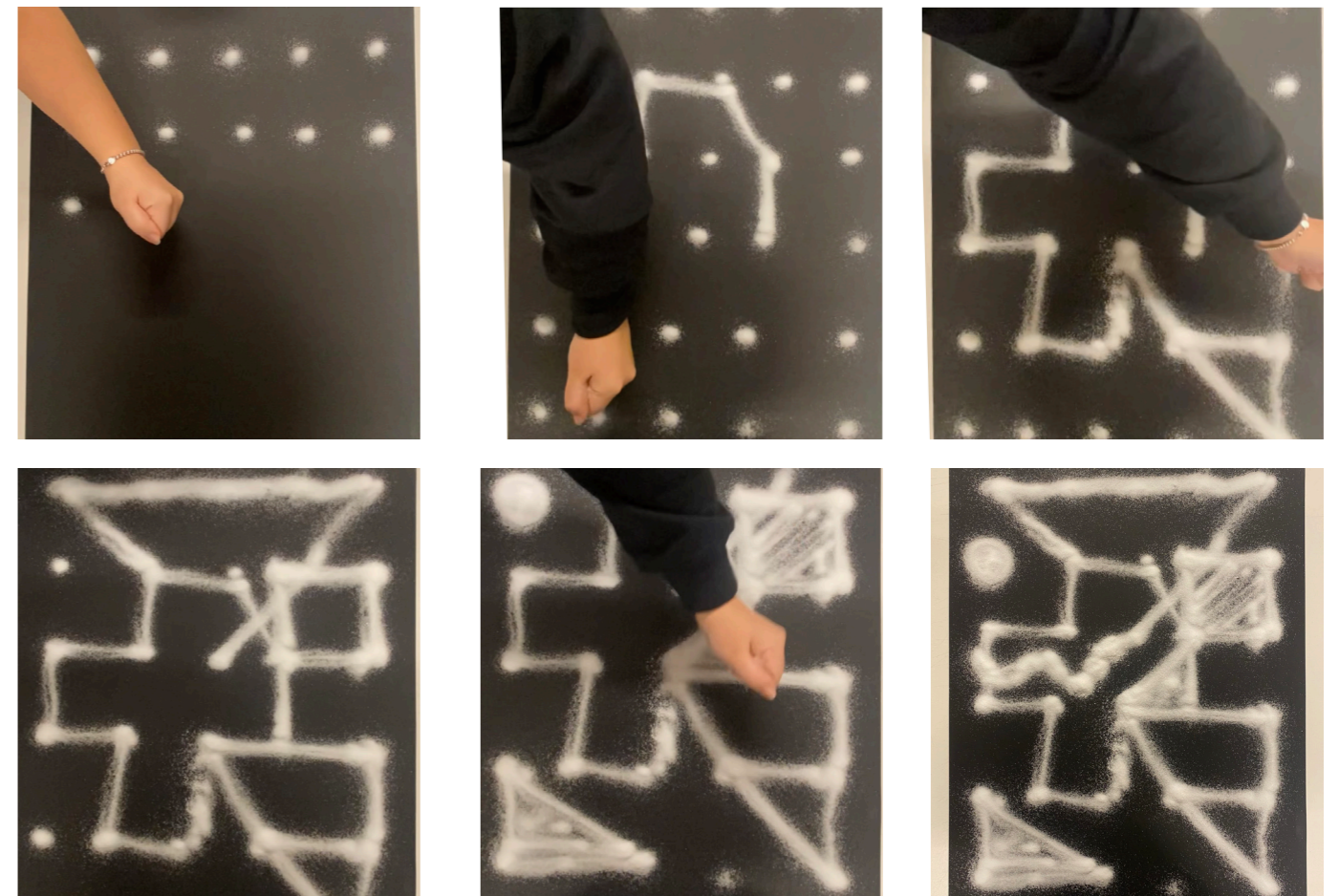


Image 03: Experimentation with salt trying traditional rangoli

Problem Statement

Navi Mumbai was intended to relieve the overpopulation issue in Mumbai and although many residents moved, business did not, leaving a large amount of people to commute daily for work purposes. The original plan for Navi Mumbai designed by CIDCO (City and Industrial Development Corporation) was based around a node structure, designed to allow residents to have easy access to the larger public transportation system.⁴ However, working outside of Navi Mumbai is still common practice in comparison to Mumbai where many live and work within the same district.⁵

Since the direct translation of 'Navi' in Marathi is 'New' this gives a similar indication of city's identity, although culture and traditions have continued to relocate, either it be from Mumbai or elsewhere to the area it is very uncommon for an indigenous group or heritage to originate within Navi Mumbai.⁶ Habitually it is common within communities to pass on the knowledge of a trade or traditional skill through a family community. This layering of abilities adds to a product, making it simultaneously bonded to the environment it was produced in.

"Different art forms arise from different social and linguistic groups. Each art form has its own cultural significance and history. But gradually, these crafts are dying out with increased modernisation and industrialisation."⁷ (Mandal 2020)

Although still present, traditional techniques and artisans are a rare to find. The Indian handicrafts that create the colourful image of the country that still exists today once previously collapsed under British colonial rule. The introduction of Machine-made products imposed the concept of mass production within India, therefore forcing Indian craftsmen to sell their goods at a lower market price. In turn, this led to many artisans abandoning their ancestral trade to find a more sustainable income. This further

damaged the self-sufficient village economy as the disappearance of traditional industries led to overcrowding in the agrarian sector.⁸

Although Navi Mumbai was built post-independence, it is apparent that its colonial past and urban governmentality is still embedded within Indian culture. The abuse of large corporations paired with corruption from government and developers have led to a proportion of the population to reside in informal/ slum dwellings. Although Navi Mumbai was a planned satellite city *'More than 40,000 families living in slums who constitute 19% of the population in NMMC (Navi Mumbai Municipal Corporation) areas as per 2001 census'*⁹ (Times of India 2018) Many of the planned housing within Navi Mumbai was aimed at middle and low-income groups, with the initial project was set to spread over approximately 343.7 sq.kms, containing 95 villages, however within this plan now resides 41 slums under the NMMC jurisdiction.

Poor infrastructure of slum communities in Navi Mumbai has a significant impact on other factors that can affect health, issues such as access to clean water and utilities and overcrowding can lead to spread of illness amongst residents.¹⁰ In a bid to house the poorer population alongside gain significant income, large developers will buy profitable land to produce luxury developments in return they have to provide housing for the slum neighbourhood. Although this sounds like a logical solution it is common for the developers to provide the bare minimum required under law and legislation needed for housing. The displacement of people claims to improve the living condition of the poor however the infrastructural development for the lower income group in comparison to the luxury development generates an even wider inequality.

Unfortunately, such radical changes in the community usually result in adverse consequences leaving families disconnected with their urban environment. *'In a relocated place, they face a situation of unemployment, police repression, social breakdown and loss of sense of belonging due to lack of collective identity.'*¹¹ (Mezzadra, Reid and Samaddar 2013)

When facing challenges between a working and living environment, different approaches can be taken. The first is to improve the design of the existing housing infrastructure to facilitate a mode of craft/ work production alongside improving the lifestyles of those who live there. The second is to provide a new alternative to live work housing, using local knowledge and methods to bind the community with their output and surroundings.

'The hard work of 'squatters' in creating homes, their love for their communities, their pride in creation and their struggles with government to gain recognition allow us to conclude that squatters in fact give reality to Henri Lefebvre's concept of the 'right to the city''¹² (Neuwirth 2005)

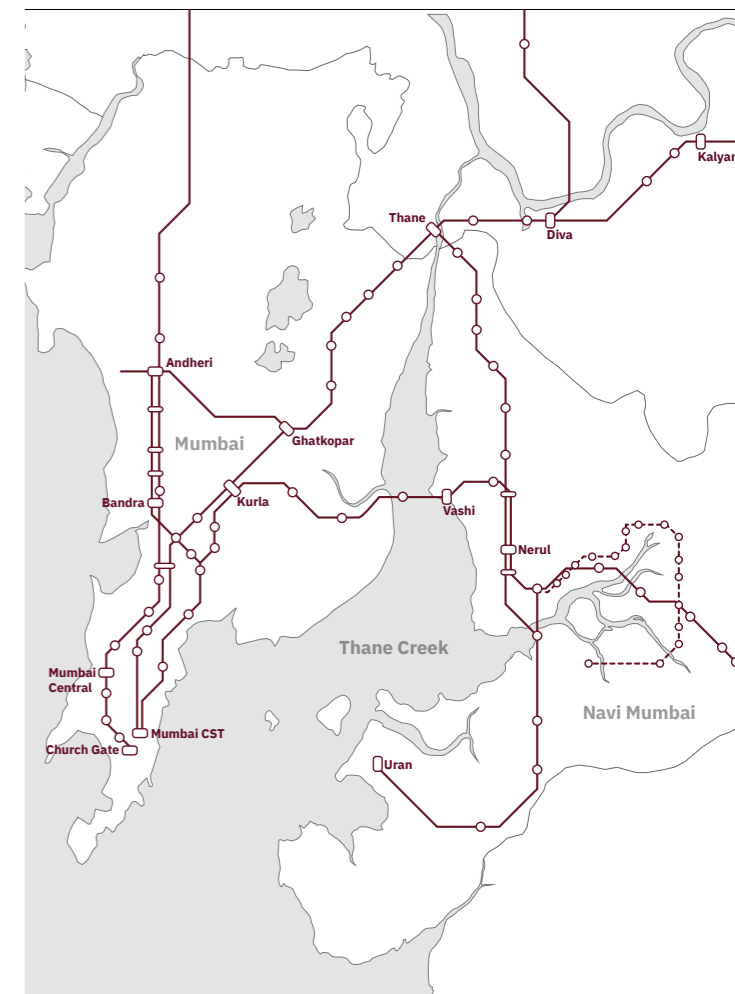


Image 04: A Map showing Metro links between Mumbai and Navi Mumbai



Image 05: Slum Dwelling in Navi Mumbai

Research Question

Continuing the focus on housing within crafting communities, the research question highlights the connection between craftsmen and their immediate environment and how through design its integration can contribute to the urban environment of Navi Mumbai

How can the design of affordable workshop housing contribute to a better integration of artisan rural-urban migrants into Navi Mumbai?

The question can be broken down into several sub questions:

- Firstly, since production within a home is a secondary function to the traditional organisation factors of a home, this question refers to the affordability of adding an additional role to housing. How

can a work at home lifestyle be translated into a new and affordable spatial organization?

- Secondly, since Navi Mumbai has played a role in urban rural migration towards Mumbai its effect on the working society has not changed. The population still commuted daily causing infrastructure issues within the city. How can the use of traditional work/live typologies covert rural-urban migrant lifestyles?

- Traditional crafting techniques rely on tools and often a conversion in space to create the work. How can craft communities be improved through spatial design of live work accommodations?

- Lastly concerns the production industry and the dying tradition of artisan crafts. How can the design of affordable housing communities contribute to reinstating the skilled crafting profession?

*Workshop Housing – A dwelling with the space and capacity to create and produce a product.

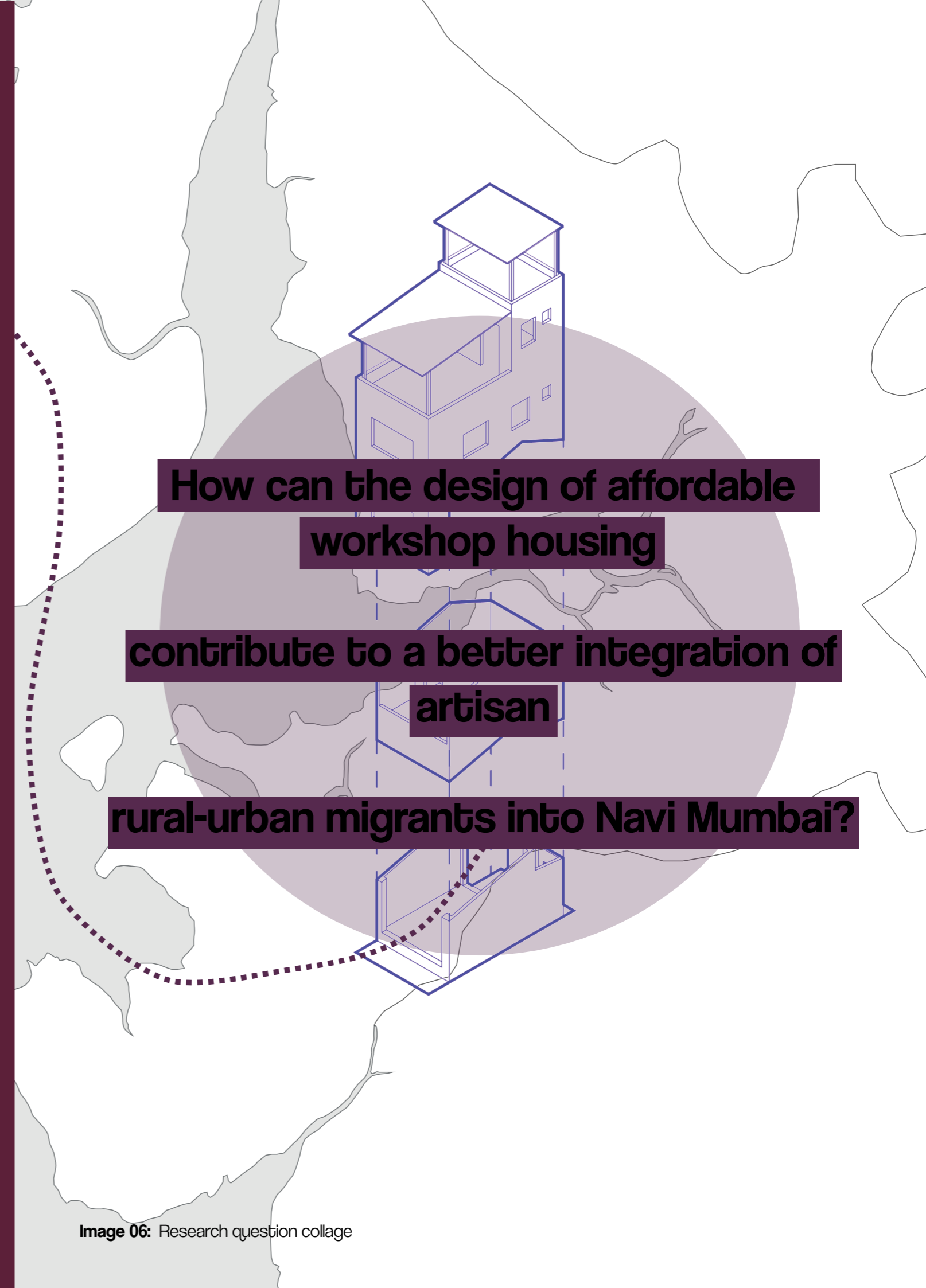


Image 06: Research question collage

Theoretical framework + Methodology

Theoretical Framework

The research builds on existing architecture and literature based on trade, craft, domestic space and architecture within India. The theoretical framework can be categorized into three groups each representing a different aspect of research, Housing, Arts and Crafts and Navi Mumbai. Within these categories are references classified into Architect/ Practice, Literature, Project. All these categories are analysed over time periods to create a framework of references to evoke the research project.

The first segment of references refers to Arts and Crafts, key literature such as *The arts & crafts of India & Ceylon* by Ananda Coomaraswamy delves into India's rich heritage with creative techniques. Although some references listed in the diagram refer do not specify to a certain location it is important to understand crafts relationship with beings. Richard Sennett's Book *The craftsman* argues that hand labourers are symbols of enlightenment, he declares that "nearly anyone can become a good craftsman"¹³ (Sennett 2008) in turn this enables a person to govern themselves whilst working with others to provide a service to the community. To celebrate India's connection with the arts many architectural projects have been built to either archive or celebrate the practice. Jawahar Kala Kendra is a multi-arts centre designed by Charles Correa, its intentions were to honour and preserve Rajasthani arts and crafts.¹⁴ Charles Correa is one of India's most influential architects, his work ranges from low income group housing to large urban development such as the creation of Navi Mumbai therefore being a critical reference to analyse.

Housing is the second overall arching topic; it is crucial to understand Indian vernacular and methods when relating the project to craftsmanship. Many new social practices are trying to reintegrate the traditional artisan profession back into the architectural landscape. Enterprises such as *Hunnarshala Foundation*, *Windows to vernacular* and *Put your hands together* all endorse creative workshops in order to promote traditional techniques of building as a way of being cost recovery replicable for the lower income groups of society.

The third group of references relate to Navi Mumbai, in order to design a suitable housing scheme it is important to understand the context. Works such as *The making of Navi Mumbai* and *The Planning and Development of New Bombay* by Annapurna Shaw give a factual introduction into the foundations of Navi Mumbai. Researching projects such as Art Village, Karjat give a hybrid connection to all three investigated sectors is a creative space where artists, practitioners educators and more can come 'together to learn, create and share their philosophies and methods of practice'.¹⁵ (Art Village 2011) The village houses the community using vernacular typologies of architecture alongside creating a collective campus of buildings to encourage art, nature and architecture to simultaneously exist.

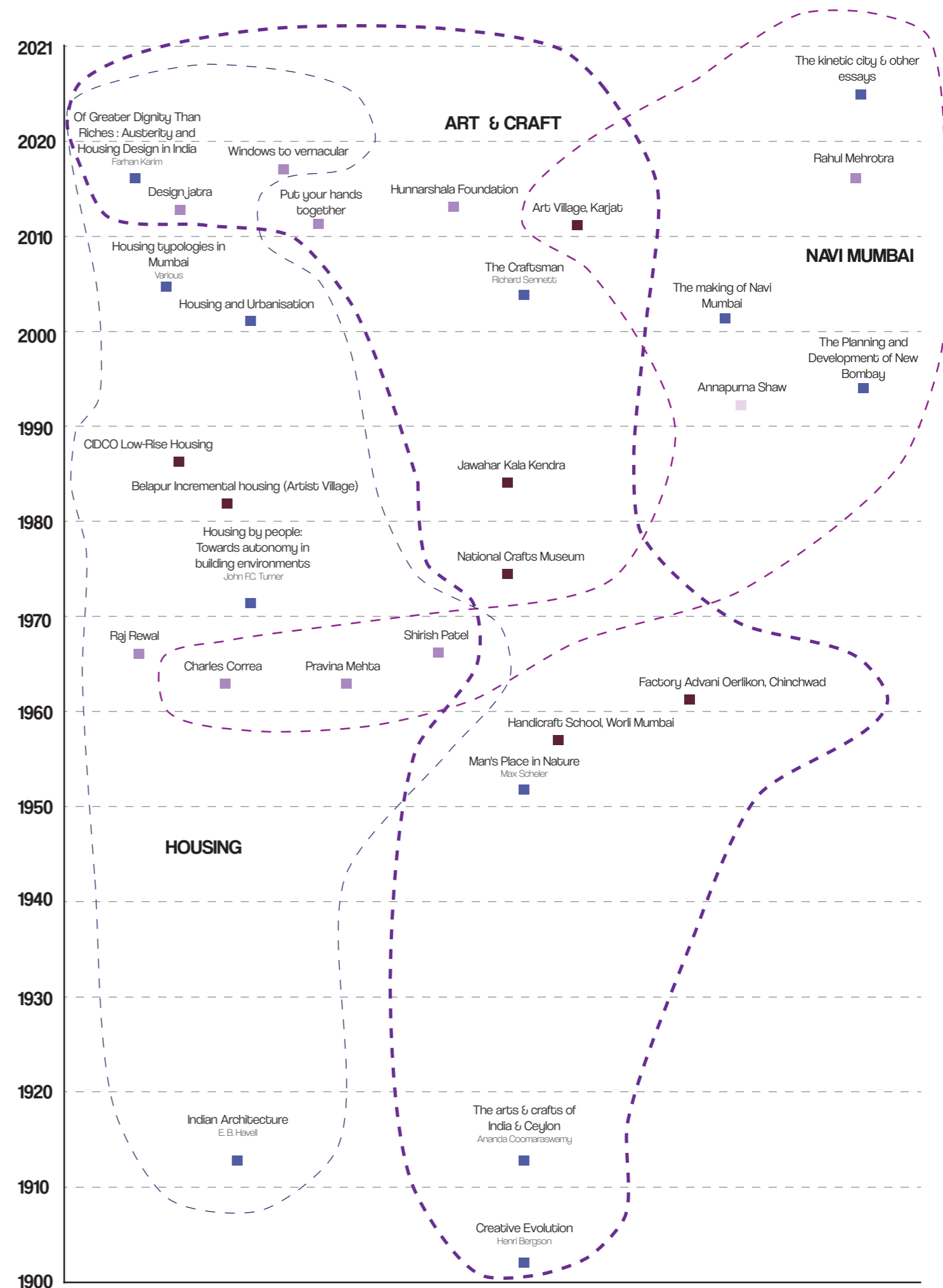


Image 07: Theoretical framework lists

Methodology

The main method that will be employed is research-by-design, this requires the theoretical framework to work in tandem with drawing and modelling. To investigate the possibilities of a working inclusive neighbourhood and how it could contribute to Navi Mumbai, the following research methods will be carried out:

Analysis of precedents: Literature review and case studies - This method of research pertains closely to the theoretical framework of the project; secondary sources of literature will be used to gain knowledge closely connected to craft in the domestic space alongside housing in the Navi Mumbai region. Primary sources will be investigated through interviewing local craftsmen and artists in the area in conjunction with architects and local residents of Navi Mumbai. Furthermore, a literature review will be used to determine the relationship between domestic space and craft manufacture.



Image 08: Analysis of precedents method

Ethnographic research - In order to understand the domestic crafting lifestyle, the research methodology that will be carried out is Ethnography. This will allow for the systematic study of how housing, craft and society operate within Navi Mumbai. Pending on field trip, site analysis will be undertaken in a chosen location together with study of local lifestyles and craft lessons.



Image 09: Bamboo Workshop

Typological analysis + comparative analyses - In conjunction with the ethnographic research method knowledge about live work vernaculars and built construction techniques. This will be gathered through a typological analysis by collecting data on life quality and crafting production to understand how to integrate these topics into housing design. Further, a morpho-typological analysis of housing systems for low income groups in the Global South will be

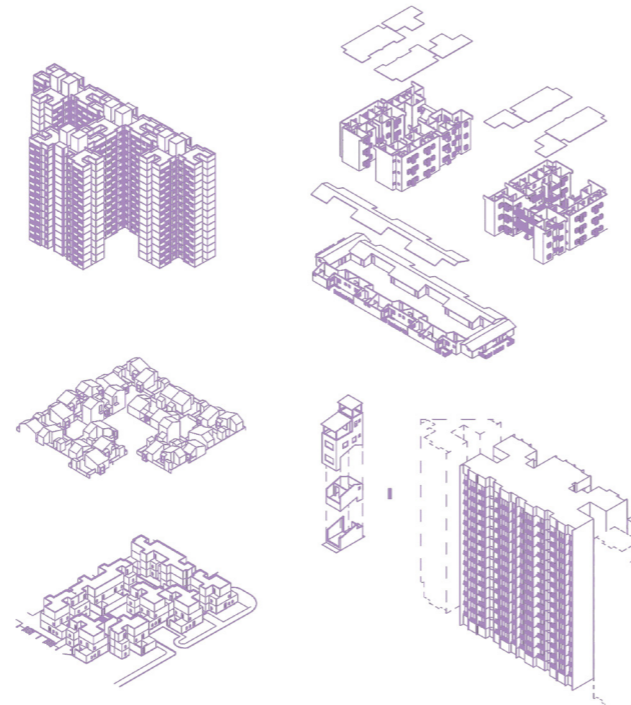


Image 10: Morpho-typological analysis



Image 11: Design Jatra Cob Workshop

Process + Timeplan

The timeplan shows the organization of work and the progression throughout the academic year. How is it carried out/or done is depicted in the centre of the diagram

P1: 2nd December
P2: 18th January
P3: -
P4: -

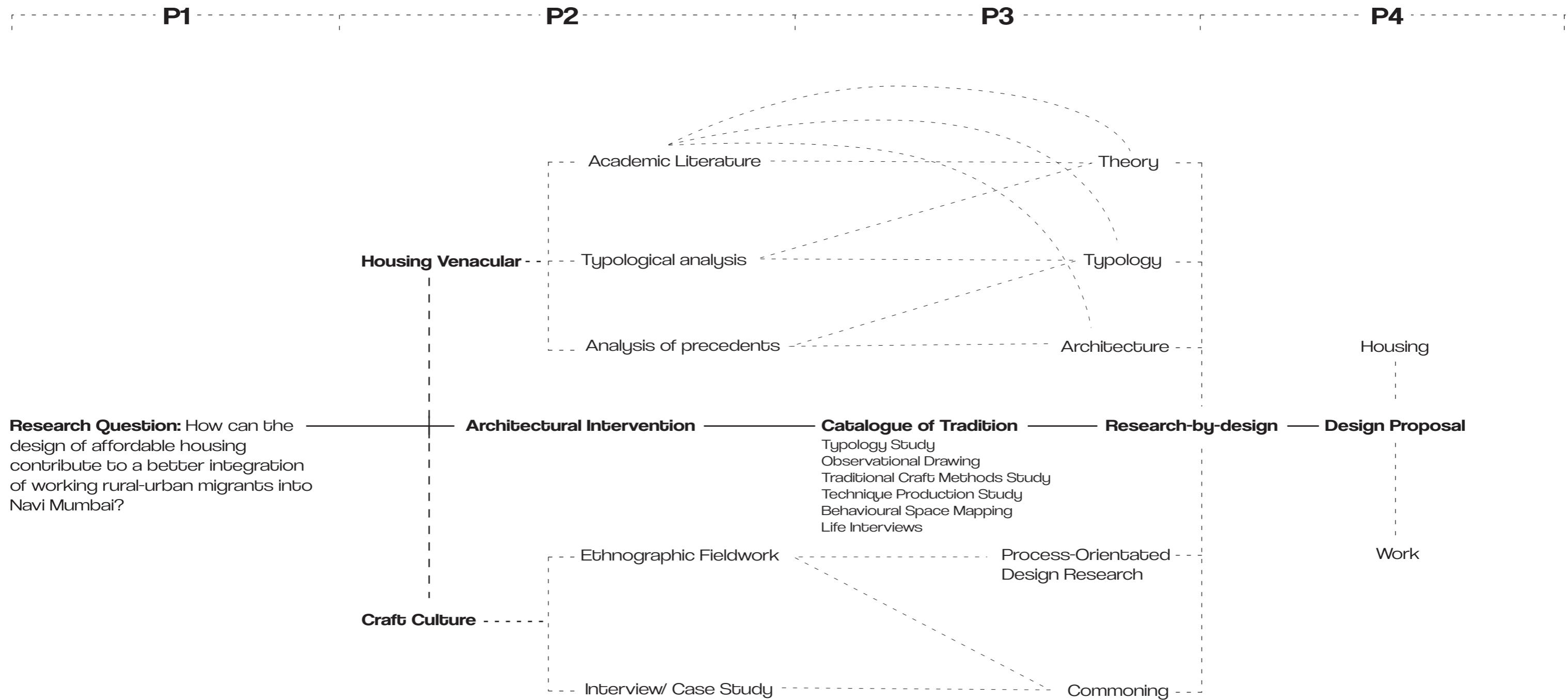


Image 12: Process plan

Relevance

The exponential population growth of Navi Mumbai and the Global South results in urgency for housing, quality of life and resources. The Research question proposes through architectural design and spatial organisation an understanding and support for people in these unique urban contexts. The research will build upon existing studies between labour and dwelling in order to alter the present state of mass housing in Navi Mumbai. By investigating historic design techniques and traditional skillsets this will introduce an additional layer to the existing housing research.

Labour system

Navi Mumbai is becoming home to larger corporations due to land prices in comparison to Mumbai and although this brings jobs to the city it also enforces cheap labour. Mass production is an approach to the design, creation, and marketing of products that emphasizes the current trends of society. These products are produced quickly and sold at a relatively low price which in turn increases recent demand for them. Much like the rest of India Navi Mumbai is now being flooded with these large corporations churning out short life products, contributing to waste, low wages and the abandonment of traditional skills.¹⁶

Pollution

A portion of pollution in Navi Mumbai is due to incorrect disposal of waste, with the larger number of corporations setting up locations in the region burnt in landfills and construction sites have become a highly influential part of the pollution produced within the city.¹⁷

Quality of life within Navi Mumbai

The Census of 2001 had shown how Navi Mumbai has a third of its population living in slums, arguably for a planned city not even forty years old, this should not

be the case.¹⁸ The research aims to investigate the relationship between Navi Mumbai and methods of affordable housing in order to improve its current condition.

“The hand is the window on to the mind,” Immanuel Kant

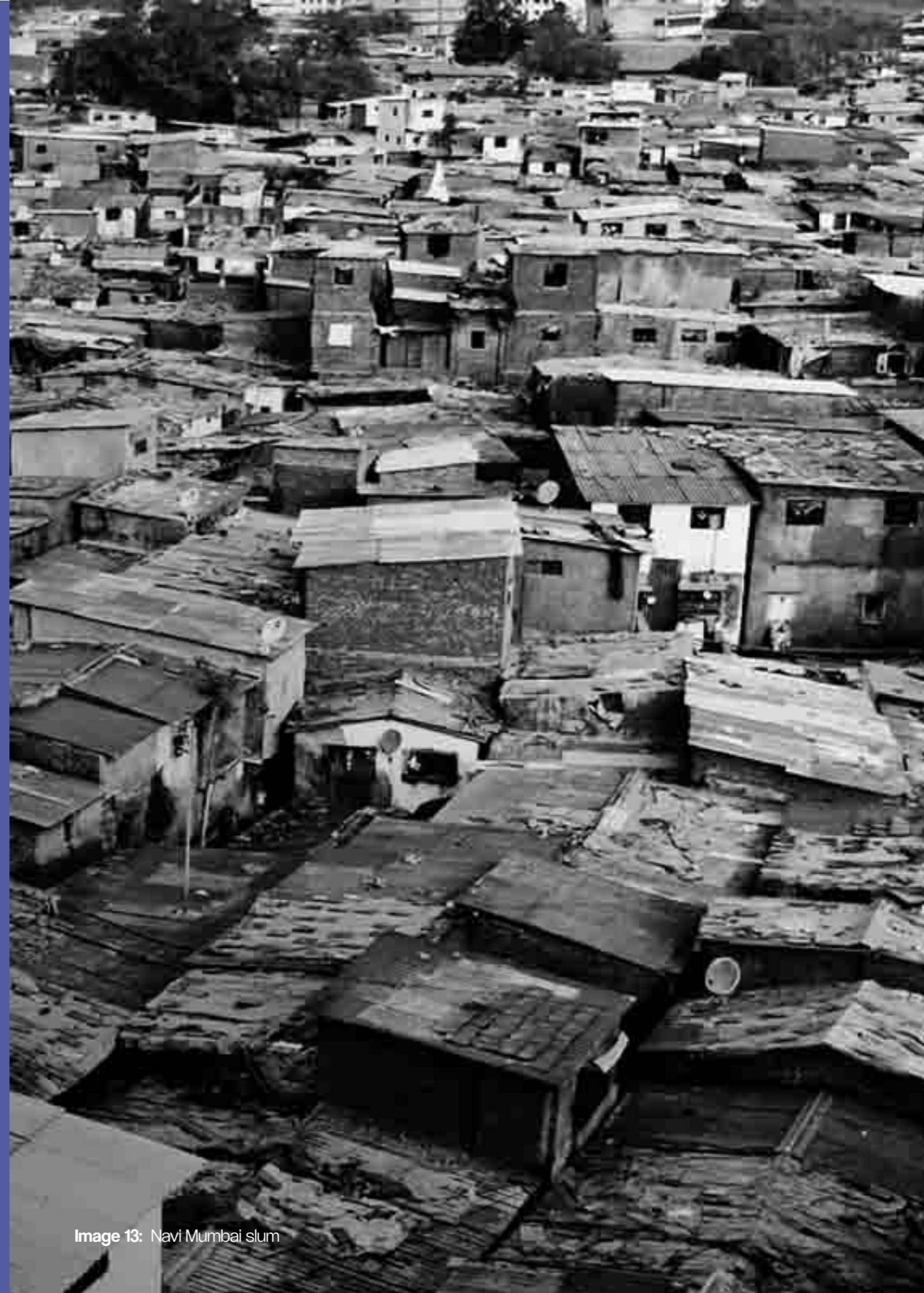


Image 13: Navi Mumbai slum

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Image List

Image 01: https://en.wikipedia.org/wiki/Navi_Mumbai#/media/File:Navi_Mumbai_Skyline.jpg

Image 02: <https://www.census2011.co.in/census/city/368-navi-mumbai.html>

Image 03: <https://realtynxt.com/2018/10/04/navi-mumbai-slum-residents-to-get-40000-homes/>

Image 02: <https://mycrafts.com/diy/13-dots-sankranti-muggulu-for-2018-pongal-kolam-designs-with-dots-easy-and-simple-rangoli/>

Image 03: By author 2021

Image 04: By author + Scott Spoon 2021

Image 05: <https://www.firstpost.com/mumbai/slum-the-city-how-planned-navi-mumbai-lost-the-plot-825695.html>

Image 06: By author 2021

Image 07: By author 2021

Image 08: By author 2021

Image 09: By author 2021 + <https://pyht.org/workshops/2018/1/24/6oqjmyl8ed17dktgtp6o9ll86ss1k>

Image 10: Global housing students 2021

Image 11: <https://designjatra.org/cob-workshop/>

Image 12: By author 2021

Image 13: <https://realtynxt.com/2018/10/04/navi-mumbai-slum-residents-to-get-40000-homes/>