

FINAL ARCHITECTURAL DESIGN STUDIO



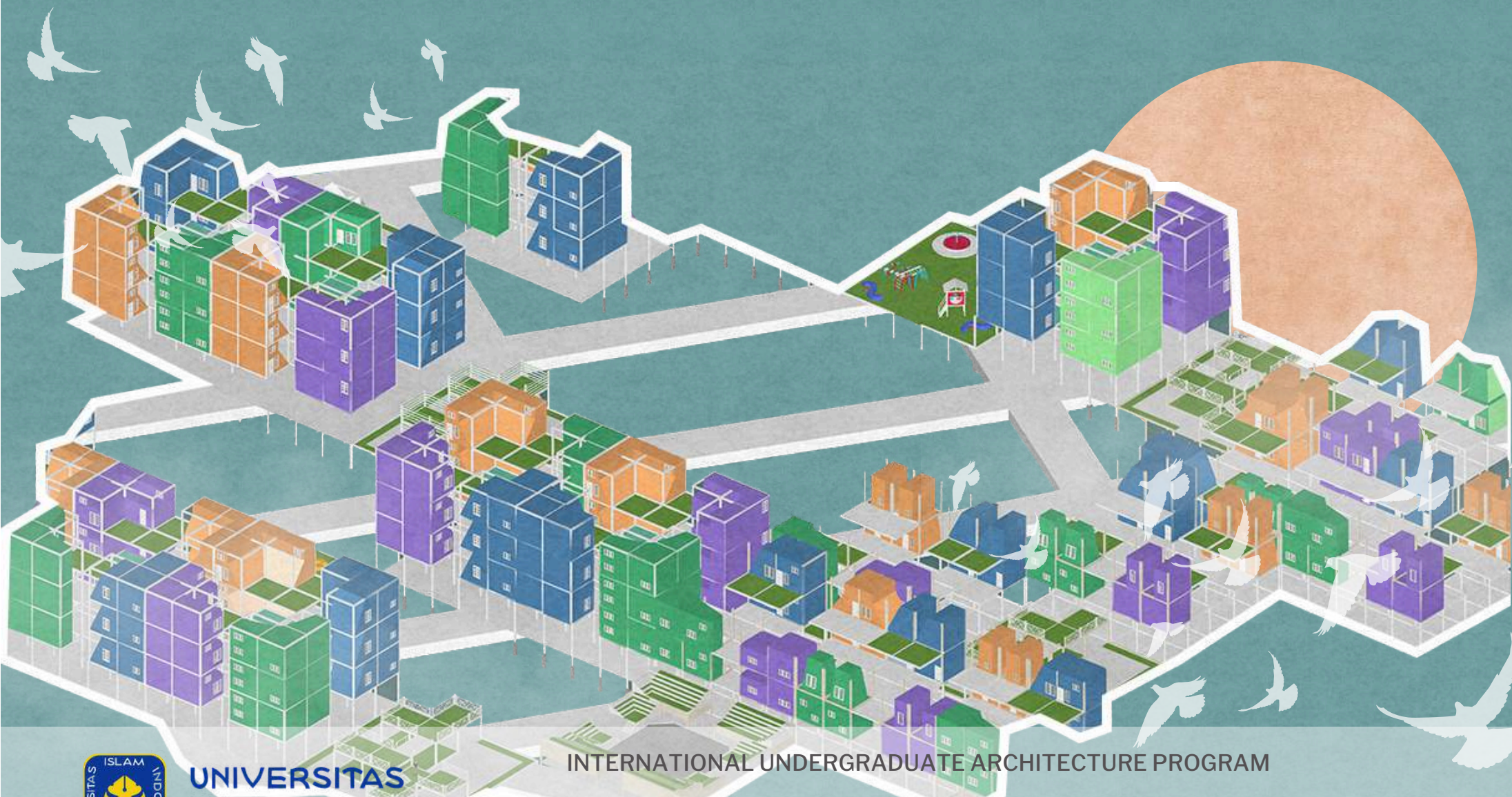
THE DESIGN OF NEW

KAMPUNG BARU

MELTING POINT BETWEEN SEASHORE AND IN-LAND VILLAGE AS A CELEBRATION
OF DIVERSITY IN BALIKPAPAN ABSTRACTION OF NUSANTARA ARCHITECTURE

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SUPERVISOR
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**UNIVERSITAS
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INTERNATIONAL UNDERGRADUATE ARCHITECTURE PROGRAM



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STUDIO AKHIR DESAIN ARSITEKTUR



PERANCANGAN

KAMPUNG BARU

**TITIK TEMU ANTARA PEMUKIMAN DARAT DAN PEMUKIMAN LAUT SEBAGAI
BENTUK SELEBRASI DARI KEBERAGAMAN DI BALIKPAPAN DENGAN
MENGUNAKAN ABSTRAKSI ARSITEKTUR NUSANTARA**

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DOSEN PEMBIMBING
ARIF BUDI SHOLIHAN, S.T., M.Sc., Ph.D.



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VALIDATION SHEET

Lembar Pengesahan

Final Architectural Design Studio entitled:

Studio Akhir Desain Arsitektur yang berjudul:

**THE DESIGN OF NEW KAMPUNG BARU: MELTING POINT BETWEEN SEASHORE AND IN-LAND
VILLAGE AS A CELEBRATION OF DIVERSITY IN BALIKPAPAN ABSTRACTION OF NUSANTARA
ARCHITECTURE**

**TITIK TEMU ANTARA PEMUKIMAN DARAT DAN PEMUKIMAN LAUT SEBAGAI BENTUK SELEBRASI DARI
KEBERAGAMAN DI BALIKPAPAN DENGAN MENGGUNAKAN ABSTRAKSI ARSITEKTUR NUSANTARA**

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STATEMENT OF ORIGINALITY

I, Fitri Amalia Rafi, declare that all parts of this work are my own work except for the work referred to as the reference and there was no assistance from other parties, either in whole or in part, in the process of making them. I decided that this portfolio is genuine and has never been published anywhere. By submission of the paper entitled above and acceptance for publication, I hereby assign the copyright for this paper to the Department of Architecture, Universitas Islam Indonesia for educational and publication purposes.

Yogyakarta, 26th August 2024

Signed,



Fitri Amalia Rafi

PREFACE

Assalamualaikum Wr. Wb.

Praise the presence of Allah SWT, The One and Only God for the abundance of grace, His gift, and His power so the preparation of the Final Architectural Design Studio report titled “THE DESIGN OF NEW KAMPUNG BARU: MELTING POINT BETWEEN SEASHORE AND IN-LAND VILLAGE AS A CELEBRATION OF DIVERSITY IN BALIKPAPAN ABSTRACTION OF NUSANTARA ARCHITECTURE” can be completed. The author realizes that the process of designing and implementing of this report can be done inseparable from the support of many parties. Therefore the author wants to express appreciation and gratitude to:

Allah SWT, who has given His gifts, instructions, ease, and calmness in every second of research process and the preparation of the final project report so that the author is able to finish this project.

Deeply thankful to author’s father, Rafiuddin and author’s late mother, Alm. Nunung Widyaningsih as well as Abang Rizal, Kakak Putri, Adik Wawa, and families that author cannot mention one by one for giving their unlimited support and love so that the author can reach this point.

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Last but not least, author want to thank herself for surviving until today, for not giving it up in the middle, and still for putting faith in Allah’s plans for whatever that can happen. Author is so grateful to be given the opportunity to complete this final project with the effort that she puts and hoping that she can grow to be a better and brighter person.

The author realizes that this final project is far from perfection, in terms of language, drawing, and writing. Therefore, the author expects constructive criticism and suggestions that will later become a provision of experience for the author to be better in the future. Author is hoping that this report can be useful for whom reading it, as well as for author’s improvement in particular. Author is sending luck and love for those who is going through Final Architectural Design Studio. May God always bless us.

Wassalamualaikum Wr. Wb.



Fitri Amalia Rafi

ABSTRACT

Since 1800s, Balikpapan has been popular destination for people from other islands to trading things until they ended up become permanent dwellers in the city; starts from Banjar, Bugis, Jawa tribes, and Tionghoa ethnic comes to Balikpapan. It causes Balikpapan to be not only rich in its nature, but also in terms of people and culture where each tribe still maintains their traditions.

Kampung Baru is a floating village located in the western part of Balikpapan and is famous as a mobility center to get to the capital of the archipelago because of the many speed boat ports and kelotok boats there. With its crowded condition due to raising populations, the settlements in Kampung Baru, which is already inadequate from the very first starts to become more dense. With developments that are very close to each other and many people using this place, the Kampung Baru area is an area that is prone to collapse due to unstable building structures and is also prone to fire due to the narrow distance between buildings. Apart from that, access and circulation for the people is also disorganized because the roads tend to be narrow and a bit dangerous due to some of the wood that is brittle and railings that have fallen off. Therefore, it is necessary to review Kampung Baru Settlement and its revitalization so that it becomes an adequate place fo dwelling as well as improving the quality of life of the people by providing unique characters of the diversity of culture comes from newcomers in Balikpapan City using an abstraction of Nusantara architecture.

KEYWORDS: *floating village, settlements, nusantara architecture*



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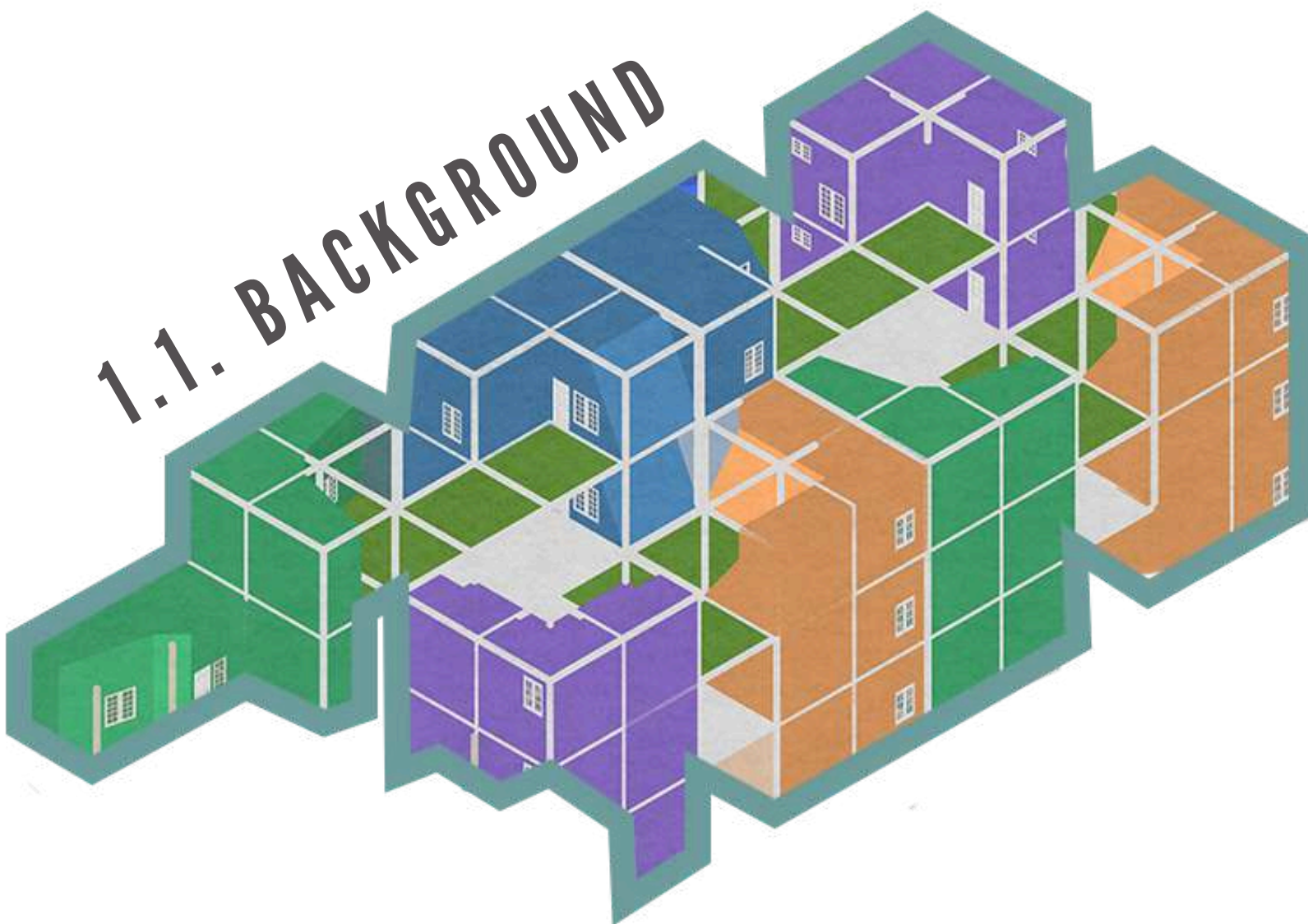
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1.1. BACKGROUND



HISTORY OF BALIKPAPAN

Balikpapan City is known for not having its own culture because of the numerous cultures of immigrants that have entered the city. It is said that the initial inhabitants of the area now known as Balikpapan were the Paser Balik or people commonly referred to as the Paser Kuleng. They settled along the coast of Teluk Balikpapan. They are descendants of a couple named Kayun Kuleng and Papan Ayun. At that time, their area was controlled by the Kutai Lama Kingdom. At some point, the community was asked to provide tribute in the form of planks. They collected planks to be used as tribute to the king. The planks were then taken to Kutai Lama using a ship. What happened, the ship they used to transport the wood turned over (in Paser language: kuleng), so the planks floated back (balik) again to Teluk Balikpapan. The people who delivered the tribute were then given the name Balik by the Kutai people. The descendants of Kayun Kuleng and Papan Ayun continued to thrive generation after generation. To honor their ancestors, they named their village in Teluk Balikpapan as Kuleng Papan. (Kurniawati & Hariyanto, 2018)

The cultural diversity of Balikpapan has been enhanced by the inflow of immigrants from other locations, resulting in a city with a diverse population comprising several ethnic groups and traditions. The majority of people living there are immigrants from different ethnic backgrounds. Along with other ethnic groups like Bataks, Butons, Sundans, and Ambonese, the most prevalent ethnic groupings are Javanese, Banjarnese, Bugis, and Madurese. Most people who live in Balikpapan are immigrants. According to Mutmainnah et al., (2014), the Paser tribe, one of the few remaining native tribes, serves as evidence of this. Despite the diversity of ethnic groups among Balikpapan's population, they continue to live in harmony and foster peace. Immigrant families might also collaborate with people from different ethnic backgrounds in order to improve their standard of living. Due to Balikpapan's great ethnic diversity, some residents—such as the impoverished immigrant families that live there—have begun to categorize themselves according to their ethnicity. Their ethnic bonds help them to survive.



Figure 1. Balikpapan City from above
Source: Selasar.Co (2023)

THE ORIGIN OF BALIKPAPAN

The Paser or Dayak Paser ethnic group is a people whose ancestral land is located along the southeastern part of the island of Kalimantan or Borneo, or in the southern part of East Kalimantan Province, Indonesia. The Dayak Paser people inhabit several regencies and cities in East Kalimantan Province and South Kalimantan Province, including Paser Regency, Penajam Paser Utara Regency, and Balikpapan City. They are also found in Samboja, which is now part of Kutai Kartanegara Regency, Bongan, Resak, and Pringtali, which are now part of Kutai Barat Regency (East Kalimantan), as well as Sekayu Baru, Pondok Labu, Sekandis, and Binturung, which are now in Pamukan Utara and Pamukan Selatan Subdistricts, Kota Baru Regency in South Kalimantan Province. The Paser people are mostly Muslim, around 95%, and some are Christian, Hindu Kaharingan, or Iden.

The Balik people (also known as Paser Balik in ethnic terms) are an ethnic group that inhabits Sepaku in Penajam Paser Utara and Balikpapan, East Kalimantan. The Balik people are considered one of the sub-ethnic groups of the Paser people, although according to Sibukdin, the head of Balik customary law, the Balik people are not part of the Paser people and are a separate ethnic group. The name Balikpapan City was taken from this ethnic group, with the word "Balik" and "Papan" coming from the Balik people who were previously known for providing planks for the Kutai Kartanegara Kingdom. Currently, the Balik people are a minority in Balikpapan and Penajam Paser Utara. In Penajam Paser Utara, specifically in Sepaku Subdistrict, their number is not more than 1,000 individuals or 200 families as of 2023, spread across three areas: Bumi Harapan, Sepaku, and Pemaluan.

The Balik people's customary area is also included in the IKN Nusantara development project, which involves the relocation of the Indonesian capital from Jakarta to Nusantara. In this project, hundreds of Balik people's homes are threatened to be relocated due to the flood management project on Sepaku River. According to East Kalimantan Governor Isran Noor, there are no indigenous people in the IKN area, as it originally was a natural forest and changed into a production forest. As development began, people, including transmigrants, started to occupy the area.



Figure 2. Tokoh Budaya Paser Balik
Source: IDNTimes Kaltim (2019)



Figure 3. Kostum Adat khas Paser Balik
Source: Suara Kaltim (2024)



Figure 4. Tari Ronggeng Paser Balik
Source: InfoPublik (2019)

PERCENTAGE OF BALIKPAPAN’S POPULATION BASED ON THEIR ORIGIN (%)

Balikpapan's location makes it a crucial hub for national and international connections. The city is currently evolving into a significant center for services, trade, and industry, not only within East Kalimantan but also across central Indonesia. Balikpapan's economic appeal is enhanced by the presence of Semayang Sea Port and Sepinggan Airport, which facilitates travel to the city. This economic attractiveness contributes to an increase in migration numbers, influenced by the city's pull factors. Additionally, population growth is influenced by both births and deaths. Balikpapan is notable for its diverse society, comprising people from various ethnic backgrounds across Indonesia. The city's population is predominantly composed of immigrants from different ethnic groups. The most common ethnicities found in Balikpapan include Javanese, Banjar, Bugis, Madurese, and others such as Batak, Butonese, Sundanese, and Ambon. Considering these factors, migration stands out as a significant characteristic of Balikpapan(Mutmainnah et al., 2014).

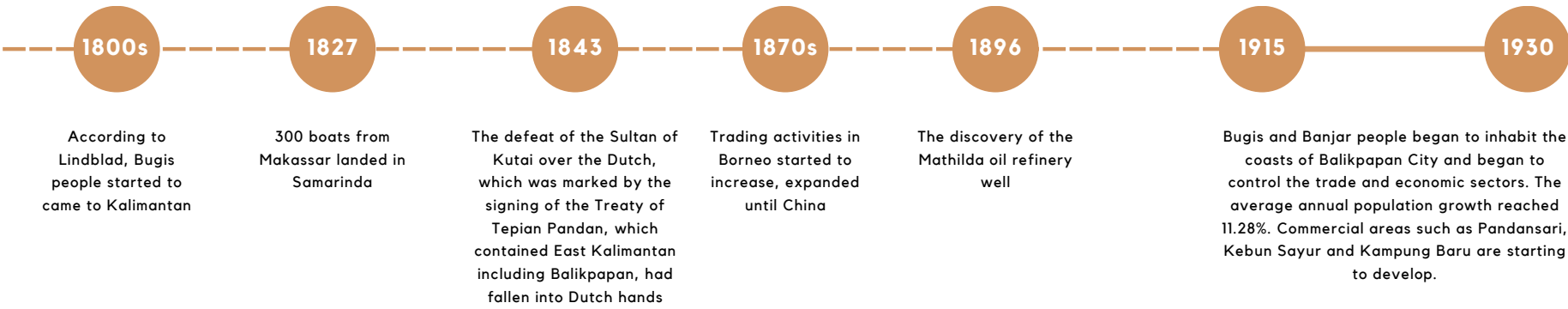
Paser	8,77
Kutai	10,34
Banjar	12,19
Bugis	14,44

Rumpun Tionghoa	16,76
Jawa	29,76
Minahasa	6,81
Batak	3,21
Other origins	3,22

NEWCOMERS IN BALIKPAPAN



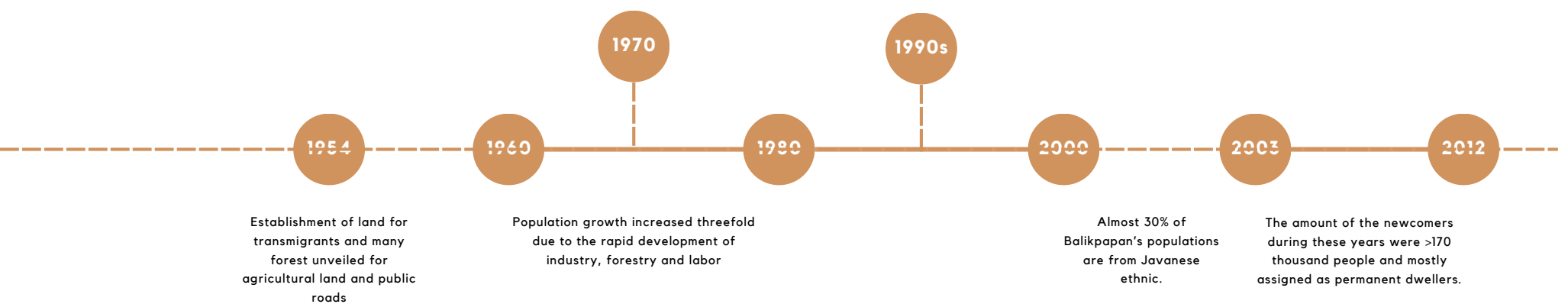
Figure 5. Illustration of history of Balikpapan
Source: Author (2024)





The tinder boom phenomenon occurred where the timber industry in Kalimantan increased and many jobs were needed for immigrants.

Many Javanese people began to immigrate to Balikpapan City as workers in the oil industry since the government transformation period, followed by the Bugis tribe, which originally only lived on the coast, began to expand to the city



BALIKPAPAN AND ITS TOURISM POTENTIALS

Balikpapan City's potential for regional development is fulfilled through regional policy methods that coordinate the expansion of multiple staple business sectors that will be established in the city. The effectiveness of development in each area serves as the foundation for these methods. This is done to ensure that the development of one urban area does not interfere with that of another, maximizing the potential for growth and integration in each region. Spatial potential is developed through the use of strategic city area development initiatives (Pemerintah Kota Balikpapan, 2021). The West Balikpapan region, which is known for its waterfront villages, has the potential to grow tourism from a social and cultural standpoint because it is a strategically important location for the development of future tourist and cultural endeavors.

One of the urban villages that make up Balikpapan City is Kampung Baru Village, which is located in the West Balikpapan district. This region lies on Balikpapan Bay's shoreline, and it features a residential area that stretches out over the water and along the shore. The range of regional activities not associated with residential regions, such as trade/service sectors, fisheries, and the area that borders the oil and gas industrial area, add to this condition (Fitriadi, 2020). The discovery of natural resources in the form of petroleum marked the beginning of the city's development, leading to the nickname "Oil City" for Balikpapan. Before the discovery of petroleum, traders traveling from Banjarmasin (South Kalimantan) to East Kalimantan as well as traders from other parts of Kalimantan Island would stop in the city of Balikpapan. The goods that the traders provided were clothing, other everyday necessities, and fundamental necessities. Geographically, the city of Balikpapan is particularly favorable, being on the bay and right next to the Makasar Strait, making sea traffic easy. This makes the city the gateway for merchants. Natural resources that could be bought and sold (traded) were discovered by passing traders. As time passed, the traders not only made occasional visits but also started to establish villages. The village is known as "KAMPUNG BARU" along Balikpapan Bay's shore. Since they settled and began a new life in this village, Kampung Baru was named after it. Most of Kampung Baru's initial occupants were traders from Sulawesi Island and Banjarmasin (Mahagarmitha, 2022).



Figure 6. Illustration of Balikpapan
Source: Author (2024)

KAMPUNG BARU, BALIKPAPAN

Within Balikpapan City, there are several urban villages, one of which being Kampung Baru West. This region lies on Balikpapan Bay's coast, and it features a residential area that stretches out over the ocean and along the sea's edge. This condition is exacerbated by a number of regional activities that are not related to residential areas, such as places bordering the oil and gas industrial sector, trade/services areas, fisheries, and sea-land transit nodes (Fitriadi, 2020). This neighbourhood has a number of issues, including space pressure brought on by the density of buildings and population, squatter settlements, trash issues, fire hazards, and criminal activity because this location is distinct in that it is referred to as the "Texas" area.

In addition to serving as a center for transit, Kampung Baru, located on the coast of Balikpapan Bay, is a popular tourist attraction for locals because it is a popular tourist spot for a day and offers sea views. Over the past few years, Kampung Baru has emerged as a popular spot for selfies on social media, particularly with the rise of social media and its widespread use as a platform for communication. Locals take advantage of this tendency to sell. therefore the cubicles that the occupants had constructed inside their homes emerged. Most of the guests are locals from Balikpapan City (Mahagarmitha, 2022). Taking selfies, working out (bike or jogging), or simply lounging and soaking in the afternoon sun by the water are common activities. In addition to the aforementioned tourist activities, villages are also visited by tourists, particularly the beautifully landscaped regions like RT 5 and its environs, which are painted in vibrant colors and adorned with an abundance of plants and flowers. Numerous organizations and agencies perform social service work or visit sites to undertake comparative studies.

The diverse cultures and customs of Balikpapan are attributed to the vast immigrant population residing in the city. The reason why the city of Balikpapan is known as the gateway for traders is due to its ideal geographic location—it lies on a bay, right next to the Makasar Strait, making sea transit simpler. A settlement with historical significance to Balikpapan's growth is Kampung Baru. Thus, to protect the region and to resurrect activities that can further develop it to make it even better in the social, cultural, and economic spheres, conservation and revitalization measures are required (Mahagarmitha, 2022). In addition to raising the standard of living for Kampung Baru residents, this preservation seeks to establish the city's identity and make it easier for outsiders to recognize it.

Figure 7. Kampung Baru Floating Villafe from drone view
Source: Ristanto (2018) with author modification

THE KAMPONG OF BUGISNESE

The village became more and more crowded. There is also a commercial area. Pandansari, Kebun Sayur, and Kampung Baru have been around since the 1930s. The name of the last village is none other than a village of Bugis and Makassar people in Balikpapan.

Based on interview from TintaSejarah (2019) with one of Kampung Baru's residence namely Rohani, Rohani has lived in the Oil City for 43 years. To be precise, she had migrated to Balikpapan since 1973. A week after getting married, her husband asked her to emigrate. The city of Balikpapan is the destination. Understandably, her husband had already tried his luck in Balikpapan. Using a sailboat and floating at sea for days, the boat he was on finally docked at Kampung Baru Harbor.



Figure 8. Scenery of floating village in Kampung Baru, Balikpapan
Source: Tinta Kaltim (2019)

Even though they have lived in Balikpapan for a long time, Bugis traditions and language have not been abandoned. In daily life, Rohani often uses Bugis language when communicating with his family. With people from different ethnicities, Rohani uses Indonesian with a very strong Bugis accent. Rohani claims that the strong traditions and language that are maintained even though he moved from Sulawesi to Balikpapan will never fade. This is understandable because in West Balikpapan, where he lives, Bugis and Makassar ethnicities dominate. Especially in the Kampung Baru area. "There are many friends from the Bugis tribe here. "Especially in Kampung Baru," she said.

The Former Sub-District of Balikpapan Barat said that 80-90% inhabitants there are from Bugis and Makassar region. They are the ones who heavily contributed in making Balikpapan Barat as the central of economic wheel. As time progressed, entering the 1970-1980 period, West Balikpapan increasingly became the economic center in Balikpapan. Even the Klandasan commercial area was said to have faded at that time. "West Balikpapan is the center for trade. People who want to shopping definitely come here," said Suhardi. A clear sign of the dominance of the Bugis ethnic group in the West Balikpapan region is reflected in the landscape of fishing settlements. As the old city center, West Balikpapan is a fishing residential area, trade and service area to meet the needs of oil refinery workers and the surrounding community.



Figure 9. (a) Boat deck, (b) Access to the deck, (c) Existing market, (d) Deck, (e) Settlements around Kampung Baru, (f) People go to the market
 Source: Author (2024)

CENTRAL ACTIVITIES IN KAMPUNG BARU



Figure 19. Floating village residents harvesting from hydroponic farming
Source: Antara Kaltim (2022)



Figure 11. Balikpapan typical bead handcrafts
Source: Wijaya (2021)



Figure 12. People frequently buy groceries in the floating market
Source: Susilo (2015)



Figure 13. Kampung Baru as the central of transport using speedboat and kelotok ship
Source: Niaga Asia (2022)



Figure 14. Children swimming in the seafront in afternoon
Source: Travelingyuk



Figure 15. People take a rest while staring at the floating village after bicycling
Source: Travelingyuk

Due to Kampung Baru's advantageous location as a transportation hub between Balikpapan and North Penajam Paser, the majority of its residents are employed as klotok or speedboat drivers. As a result, the area has numerous docks and ports that offer these transportation services. The traditional floating market is not far from there, therefore most people earn a living by selling in addition to driving water transportation. Many locals are setting up stalls on their own homes' terraces in addition to selling in the market.

Because the port and residents' homes are very close together, some homeowners also rent out their terraces to motorbike riders who wish to use speedboat services for day trips so they can pick up their bikes when they return from the port. The people of Atas Air Village continue to farm and grow despite the village's declining green space. Rather, they cultivate crops using hydroponic medium, and they've even harvested a few to sell or consume themselves.

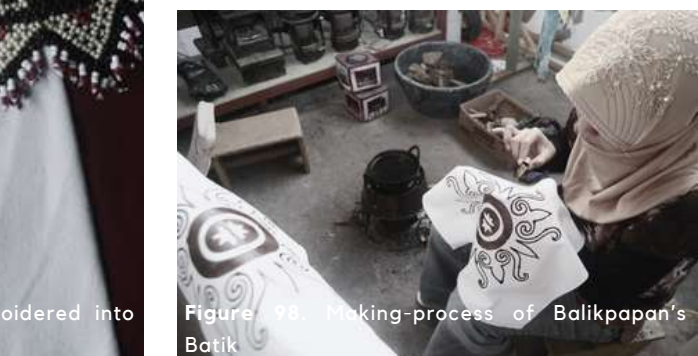
HANDCRAFTS AND BATIK BALIKPAPAN

Due to the abundance of handicrafts in Balikpapan, many people earn a living by selling the traditional handicrafts made in Balikpapan, such as beads, stones, or shells.

Since the 10th century AD, the inhabitants of Kalimantan have been familiar with bead traditions. Many kinds of beads made of clay, shells, bone, stone, and glass have been discovered in archaeological sites in Kalimantan and the adjacent areas. These beads have been replaced, nevertheless, by synthetic materials with more varied and artistic shapes and colours.

The beads are woven into the traditional Dayak designs, which can be used to create a variety of jewellery pieces and to accessorise other crafts like traditional clothing and Sanjay (woven bags). Those are Balikpapan's typical UMKM products, such as Dayak Ethnic Crafts, express one of these identities. They evolve with the times while retaining their unique qualities, making them a part of the millions of cultural mementos from Indonesia.

On the other hand, Batik Shaho is typical batik from Balikpapan which expresses the form with curves, spirals, circles, and human statues. Motifs like this are often found in the carvings or paintings of the Dayak Kenyah and Bahau people in East Kalimantan. Batik Shaho is also colored with natural ingredients such as ironwood powder which is a typical Kalimantan plant.





General Problems

How to design a new and adequate settlements of Kampung Baru Village in Balikpapan with maintaining the diversity of the tribes that exist inside the city and solving other problems as well as accessibility, safety, and privacy?

Goals and Objectives

Re-designing new settlement in Kampung Baru Village with the concept of contemporary Nusantara Architecture to become a 'point' where people from different tribe can feel belong the space.

Can be a prototype of upper water settlements in the rest of Kampung Baru village.

Improving the quality of local people's life there by providing facilities and workshop where they can sell their handicrafts, harvest plants, souvernirs, food, etc.

Specific Problems

How to design a new settlement that provides the sense of contemporary Nusantara architecture to unite the people who comes from different tribes?

How to create spaces for people to interact and socialize with each other inside the settlement?

How to maintain the culture and traditions as well as cultivating local people's small entrepreneurs?

MACRO ISSUES	Balikpapan as city of diversity where newcomers' culture grows in the city	Speedboat and <i>kelotok</i> boat as main transportation to go to IKN	Floating market as the center of commercial place for the local people	Creating a third-space that belongs to everyone
MICRO ISSUES	Designing an adequate settlement that is considering people's daily activity there, as well as safety and comfort for the passengers and the drivers that gives the attraction both for tourists and local people.		Enhancing the economic condition of local people and small medium enterprises which promotes local commodities and culture.	Possibility of growing tourist-attraction place by its unique character from the site and the culture from the inhabitants and the place itself.
VARIABLES	Creating a public space that resembles the uniqueness of Kampung Baru	Revitalizing floating market that is supporting local enterprises		Improving the facilities in Kampung Baru that can accommodate the potentials of coastal-settlements and culture of the local inhabitants
PROBLEM FORMULATIONS	How to design a new and adequate settlements of Kampung Baru Village in Balikpapan with maintaining the diversity of the tribes that exist inside the city and solving other problems as well as accessibility, safety, and privacy?			

Figure 49. Design constraints by Bryan Lawson
Source: Illustrated by author (2024)

	RADICAL	PRACTICAL	FORMAL	SYMBOLIC
DESIGNER Architect	Maintaining the site identity as a center of floating market and commercial area as well as enhancing the tradition of dwellers there.	Designing based on waterfront design and traditional structure of Kalimantan's architecture with considering the system of the boat docks and floating market space distribution.	Following the existing of site-pattern as well as the access and circulation for the functions of boat docks and floating market.	Using stilt-house typology of vernacular architecture in Kalimantan and designing based on Bugis' people behavior in the area.
CLIENT Government of Balikpapan City	Improving the quality of the speedboat docks and floating market in terms of building structure, infrastructure, and accessibility.	Making sure that the facility (structure and infrastructure) of the speedboat docks and floating market can adequately be used by the users.	Having a good resistance toward the water level of the sea and infrastructure that can function well.	Presenting Kampung Baru as one of the ways to go to IKN.
USER Sellers in market, SMEs users, visitors, local people	Adequate harbor facilities for boat drivers and passengers, sellers of floating markets, SMEs do-ers, and tourists.	Clearance of circulation of the speedboat docks, easiness to the floating market, and promenade for relaxing.	Enhancing the comfortability and having good shape for aesthetics to attract tourists and visitors.	Highlighting the floating markets as the uniqueness of the site that can be tourist attraction to visit.
LEGISLATOR Government of Balikpapan City	Peraturan Daerah Kota Balikpapan NO. 12 Tahun 2012 TENTANG RENCANA TATA RUANG WILAYAH KOTA BALIKPAPAN TAHUN 2012–2032	Reviewing the feasibility of building designs based on applicable regional regulations according to PERMENPAR No. 3 Year 2018.	Being contextual to the waterfront site with considering structure and infrastructure with the regulations applied based on Ditjen Cipta Karya (2000).	Having zoning that complies with development regulations can improve the regional economy and become an attractive tourist center for tourists.

PROBLEM LIMITATION

ARCHITECTURAL OBJECT



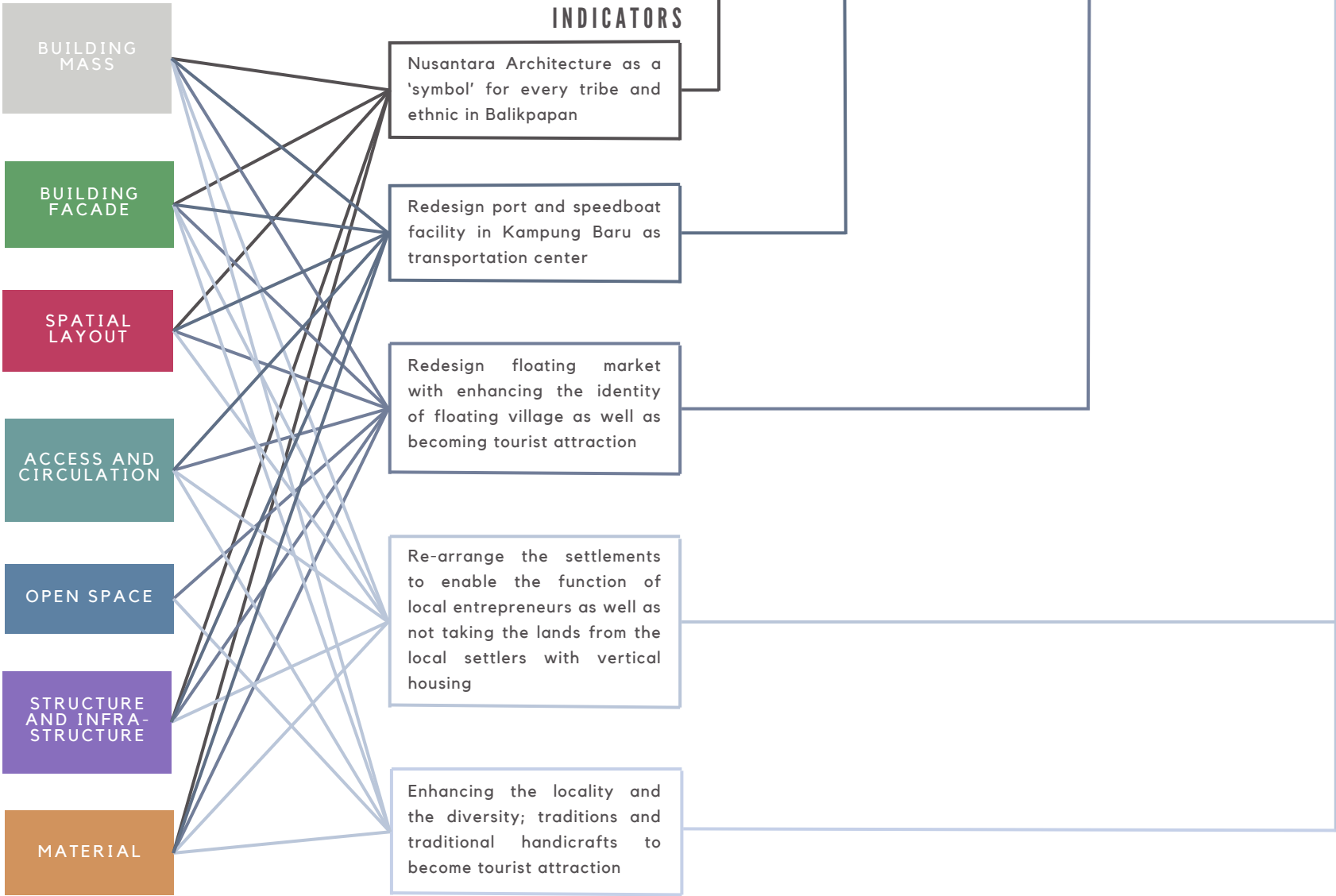
Balikpapan is a city that widely known with its diversity of populations due to newcomers keep coming to the city for working and seeing possibility of staying

Kampung Baru is a floating village in Balikpapan which acts as one of transportation center to go to the New National Capital City

Floating market is one of the vital supporting facilities around for local people to get their daily identities and acts as the identity of the floating village

Melted point for the diversity and locality; newcomers come from various tribes mostly Paser, Banjar, Bugis, and Javanese with cultivating its similar culture (Sedekah Laut) and local handicrafts for tourist attraction

INDICATORS

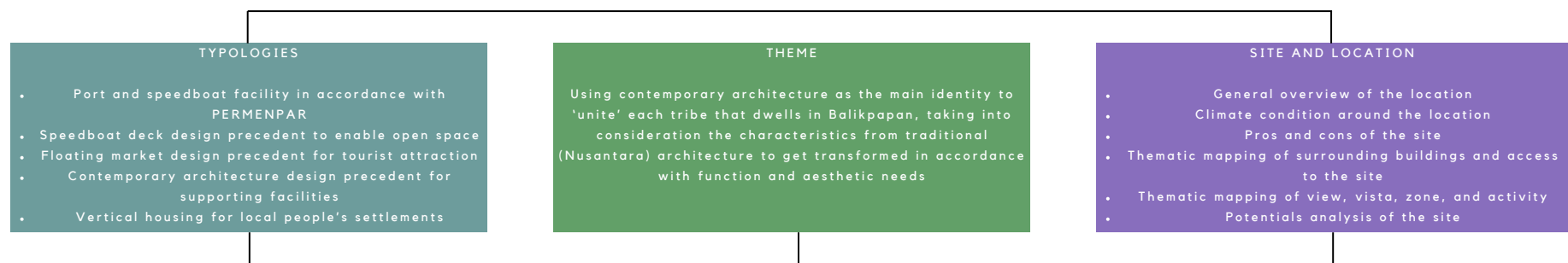


THE DESIGN OF NEW KAMPUNG BARU:

MELTING POINT BETWEEN SEASHORE AND IN-LAND VILLAGE AS A
CELEBRATION OF DIVERSITY IN BALIKPAPAN ABSTRACTION OF
NUSANTARA ARCHITECTURE



HOW TO DESIGN A NEW AND ADEQUATE SETTLEMENTS OF KAMPUNG BARU VILLAGE IN BALIKPAPAN WITH MAINTAINING THE DIVERSITY OF THE TRIBES THAT EXIST INSIDE THE CITY AND SOLVING OTHER PROBLEMS AS WELL AS ACCESSIBILITY, SAFETY, AND PRIVACY?



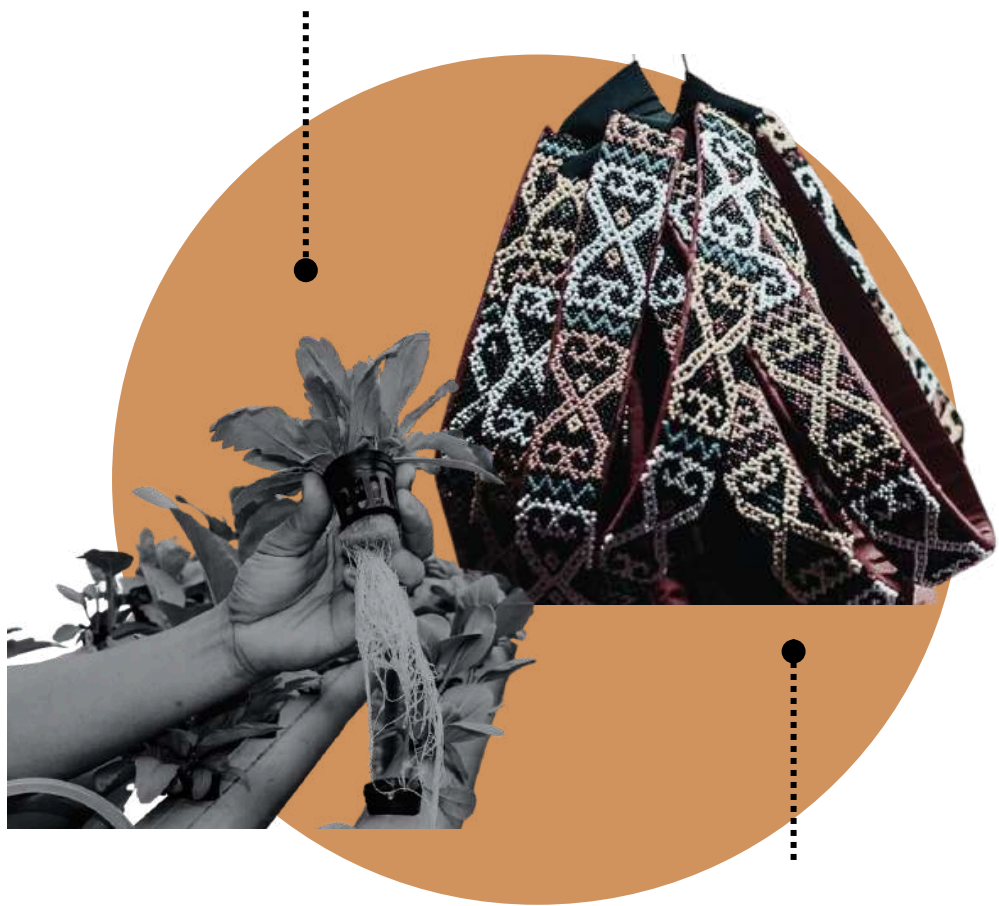
DESIGN ASPECTS



DESIGN HYPOTHESES

AGRICULTURE

Despite the village's diminishing green space, the residents of Atas Air Village nevertheless farm and thrive. Instead, they use hydroponic medium to grow their crops, and they've even harvested a couple to sell or eat.



HANDCRAFTS

The beads are woven into the distinctive Dayak patterns, which can be used to make a range of jewellery items and to accessorise other handicrafts including Sanjay (woven bags) and traditional apparel. These are the typical UMKM items from Balikpapan that represent one of these identities, like Dayak Ethnic Crafts. They become part of the millions of cultural souvenirs from Indonesia as they change with the times while keeping their distinctive characteristics.

Figure 22. Illustration of handicrafts and garden in Kampung Baru
Source: Author (2024)

Floating market exists as the center of the commercial site at Kampung Baru where people sell local commodities such as fruit, vegetable, culinary snacks.

ECONOMY

Kampung Baru as a gate to IKN due to its strategic location that is facing Balikpapan Bay and directly crossing the Penajam Paser Utara (PPU) as IKN making people easily mobile from Balikpapan to PPU.

CULTURE

Some of them also create small medium enterprises by selling bead handcrafts typical of Balikpapan. The typical typology of buildings built around the waterfront of Balikpapan Bay is adapting from Kalimantan traditional house.

CONNECTIVITY

The center of transportation site which mostly using speedboat and *kelotok* to crossover to PPU due to its cheap price and saving more time rather than using ferry ship or through land.

Figure 23. Illustration of potentials in Kampung Baru
Source: Author (2024)

ORIGINALITY AND NOVELTY

TITLE	YEAR	AUTHORS	DESIGN CONCEPT
Designing Marine Tourism in the Kamal Harbour Madura Trough the Symbiotic Architecture Approach	2021	Gisella Ulrich	Focusing on the potential for tourism development in an abandoned area on the east side of Kamal Harbor to create opportunities for marine tourism. A symbiotic architectural approach is selected by making culture a design identity to compose a strong philosophy and novelty. Additionally, principles of post-pandemic tourism resilience are valuable in designing a futuristic design.
Revitalisasi Pangkalan Pendaratan Ikan Cikidang sebagai identitas kawasan wisata nelayan Pangandaran dengan pendekatan kearifan lokal	2023	Resti Nurwinda	Revitalizing fishery sector in Pangandaran Regency which has potential for economic growth, but fishermen's income is affected by uncertainties and lack of facilities. To increase income, revitalization is needed to attract tourists and improve facilities, while exploring traditional Sundanese culture. The expected results include improved primary income from capture fisheries and secondary income from a production center.
Perencanaan Ruang Budaya Sungai Selili di Samarinda dengan Pendekatan Space Syntax	2020	Yogo Pratomo	Strengthening the tourism and fishery sectors in fishing port at Pangkalan Pelelangan Ikan (PPI) Selili, Samarinda to become a new economic center as an action to prevent economic decline when coal mining ends. Within the fishing port needs to be managed effectively to maximize its potential and improve the economy and well-being of fishermen in Kota Samarinda.
Perancangan Pasar Kampung Baru Tengah yang Terintegrasi dengan Rumah Susun di Kawasan Pesisir Balikpapan Berdasarkan Aspirasi Stakeholder	2020	Agil Artyatma Arham	Revitalizing traditional markets to compete with modern markets, a mixed-use building concept is needed to integrate Pasar Kampung Baru Tengah with Rumah Susun in Kota Balikpapan. The design should cater to the needs of the community or stakeholders to maximize the potential of the coastal area in Kelurahan Baru Tengah.
Design of Water Colony: Future Water Adaptive Settlement in Sudimampir Area Responding to Rising Sea Level in Banjarmasin	2022	Muhammad Thirafi Hadyan Syarief	Addressing three main issues to be tackled in Banjarmasin, in South Kalimantan, faces challenges due to its below-sea-level geography and river proximity. Historical areas like Sudimampir, Ujung Murung, and Pasar Lima have driven growth, but the old infrastructure poses a flooding risk: developing a concept to mitigate rising water impacts, preserving Sudimampir as a historical service trade center, and structuring development without disrupting ongoing trading activities.
Design of Inclusive Modular Housing with Open Building Approach Responding to Flood Disaster in Kemang, South Jakarta	2022	Abdur Rahman	Reorganizing settlements in Kemang, an elite area in South Jakarta, which often experiences floods from the Krukut River overflow during heavy rains. The reduced water catchment areas, due to extensive building and pavement, exacerbate the issue. This has created social inequality, with luxurious buildings alongside dense housing, often separated by high walls. Efforts aim to increase social and environmental value by reforestation and public space development, and residents' housing is using modular housing methods to enhance community inclusivity.



GENERAL SITE CONTEXT

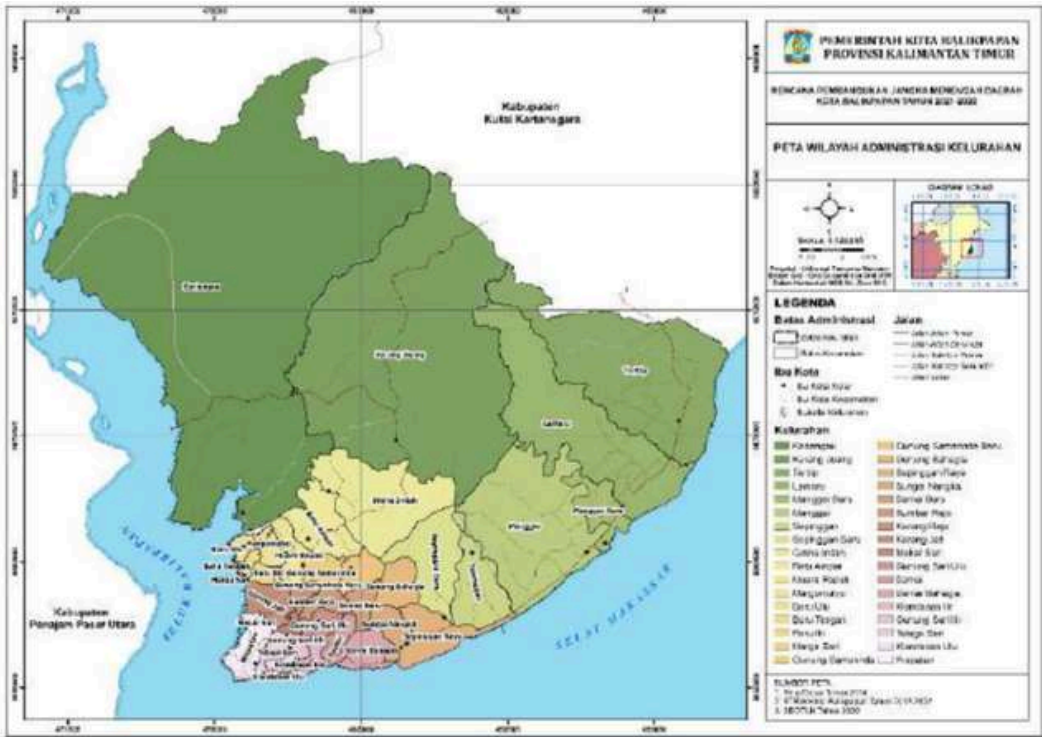


Figure 24. Balikpapan city Administrative Map
Source: Rencana Tata Ruang Wilayah Kota Balikpapan Tahun 2012-2032

Geographically, Balikpapan City is located in the eastern part of Kalimantan Island and directly borders Balikpapan Bay and the Makassar Strait. The position of Balikpapan City, which is directly adjacent to the Makassar Strait, is an added value in relation to the plan to move the National Capital (IKN). The city of Balikpapan itself is prepared as a Buffer Zone for the new IKN, namely Regency of Penajam Paser Utara because it directly borders it.

The city of Balikpapan has a hilly area with a few sloping areas around rivers and coastlines. Administratively, the total area of Balikpapan City is 51,101.24 Ha, with the following limits:

- To the north it borders Kutai Kartanegara Regency;
- To the south it borders the Makassar Strait;
- To the east it borders the Makassar Strait; and
- To the west it borders Regency of Penajam Paser Utara.

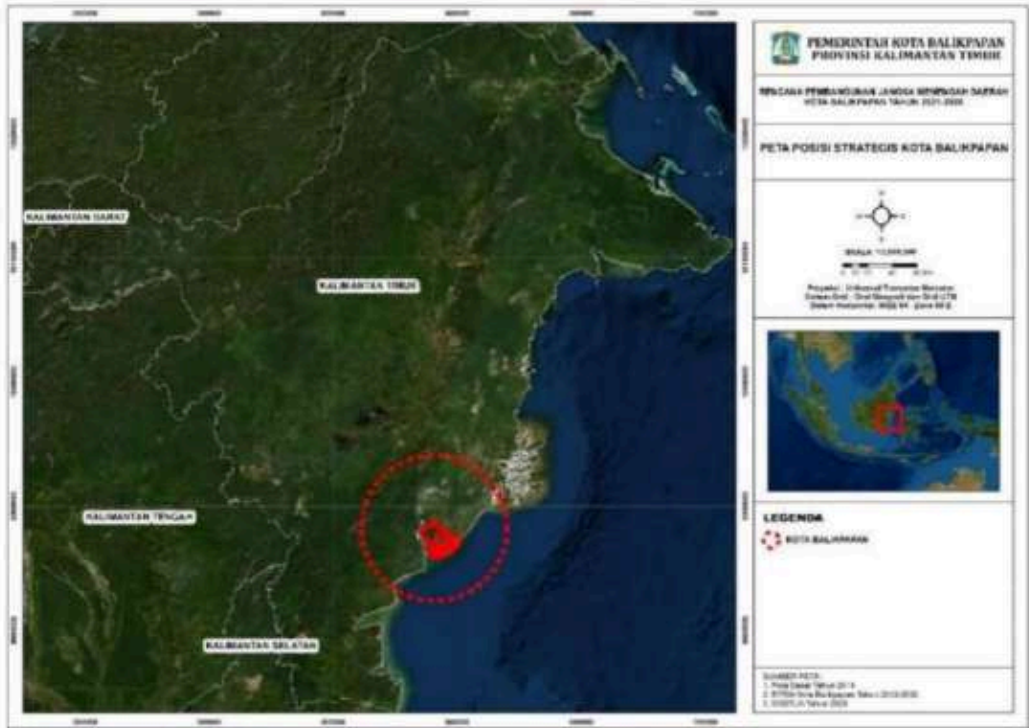


Figure 25. Map of the Strategic Position of Balikpapan City as a Support for IKN
Source: Rencana Tata Ruang Wilayah Kota Balikpapan Tahun 2012-2032

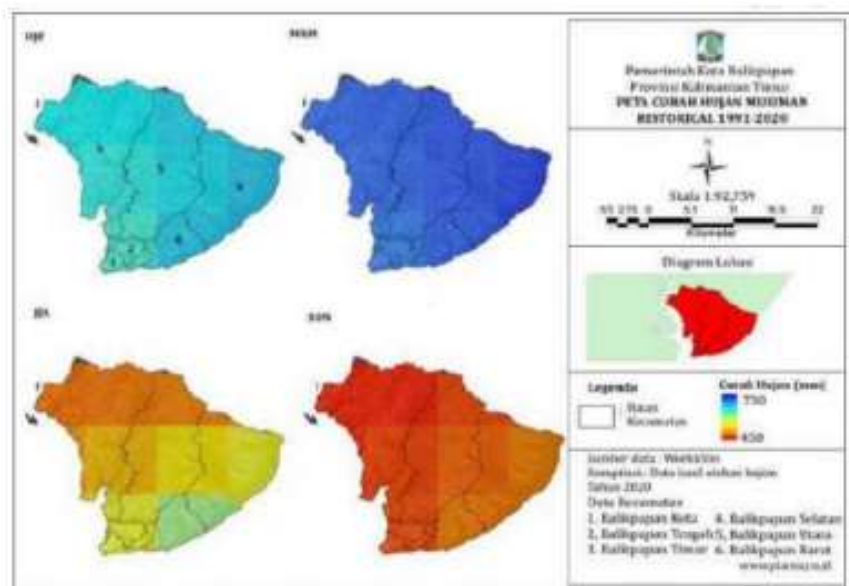


Figure 26. Historical Seasonal Rainfall Map of Balikpapan City 1991-2020
Source: DLH Kota Balikpapan, DIKPLHD Kota Balikpapan, 2019

The temperature distribution of Balikpapan City is in the range of 27°C to 29°C, the redder color indicates the higher temperature, while the yellow color indicates lower temperature. Balikpapan City District, Central Balikpapan District, and South Balikpapan District have lower temperatures compared to other districts.

Balikpapan City's seasonal rainfall is in the range of 750 – 450 mm. The highest historical rainfall in 1991-2020 was in March, April and May which is shown in a bluer color compared to other months. Seasonal rainfall in September, October and November is lower compared to other months, indicated by a redder color. This shows that the peak of the rainy season in Balikpapan City is in March, April and May and the peak of the dry season is in September, October and November.

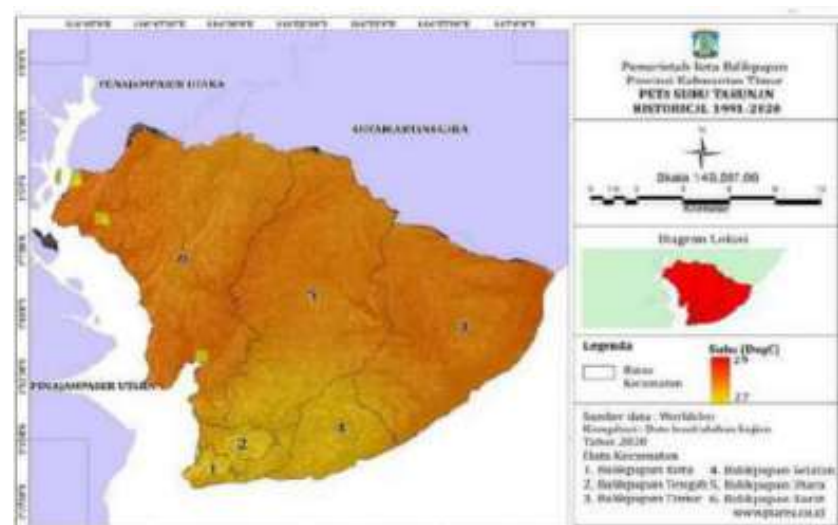


Figure 27. Historical Annual Balikpapan City Temperature Map 1991-2020
Source: DLH Kota Balikpapan, DIKPLHD Kota Balikpapan, 2019

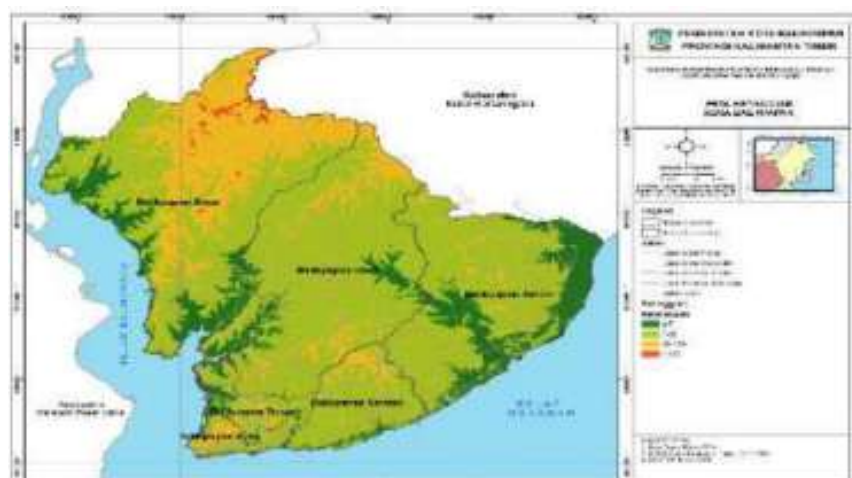
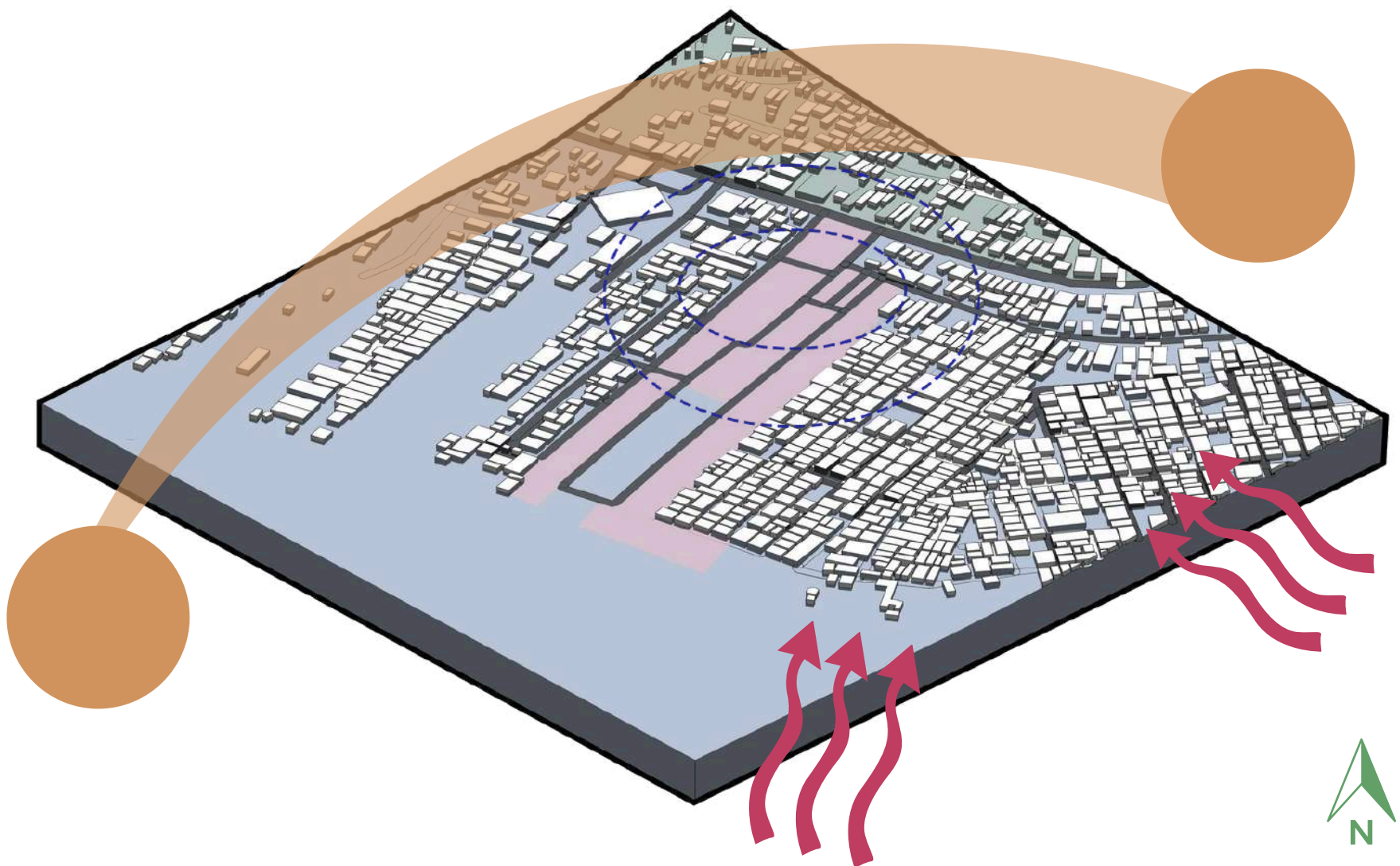


Figure 28. Altitude Map of Balikpapan City
Source: RTRW Kota Balikpapan Tahun 2012-2032

Morphologically, Balikpapan City consists of 85% of the area hills with red-yellow podzolic soil which has a thin topsoil character, the soil structure is easily eroded. Meanwhile, the other 15% are plain areas located along the east and south coasts of the Balikpapan City area with the soil type generally being alluvial. From a topographic perspective, most of the Balikpapan City area is on a slope of between 15-40%, namely an area of 21,305.57 Ha or 41.69% of the total area.

CLIMATE CONDITION

The sun-path analysis will be used to determine the orientation of the building in accordance with the function; for example floating market does not necessarily need to face the west direction since it will increase the heat and glare for the users when they go to the market, but the promenade can be made to face the west for people view the sunset. Wind direction mostly comes from the south area which will determine the thermal comfort for the people, e.g. the placement of windows and ventilations.



WIND SPEED

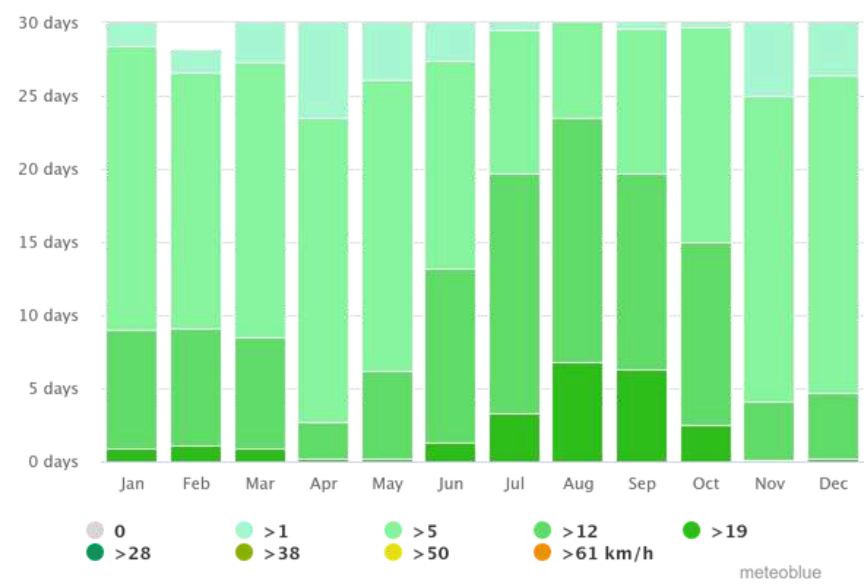


Figure 29. Wind Speed
Source: Meteoblue

WINDROSE

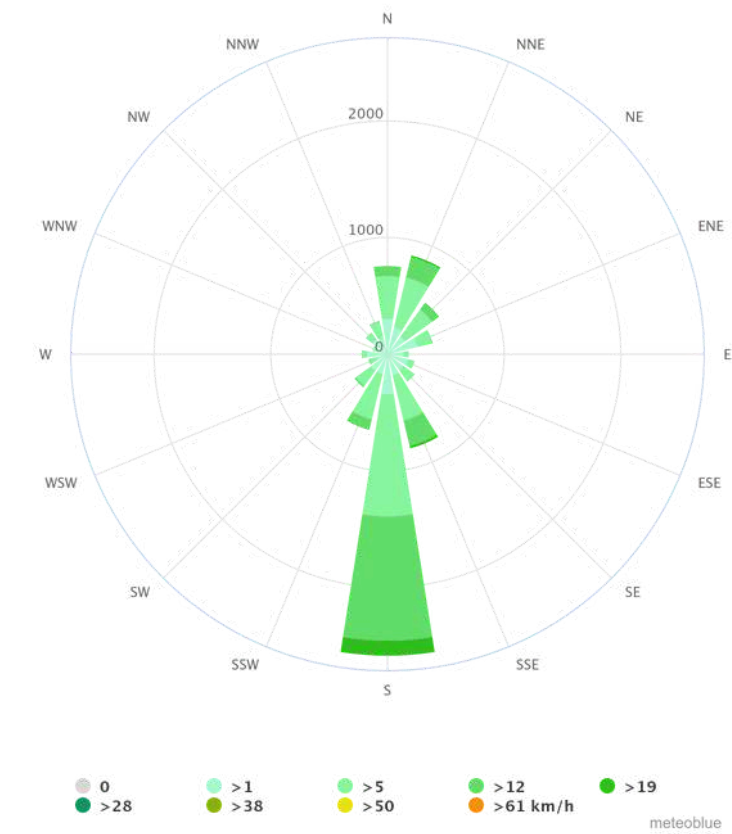


Figure 67. Windrose
Source: Meteoblue

PRECIPITATION AMOUNTS

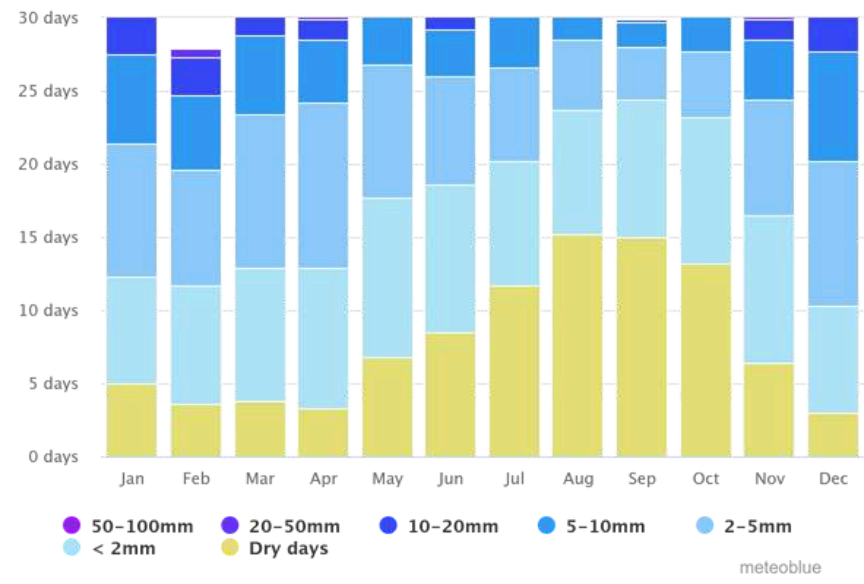


Figure 30. Precipitation amounts
Source: Meteoblue

Average rainfall in the city of Balikpapan is around 10-25 mm. Meanwhile, the dominant wind direction comes from the south with speeds above 10 km/h. This aims to determine the height of the building above sea level and determine the dominant direction for obtaining natural ventilation.

SEA TIDAL COEFFICIENT

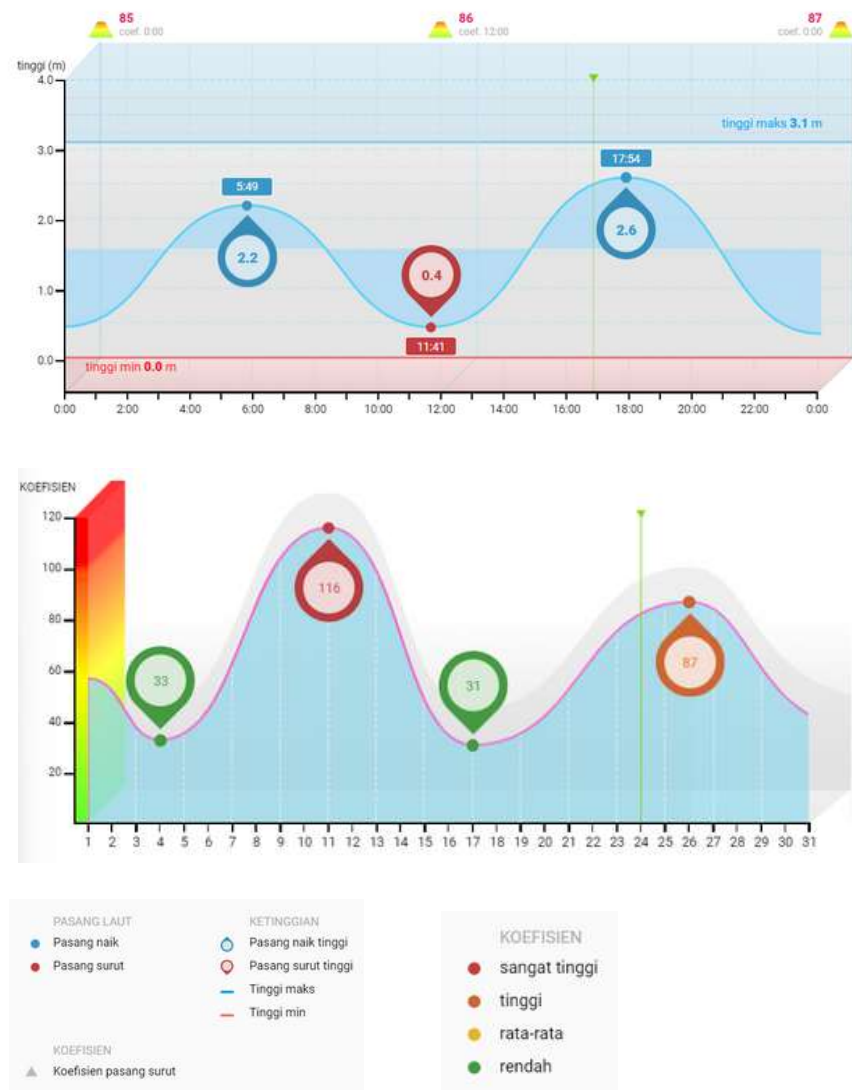


Figure 31. Sea tidal coefficient
Source: Pasanglaut.com

The forecast range of tides is indicated by the tidal coefficient. The tidal coefficient of sea water is 86. With a coefficient this high, large tides and currents will be visible. These levels can be compared with the maximum high tide recorded in the tide tables for Balikpapan, which is 3.1 m with a minimum height of 0.0 m.

AVERAGE TEMPERATURE AND PRECIPITATION

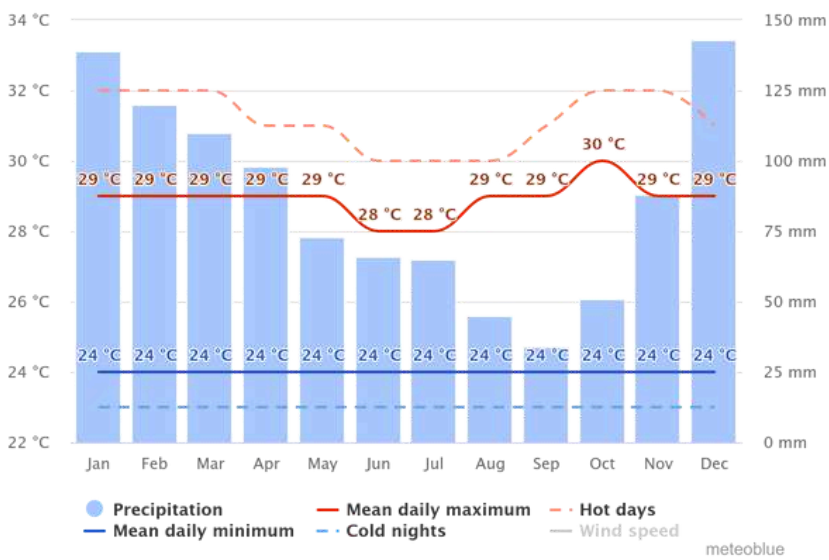


Figure 32. Average temperature and precipitation
Source: Meteoblue

SUN PATH

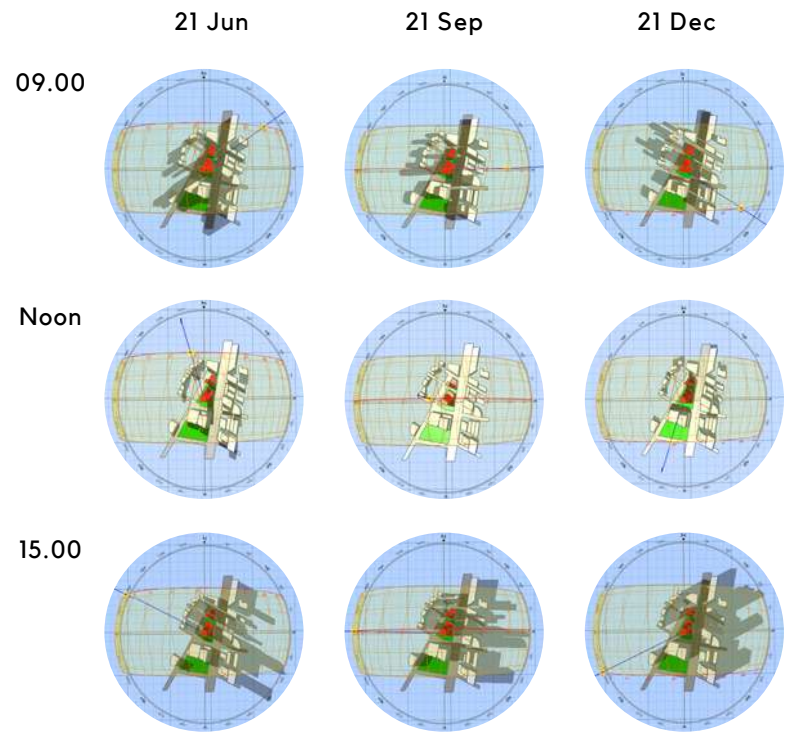


Figure 33. Sunpath
Source: Andrewmash

SITE EXISTING

± 31.200 square meter



BOATS PARKING AREA



SPEED BOAT DOCK

According to RTRW Balikpapan City Year 2012-2032, the coastal residential area in West Balikpapan District is an area that is considered strategic for developing potential cultural and tourism activities.

FLOATING MARKET



LETJEND. SUPRAPTO STREET



21 JANUARI STREET



SITE EXISTING





EXISTING CONDITION



245 HOUSES



± 1507 inhabitants in
3 RTs, 277 heads
family



± 5 people work as
farmers



± 20 people work as
traders and having
kiosks



± 15 people work
as a fisherman



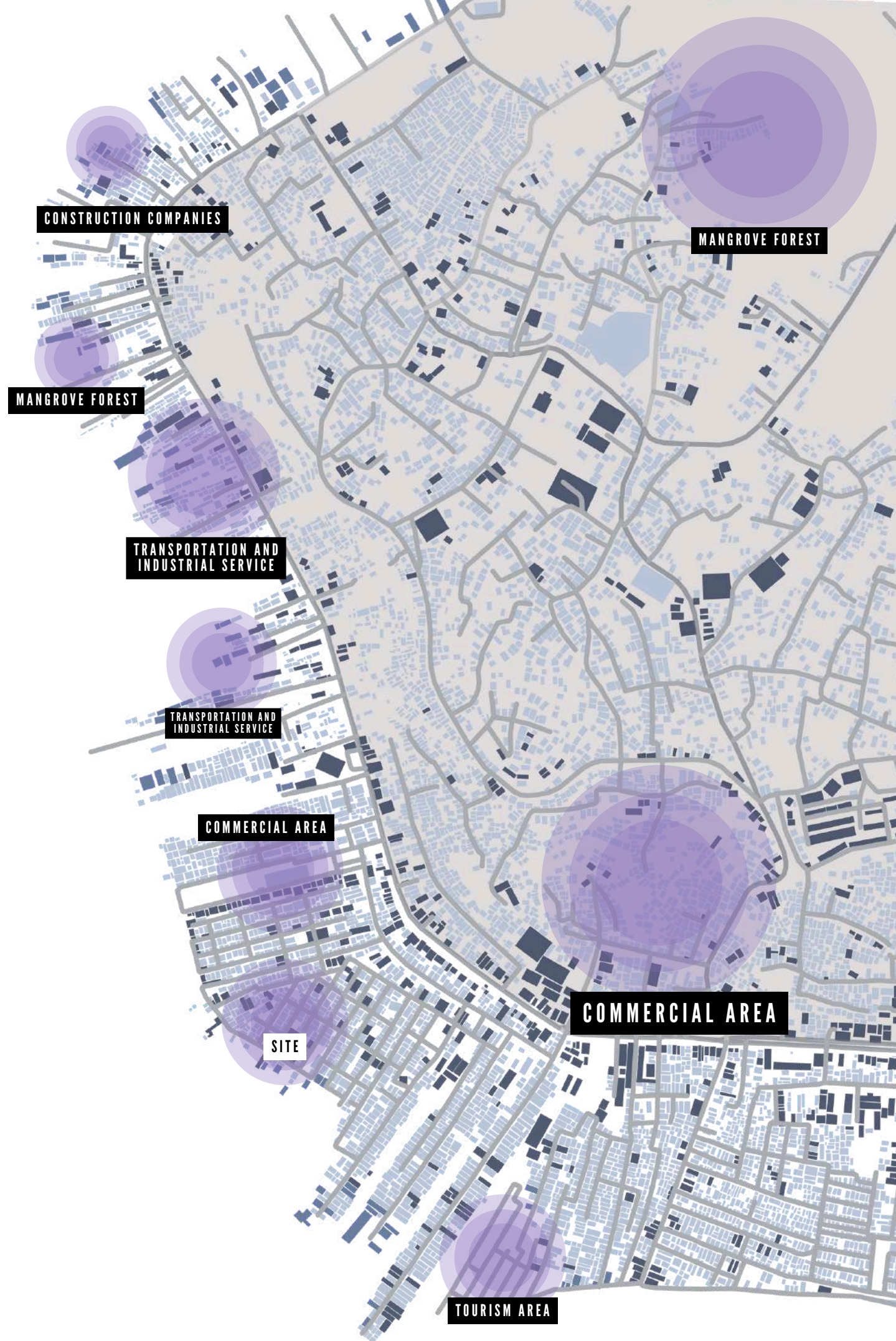
± 770 people in
productive age



± 350 people
unemployed



- COMMERCIAL BUILDING
- DOCKS OF SPEEDBOAT AND KELOK
- INDUSTRIAL AND TRANSPORTATION SERVICE
- SETTLEMENTS



ACCESS TO SITE

MAIN ACCESS

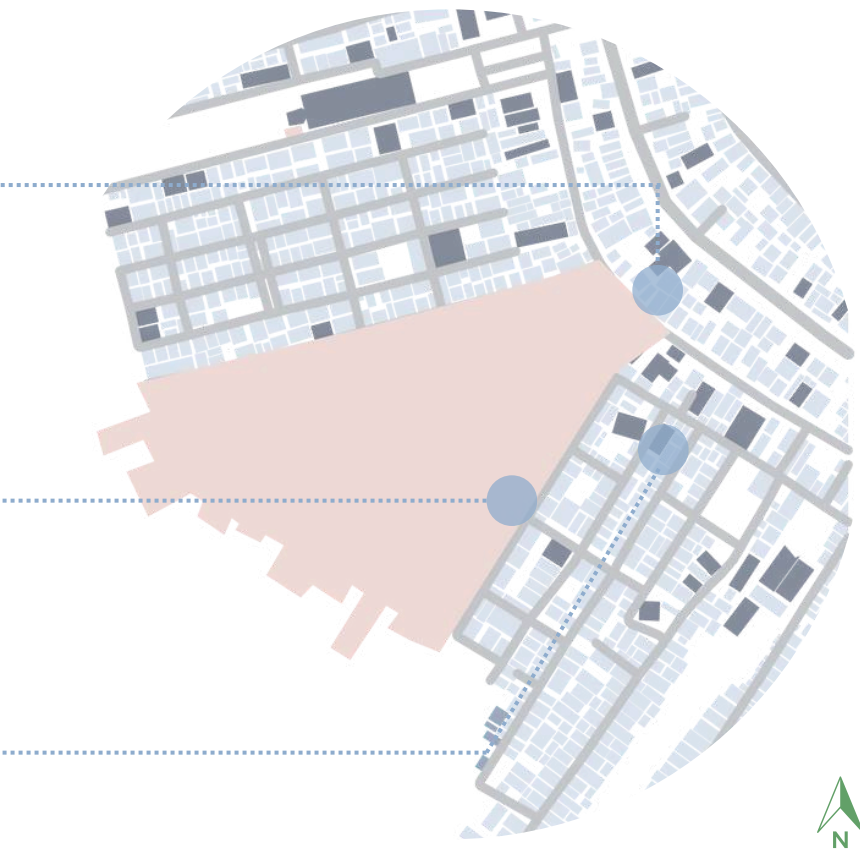
Directly connected to protocol street in Letnan Jend. Suprpto St. for 10 meter away

SECONDARY ACCESS

Connected to residential area

SECONDARY ACCESS

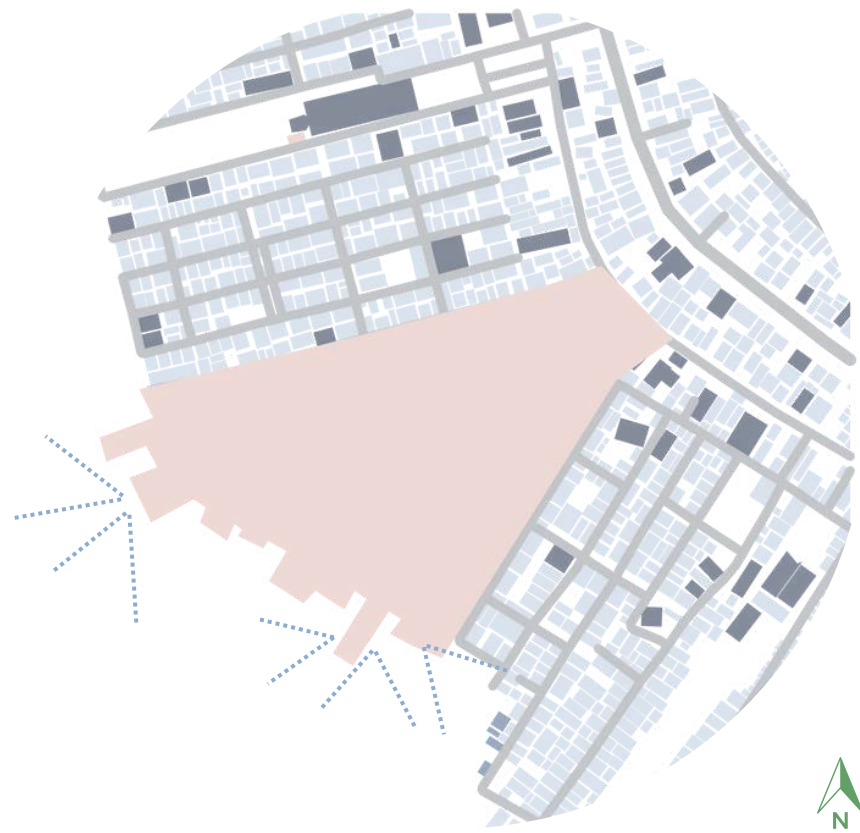
Connected to 21 Januari St.



VIEW VISTA

Enables the view to northwest, apertures more likely to be placed north-oriented

For tourist attraction, orientation of the mass can be directed to the west for sunset viewing



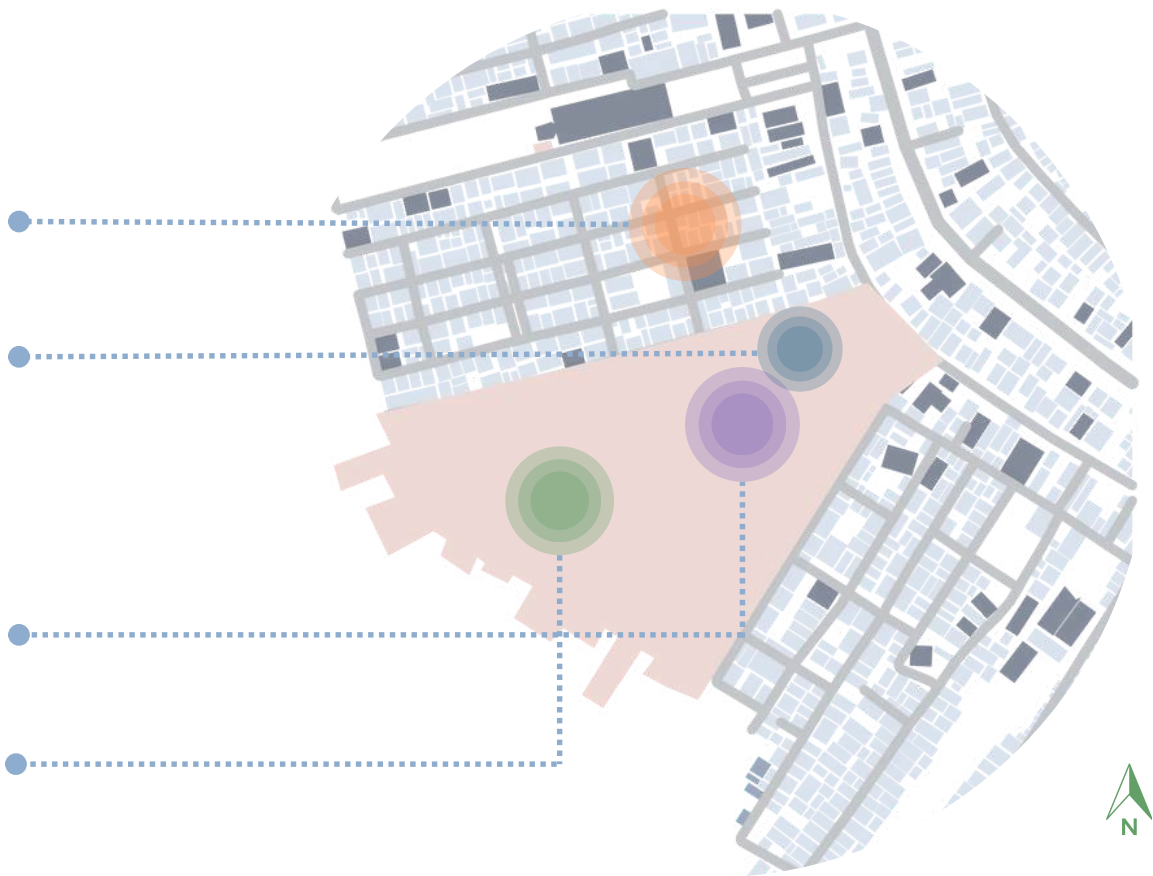
CENTRAL ACTIVITIES

Speedboat harbour and pier most likely to be placed here in order to easily differentiate the circulation between boat for floating market and boat for transportation

Boat service center and route for going through the kiosk in floating market

Possible massing for floating market as the center of activities

Potential for promenade deck and photo-spot because it still enables 360 degrees view of the sea

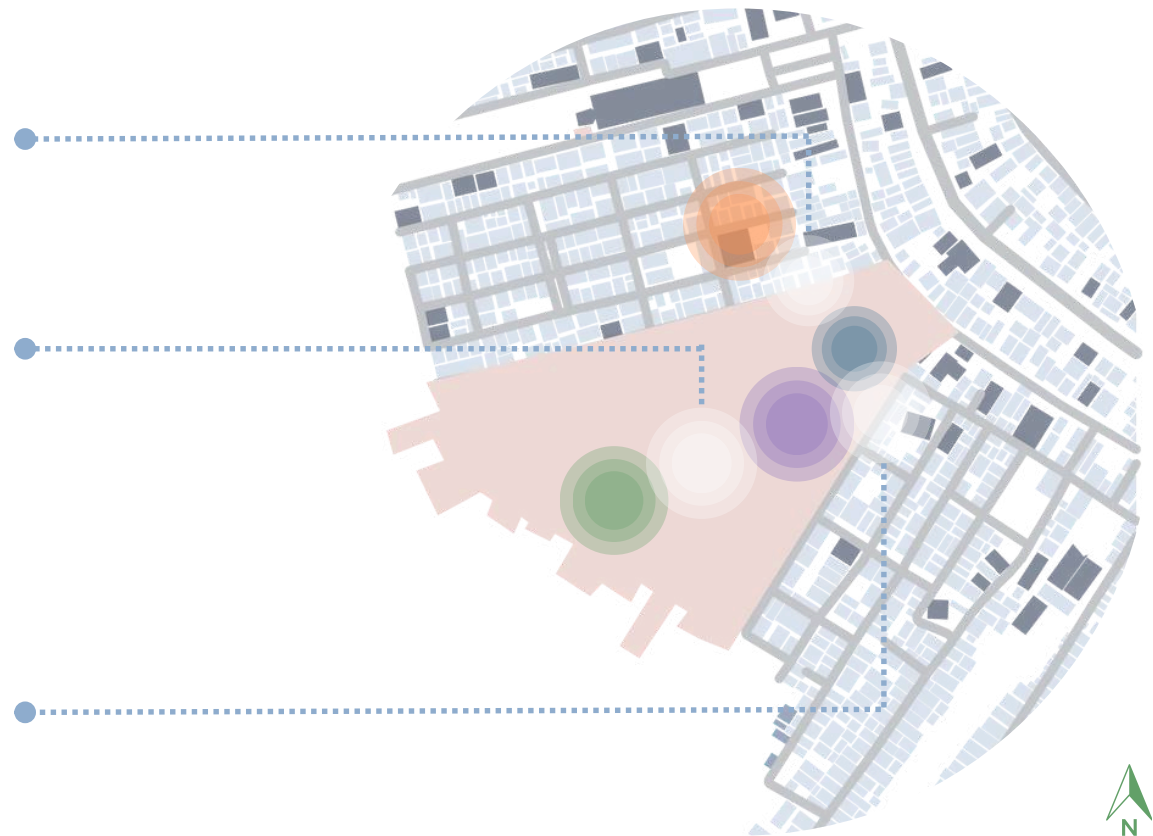


INTERMEDIARY ZONE

Intermediary zone between the entrance from to the harbour

Intermediary zone between the boat service center and kiosk to the promenade deck by having open space

Intermediary zone between floating market to the boat service with green open space as well as for people interact.



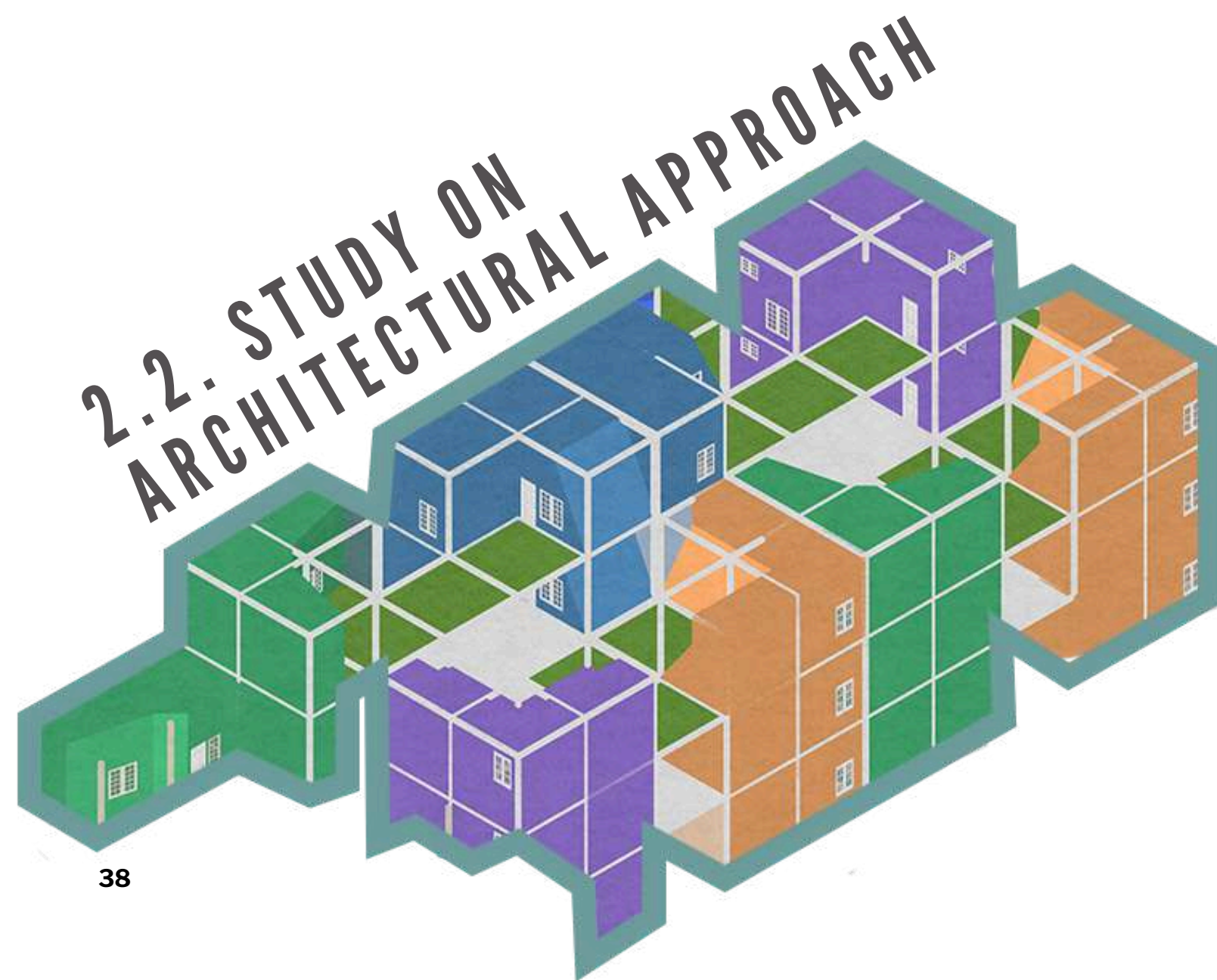


PROS

- Cultural richness: The floating village has a unique cultural identity which is Bugis village in Balikpapan land that can be a significant attraction for tourists.
- Central of movement: The existence of port, floating market, and the culture in Kampung Baru enables it to be the center of economy and culture activity.
- Participation of community: The open spaces designed for cultural expression can enhance the sense of community and attract cultural enthusiasts.

CONS

- Fire hazard: The prevalence of wooden houses and the close proximity between them in slum area pose a significant fire risk.
- Infrastructure challenges: The existing infrastructure may need improvement to accommodate increased tourism and market activities. Increased tourism and economic activities may strain the existing infrastructure, leading to potential issues with waste management, water supply, and transportation.
- Accessibility: Due to narrow wooden road and the dense both of activities and people there, the site is not too accessible for all transportations mode and lack of parking lots.



NUSANTARA TRADITIONAL ARCHITECTURE

There are a great variety of vernacular architecture in Indonesia. These run parallel to the wide range of ethnicities. In line with the concept of vernacular homes generally, Indonesian homes serve a variety of purposes, including fulfilling spiritual needs and offering deeper significance in addition to serving as places for everyday physical activity (Wazir & Indriani, 2020).

According to Wazir & Indriani (2020), there are few characteristics of vernacular houses in Indonesia which are flexibility, using platform style, gendered space, house mobility, sunlights and air circulation, semi-public space, and the role of anthropometry.

FLEXIBILITY

For the practical advantage of the occupants in such limited visibility, space measurements are made. The only way those with higher social roles can have regions that are larger than what is necessary. In preparation for more guests, this enables the locals to host additional locations. Larger spaces obviously require more complex roof construction and structure, which is beyond the means of lower social classes. However, if a house is constructed entirely of one space, then this technological problem can be fixed.

Diverse spatial configurations found in Indonesian vernacular homes reflect the cultural and natural conditions unique to each location. Homes on Pulau Seram, Maluku, for example, have clear spatial divides and their occupants know why each space is there. Java's joglo houses, on the other hand, are distinguished by their large multipurpose rooms that can be utilised for everyday activities as well as festivities without the need for permanent partitions. Contrarily, Bali's distinctive homes are modular, made up of distinct areas that may be added to or changed as needed. The spaces are dispersed over a greater region, which increases complexity at the expense of flexibility.

By contrast, West Papuan Ibeiya huts are made for sitting, mostly for cooking, and have very little flexibility because they have to be adapted to the harsh highland climate. One can classify other Indonesian vernacular houses according to how flexible and well-organized their spaces are. Houses with large and small spaces that can be used for different purposes, houses with evenly sized plans that offer limited flexibility, and houses with very low flexibility, like the Ibeiya houses, which require occupants to adapt to the space's design, are among these categories. Houses with high complexity include those with multiple functional areas. These varied illustrations of Indonesian vernacular architecture display the country's rich cultural legacy as well as the manner in which regional demands and environmental factors have influenced the layout and functionality of traditional dwellings.

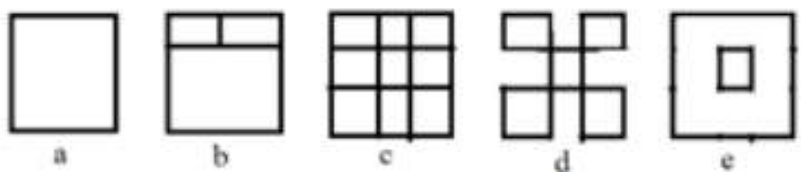


Figure 34. Typology of Indonesian vernacular houses based on plan flexibility. From left to right: (a) house without partition, (b) house with several large spaces and small spaces, (c) house with small spaces, (d) house with small spaces, separated by outdoor space, (e) house with one small space

PLATFORM STYLE

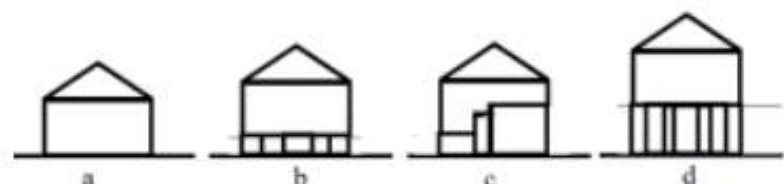


Figure 35. Typology of Indonesian vernacular houses based on distance from the ground. From left to right: (a) house embedded to the ground, (b) house with low pit, (c) house with split level floors, (d) house with large pit, accessed by standing human.

Indonesian traditional dwellings, known as limas houses in particular, are distinguished by their stilted architecture, square or rectangular forms, and nearly three-meter heights. These dwellings have a pit that has several uses and are held up by thirty-two unglan wood stilts. In addition to serving as extra room for boarding or storage, the raised pit in limas houses can be utilised for regular activities like gatherings and storage. In the past, the tall pit in limas dwellings acted as a stronghold to ward off enemy attacks, giving the occupants a greater vantage point for a counterattack.

Other varieties of Indonesian vernacular homes are split-level homes, such as the Tongkonan homes of Torajan, which feature a raised platform for personal areas. Likewise, split-level flooring are seen in Bubungan Tinggi houses from Banjar, South Kalimantan. Leboya and Sopo houses from Sumba and Toba are examples of a different kind of building that employs hollows to house cattle. These dwellings contain pits for feeding and disposing of waste. Important purposes for the pits in stilt houses are ventilation, improving shade, controlling temperature, and safeguarding against wild animals or floods. These features allow for the creation of a typology of Indonesian vernacular homes, which can be divided into four groups: homes that are buried in the ground, homes with low pits, homes with split levels, and homes with elevated pits.

HOUSE MOBILITY

The distinctive spatial compositions of Indonesian vernacular buildings may be seen in the houses of the Duanu tribe in Riau, which are made up of a moving boat that serves as a residence and a permanent house situated over the sea. The permanent home is square in shape and sits on stilts above the water. It contains two rooms: a kitchen and a main area used for daily activities. The boathouse itself is utilised for living, cooking, and special occasions like weddings; the porch acts as a port and a place to tie up boats.

Malay houses have a mobility element to their culture, even though they are not as movable as the boat-houses of Duanu. To relocate houses—often as a result of a death in the family, the birth of a child, or the sale of land—they hold a house-lifting ceremony. The light weight and design of the dwellings, which can be carried by humans and covered by the essential area of the house, make this mobility possible. It is also possible to separate and move houses in sections. Houses can be divided into three categories according to their degree of mobility: totally mobile homes, such as the boat houses of Duanu, semi-mobile homes like those of the Malay people, and permanent homes. Rakithouses from the Musi River in South Sumatra and Bandung houses from the Kapuas River in West Kalimantan are two examples of the latter.

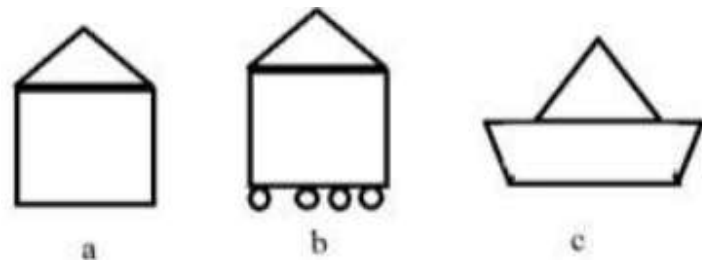


Figure 36. Typology of Indonesian vernacular houses based on mobility. From left to right: (a) permanent house, (b) semi mobile house, and (c) completely mobile house

SUNLIGHTS AND AIR CIRCULATION

The orientation of Indonesian vernacular houses varies depending on a number of factors, including cultural beliefs, practical considerations, and environmental factors. For instance, many houses face north-south to maximise sunlight; others, like Javanese houses in Yogyakarta, are oriented to pay respect to specific deities or directions; some, like those in Aceh, face west-east as a symbol of Islamic spiritual orientation; still others, like limas houses in Palembang and Malay houses in Pontianak, are oriented towards roads or rivers for practical reasons. This diversity of orientations can be divided into three categories: houses without specific orientation, houses with a north-south orientation, and houses with a west-east orientation.

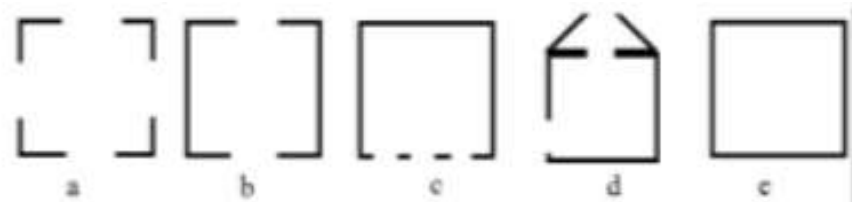


Figure 37. Typology of Indonesian vernacular houses based on opening extensivity. From left to right: (a) openings on all sides, (b) openings on two adjacent sides, (c) openings on one side, (d) opening in bottom and peak of the house, and (e) without openings

Utilizing enlarged apertures to optimise ventilation is another characteristic shared by Indonesian vernacular homes. In order to improve ventilation, certain homes, such as the Malay homes in Riau and Jambi, have large windows that are body height. As a result of their adaptability to high altitude life, homes like Tobelo from Halmahera, on the other hand, are highly enclosed, especially at the back. Four types of homes can be distinguished by this variety in openness: homes with openings on all four sides, homes with openings on two sides, homes with openings on one side, and homes without openings.

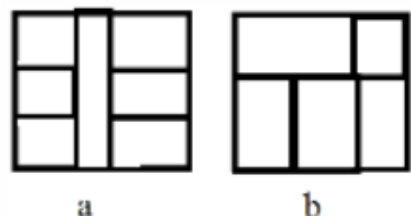


Figure 38. Typology of Indonesian vernacular houses based on aisle's existence. From left to right: (a) house with aisle, (b) house without an aisle

In addition, some homes have vertical ventilation as opposed to cross or one-direction ventilation, which involves air moving from the bottom to the top of the structure. Nias homes are one form of example. There is absolutely no ventilation in other types of dwellings, such as Dani, Bali Aga, and Sasak houses. Aisles in houses might also differ according to cultural beliefs. For example, because of the concept that danger can simply flow through once it gets in, Minahasa houses include lanes that connect the front and back doors. Conversely, for various reasons, Chinese and Javanese homes are adamantly against having direct passageways between the front and rear entrances.

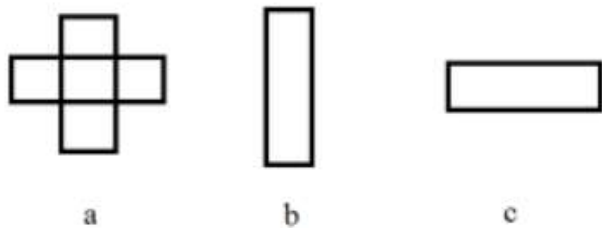


Figure 39. Typology of Indonesian vernacular houses based on direction faced. From left to right: (a) no specific orientation, (b) north-south orientation, and (c) east-west orientation

SEMI-PUBLIC SPACE

In Indonesian vernacular homes, the porch is an important location that acts as a boundary between semi-public and public spaces. Its layout allows for a lot of individuals to sit down comfortably. Usually, limited areas are created by fencing off and raising portions of Malay and Minahasa houses above the ground, making them stepladder accessible. Javanese homes, on the other hand, frequently feature an open, fence-free hall (pendopo) that makes it easy for large groups of people to congregate. In Javanese homes, the pendopo is regarded as necessary; without it, the dwelling is deemed incomplete.

ROLE OF ANTHROPOMETRY

Javanese homes have a ground-level porch instead of an elevated one, which is seen as the community centre where higher-ups can gather with servants and lower-level employees.

Unlike Osing houses in Eastern East Java, which are smaller and lack stairs, Javanese houses have a larger and split pendopo. However, because levels have been lowered and pendopo is used for socialisation with everyone, the idea of levelling pendopo in Java is not understood as social stratification. The doorway leading to the dalem and senthong sections is smaller, akin to the porch gate found in Malay homes. In order to show respect for the home owner, guests are encouraged to glance down and bow their heads at the lower door frame. The bottom borders of the dalem and senthong doors in Javanese homes force individuals to look down in order to prevent falling.

Standing on stilts and functioning as a community home for multiple families, the Betang Dayak dwellings in West Kalimantan feature an expansive porch with no defined boundaries. With reference to semi-public borders, these variances allow three types of Indonesian vernacular buildings to be distinguished: Javanese houses with soft borders, Betang houses without borders, and Malay houses with fences.

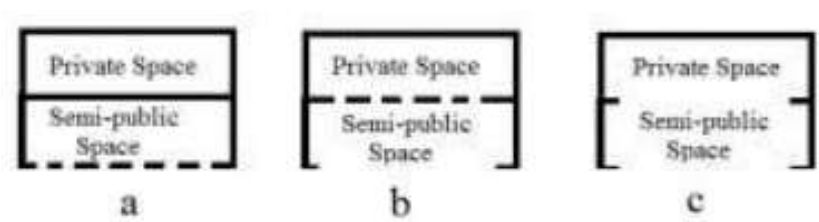


Figure 40. Typology of Indonesian vernacular houses based on semi-public borders. From left to right: (a) house with a rigid border, (b) house with a soft border, (c) house without border.

Aside from minor differences in floor plans and dimensions, the activities carried out by occupants of traditional homes are comparable to those of contemporary people. Houses in Arfak, for instance, don't offer much room flexibility, but homes in Duanu blend moving and stationary elements to create a special kind of space. These are environmental adaptations, such residences on top of mountains giving priority to fireplace functions and dwellings by the sea giving priority to activity movement.

Vernacular homes also exhibit societal hierarchy; for example, tongkonan houses have areas designated for dining as well as the temporary storage of dead bodies. Large areas make meals easier for large groups of people, and spaces are designed to be as adaptable as possible in lower-class civilizations. But independence is measured in terms of space; large houses have enough room for multiple partitions, whereas compact houses have few partitions. When calculating the size of a place, anthropometry plays a critical role by taking the owner's money, rank, and role into account. Additionally, basic mathematical calculations for planning and building conventional homes employ anthropometry. For instance, the height of an adult plus one fist and one hand span is used in Balinese anthropometry to determine the height of a door frame.

There are certain guidelines, including not wearing sandals inside the house, in vernacular homes as an attempt to keep them clean. This rule preserves the flexibility of the space by also affecting the spatial environment. Particular areas and configurations are needed for activities like dining, which produce more garbage and crumbs than sleeping. The breadth of a room in a Malay house is intended to make sleeping pleasant; it should at least be 130% wider than the tallest member of the household. All sleeping spaces, including family rooms and verandahs, are subject to this value. Anthropometry is used to measure the number of individuals surrounding circular eating plates on verandahs; four persons are utilised for Malay homes and eight for Palembang homes.

RUMAH LAMIN (KALIMANTAN)

The architecture of the Lamin House is distinctive and worth studying in further detail. It is shaped like a rectangle and averages 200–400 metres in length and 15–25 metres in width. It also has a gable roof and is raised above the ground. It is adorned with statues arranged in front of the building, carvings and typical Dayak motif paintings with the primary colours being red, yellow, black and white. One Lamin is home to numerous families in groups. The architecture of a laminated house designed to resemble an elongated box on stilts, with bark walls and a shingle roof, will work well in the local climate because it can avoid ground-level damp heat and allows for smooth air circulation due to the walls' and floors' high porosity (Yuuwono, 2015). Entering the Lamin House will inevitably make people feel cool because of the gable roof that stretches from east to west, which is also highly ideal in anticipating solar radiation and allowing air circulation. Because the entire structure is made of ropes, it is constructed entirely of environmentally beneficial materials without the use of nails. rigging manufactured from plants found in forests.

Dayak Kenyah ornaments come in the following colours: white, blue, yellow, red, and black. Yellow denotes authority, red denotes bravery, blue represents devotion, and white represents the spirit of cleanliness. Black dominates the base of the walls, while red is rarely used on necklaces. The necklace primarily features the colours white and yellow, with white serving as the primary figure and yellow as the supporting figure. The core motif of the circle and circular motifs is ferns, or ferns whose juvenile leaves curve in a spiral shape and are commonly seen in Kalimantan (Kusumaningrum, 2018). This arch represents Dayak Kenyah, a tribal descendant who consistently works to bring the Dayak community together. All of the Dayak tribal chiefs and sub-tribes in Kalimantan are represented by the curved and circular designs on the Lamin walls. The Dayak tribe imparts lessons on brotherhood and solidarity among the Dayak tribes, which must be upheld, through these curved and circular decorations.



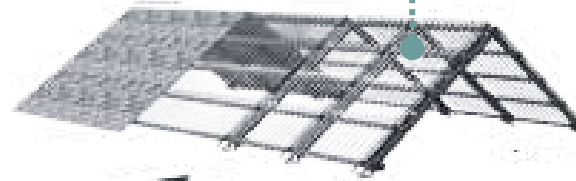
Figure 42. Common motives in Rumah Lamin of Dayak tribe in Kalimantan
Source: Kusumaningrum (2018)



Figure 43. Rumah Lamin typical of Dayak tribe in Kalimantan
Source: Kusumaningrum (2018)

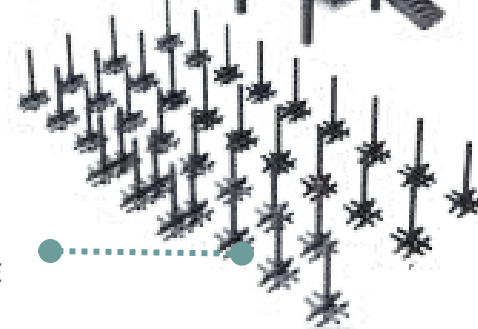
As support for all load on, structure bottom becomes a symbol shoulder or supports all activities on it, as well as a liaison between Lamin's house with nature (land).

ROOF
STRUCTURE



The upper structure has symbol as body from Lamin. Body has the meaning as place of the spirit of Lamin.

UPPER
STRUCTURE



LOWER
STRUCTURE

The roof structure is symbol to protect interference from above, as well has meaning too as a place the existence of the supernatural.

Figure 44. Isometry of Rumah Lamin's structure
Source: Baharuddin (2006)

The roof structure, upper structure, and lower structure are the three components that make up the Lamin home structural system. To prevent collapsing before the top structure, the lower structure bears the loads from the structure above it. The feet are the lowest structure, just like in people. It will be challenging for the person to stand if their leg is fractured or collapses. The bottom building serves as both a link between the Lamin house and nature (the land) as a symbol of carrying or supporting all activities above it by sustaining all the loads above (Baharuddin et al., 2006)

Everything in a building construction that is above ground is called the superstructure. Columns, beams, shear walls, and stairs make up this superstructure, and each one serves a crucial purpose. Lamin's body serves as a symbol for the higher structure. The body is understood to be the Lamin spirit's dwelling home. The roof is a component of the building's construction that serves to shield and cover the structure to keep building occupants comfortable. The three primary components of a roof structure are typically the truss frame, curtains, and roof covering structure. In addition to serving as a protective barrier against outside interference, the roof structure represents the location of the supernatural realm.

BOLA SOBA (BUGIS/SOUTH SULAWESI)

The Bugis tribe's cosmological perspective distinguishes between three categories: the classification of the world's layers (upper, middle, and underworld); the classification of the head, body, and foot of the traditional house; and the classification of the four corners of the eye winds (north, south, west, and east). The quadrilateral rhombus, or *sulapa eppa wala suji*, is symbolized by the four cardinal corners. One interpretation of the rhombus quadrilateral is as a cosmic model. The four elements of air, water, fire, and earth—all of which are essential to human life—are linked to the cosmic model (Wardiman et al., 2020).

Furthermore, the quadrilateral is projected onto the principles of human life which also consist of four, namely:

- 1. The principle of life regarding the existence of human birth
- 2. The principle of life regarding the existence of human presence
- 3. The principle of life regarding existence human service in the macrocosm and,
- 4. The principle of life regarding human death



Figure 45. Rumohang Bola Soba in South Sulawesi
Source: [travellingyuk.com](#)

RAKKEANG (UPPER STRUCTURE)

According to the Bugis tribe from South Sulawesi, Dewata Seuwae is the supreme god and the one who created the cosmos. Dewata Seuwae, who believes in the gods who are tasked with maintaining the universe's order and guarding Dewata Seuwae's creation, created everything as it is now.

The ceremony offerings to Dewata Seuwae are found in the body since, according to the ceremonial system, he and the god boting langi' reside in the sky. The gifts are made to the top of the house (rakkeang), which is regarded as the upper world or the home of the god Boting Langi, but the house itself (alle bola).

Usually referred to as *massorong makee*, this practice is the "upward worship of the gods in the sky." The Bugis tribe views the rakkeang (attic) of their homes as a sacred place, which is another reason why they store rice and family heirlooms in this portion, which are thought to have sacred value (Yunus, 2012).

ALLE BOLA (MIDDLE STRUCTURE)

The middle world, also known as lalengpola, is the centre of a Bugis house, where all of the owner's activities—including entertaining guests and taking care of their basic needs—are performed. The ancient Bugis community believed that the universe had a core that is crucial to life. This belief was applied to the second level of the macrocosm. The notion that lalengpola represents the Microcosm, or middle world, is also present in the house. The middle world is split into three sections: the middle area, the back area (dapureng), and the front terrace, or lego-lego (Wardiman et al., 2020).

When someone comes to visit the residence, they are greeted on the front patio. Usually, the terrace area consists of long benches or seats that face one another and are fixed to the house's trellis or balcony. This bench is a permanent fixture on the home's terrace. The living room is the next room you see when you enter the house and is used to host guests. The size of the owner's home determines the size of the guest room.

AWA BOLA (LOWER STRUCTURE)

From a macrocosmic perspective, the lower level is the lowest level because the house lies beneath all of the world's activity. Because it was seen as inferior, the bottom level of a house was seldom used by its owners in history. Instead, it was either underused as a pet cage or left empty. However, a lot of people these days use the phrase "mabbola yawa" which refers to establishing a chamber beneath a house so that one can live there, as a place to dwell. This suggests that, in the modern period, the beliefs of the past have started to wane once more. The size of the house determines the size of the *bola's* life (Wardiman et al., 2020).

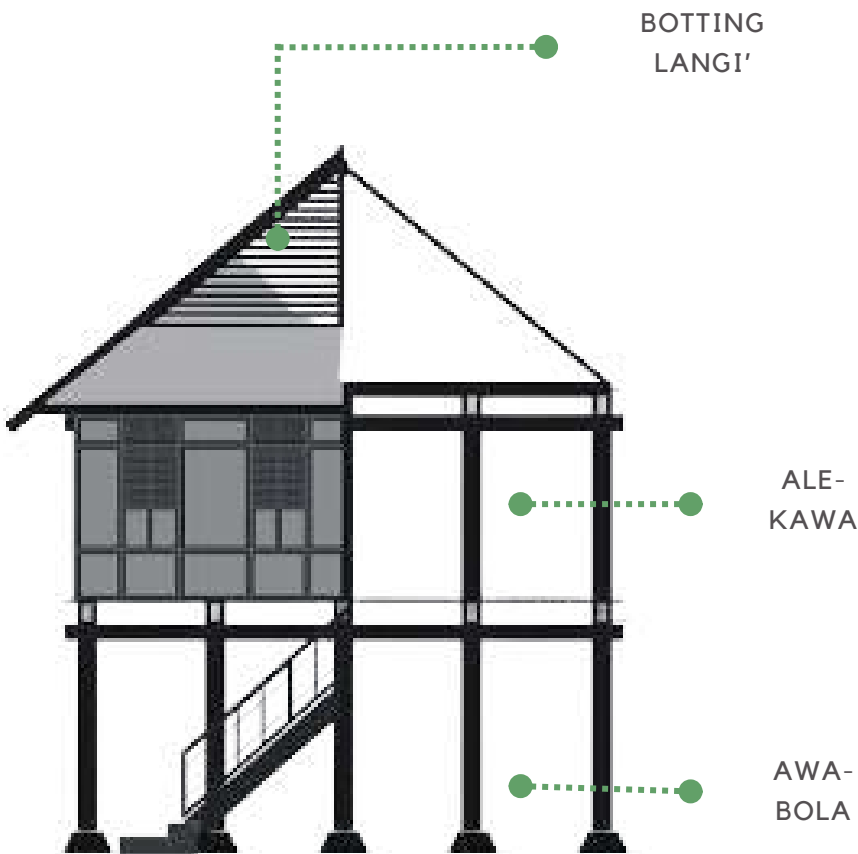


Figure 46. Structure of Rumah Bola Soba
Source: Kumparan (2017)

BUBUNGAN TINGGI (BANJAR)

The Banjar House is a type of traditional house of the Banjar people which is shaped like a stilt. The house buildings are shaped like stilts, because the areas where Banjar people live are generally near swamps or riverbanks. Houses with stilt construction can protect their occupants from tidal waters and attacks by wild animals. There are several types of Banjar houses, including the high ridge, the baliku elephant, the manyusu elephant, the male hall, the bini hall, the palimbangan, and the palimasan.

Banjar traditional house buildings were originally made with a rectangular construction that extended to the front. Later in its development, to the right and left of the main building, a room with a long rectangular shape was added (attached). This additional room is called banana sasikat, and is positioned slightly to the back of the main building. The architecture of the "Bubungan Tinggi" house is strongly influenced by the culture of ethnic Malay houses on the coast (Mentayani 2008). Apart from that, the culture of the Dayak and Javanese people is also influenced by their building styles. The most dominant influence on the "Bubungan Tinggi" traditional house is the characteristics of Islamic teachings, as well as several features based on Hindu teachings and other beliefs. The "Bubungan Tinggi" house has many philosophical values, for example the dragon carving on the body of the house symbolizes the subconscious, and the ivory hornbill carving symbolizes the upper world. The dual universe decoration shows people's belief that the house is a sacred place.



Figure 47. Rumah Bubungan Tinggi
Source: iWareBatik

HATAP

The top portion of the home, known as the hatap or roof, serves as a functional house protection. The "Bubungan Tinggi" house's roof shape is based on the frame structure; that is, certain parts of the roof dive upward in the shape of high ridges, while other parts take the form of pisang sasikat, which includes the kitchen and anvil. Shingle terminology, or bits of ironwood, are used to construct the roof (Suryatin et al., 2022). Banjar houses typically have wainscoting along the borders and roof slopes to adorn the area above the high ridges. The roof's purpose is to keep out heat and rain for the occupants of the structure.

FLOORS

The floor is horizontal in shape, although it can differ and leveled depending on the room to which it is related. Wooden planks are used in the construction of the "Bubungan Tinggi" dwelling. Ironwood is the material that is specifically utilized for the *palatar*. The floor in the kitchen and *palatar* was created a little loose throughout the manufacturing process. Water can easily run downward in the *padapuran* chamber since the floor is left free. Additionally, the *palatar* floor is loosened to facilitate dust removal (Suryatin et al., 2022).

TAWING (WALLS)

Tawing has the semantic meaning of a wall with a standing and horizontal shape. The "Bubungan Tinggi" tawing shape is usually arranged standing up, not horizontally, which is attached with a tawing turret (wall post) and balabad (Suryatin et al., 2022). This is what makes the walls of the "Bubungan Tinggi" house unique and different from other houses. Tawings on "Bubungan Tinggi" houses are usually made of wood. Tawings that are installed horizontally aim to ensure that water falls straight down during the rainy season, so that it cannot enter the house.

LAYOUT OF BUBUNGAN TINGGI



Figure 48. Layout of Rumah Bubungan Tinggi
Source: Suryatin, et al. (2022)

Palatar

The palatar lexicon has a semantic meaning, namely terrace or pavilion. This outer room has an open shape, which is located in the first section after climbing the front (front) stairs.

Panampik kecil

The lexicon small panampik has a semantic meaning, namely a small room in the house. The shape of the floor surface is higher than the palatar floor. In Banjarese culture, house residents use small panampik as space granary for storing rice. Apart from that, this small panampik also functions as a place for children to sit when there are ceremonies or events at home.

Panampik panangah

In the Banjar cultural concept, the panampik panangah part of the house usually functions as a living room for adult men when there are events or ceremonies held at home. This concept symbolizes the meaning of Islamic religious culture implemented in the function of the room. Women and men should be separated in a meeting.

Panampik besar

In the cultural concept of the Banjar people, the big panampik or ambin sayup functions as a place to receive guests comes from far away. These guests usually sat cross-legged on the floor, because in ancient times there were no guest chairs. Based on the cultural point of view of the Banjar people, the panampik room is small, the middle panampik and the big panampik in their function contain the philosophical meaning of the life and relationships of the Banjar people. This philosophy is visible during the celebration. The large panampik room at the highest level is used as a seat for religious scholars, village elders, and other people.

Padapuran

Padapuran is a room used by residents of the house for cooking, washing, drying wood, and sometimes also to receive female guests next door. Padapuran is usually located at the back with a lower floor surface than the lower panampik floor.

Palidangan or ambin

The lexicon palidangan or ambin in has a semantic meaning, namely a room located in the middle of the house for family gatherings. The existence of a family room symbolizes the meaning that the characteristics of the Banjar people are paying attention to emotional relationships with family, including religious symbols, because this room is part of the activities of reciting the Koran, worshiping, etc., both alone and with family.

Panampik dalam (panampik bawah)

The lexicon of panampik dalam (panampik bawah) means the inner room, which it is located behind the palidangan. The inner panampik is used to receive female guests. Apart from that, the inner panampik is also used as a dining room and a place to store glassware such as bowls, glasses, plates, etc. Towards the back of the building, namely after the inner panampik is the kitchen. The panampik is located close to the kitchen and is limited by the wall of the family room. In this way, female guests are separated from the male residents of the house. Women who are not muhrim are separated in different rooms.

Anjung

The anjung lexicon has a semantic meaning, namely the room located on the left and right wings of the traditional building "Bubungan Tinggi." The roof of the anjung is shaped like a sasikat banana (Banjar language). In the socio-cultural concept of Banjar family life, in general, left and right jurai platforms are used by the homeowner as a bedroom, prayer room and decoration. However, the left and right jurai platforms also functioned as a place to give birth and bathe corpses. Thus, it can be concluded that the shape and area of the rooms in the "Bubungan Tinggi" house always have a function to support daily activities.

JAVANESE TRADITIONAL ARCHITECTURE

Traditional Javanese houses have highly symbolic architecture because they serve as embodiments of the horizontal (social), vertical (sacred), and internal (private) relationships that are expressed in the places, activities, and shapes of their surroundings as well as the meanings that underlie them (Tarigan et al., 2022). The classical architecture that is currently understood concentrates only on its physical form. In terms of the activities that are conducted there as well as their physical forms, traditional Javanese houses are currently undergoing changes in their architecture.

The Javanese place a strong emphasis on cosmological considerations when it comes to residence since their culture bases everything on a person's relationship with The Creator, which is reflected in the vertical layout of their traditional interiors. A house is a microcosmos, or little universe. The link between people and The Creator, who is the vast universe (macrocosmos), is a house (microcosmos). A home takes on significance since it is the hub of everything (Tarigan et al., 2022).



Figure 49. Ruman Joglo from Javanese
Source: Prasada Group (2024)

The joglo, the tallest of all the ancient roof styles, was naturally only used by the Javanese nobles and palaces (kraton). Four columns create the innermost and sacred portion of the building, supporting the steep central piece (tumpang sari) of this roof.

The lavatory, kitchen, laundry and storage spaces could all be constructed as an addition into the backyard. Those with the means and a sizable enough plot of land used to reside in walled compounds that were modelled after Bali's traditional architecture. The pendapa, peringgitan, and omah are the three primary buildings that make up this compound. Additional buildings are added for use as living areas, kitchens, and bathrooms (Weichart, 2020). These complexes are still seen in Java today, although they are quickly disappearing from the landscape due to a lack of available land, contemporary construction, and smaller residential units.



Figure 50. Positions of pendapa, peringgitan and omah within the house compound (from left)
Source: Luritzhofer (2019)

The pendapa, the most notable structure, is virtually exclusively located in the compounds of affluent families. It is a pavilion used for religious performances, social events, and guest receptions. Since it is semi-public, it is located closest to the compound's entrance. Wayang performances take place in the semi-public peringgitan, which connects to the omah and is situated behind the pendapa (shadow puppet theatre). The omah is a multipurpose structure with different sections. As we proceed towards the interior and rear sections of the house, the verandah-equipped front portion continues to be a part of the profane semi-public area, but it gradually transforms into a private and sacred region. The owner's social and economic standing is reflected in the roof construction (Weichart, 2020).



Figure 51. Javanese house types (from left): Kampung, Limasan, Joglo.
Source: Luritzhofer 2019

According to the unity concept of the microcosm and macrocosm, humans have developed a relationship with a power that is much greater than themselves. This relationship enables the concerned human to become more aware of their surroundings and gradually increase their strength, which in turn brings about welfare, fertility, and other positive aspects of life in general. The conviction that there is power outside of the human body, that power originates not just from God but also from supranatural forces inside this cosmos. According to this idea, humans are constantly the centre (pancer), moving (dynamic power), and encircled by four wind corners (keblat papat). Pajupat is the Javanese religious system that finally gave rise to the term papat keblat kalima pancer (Pitana, 2019).

The Javanese concept of Pajupat paired with their understanding of Omah as their place of abode can be illustrated as follows.

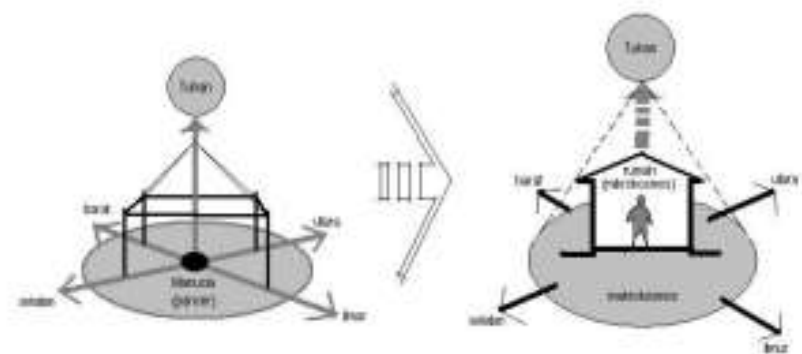


Figure 52. The Figure of The House as a miniature of cosmos
Source: Luritzhofer (2019)

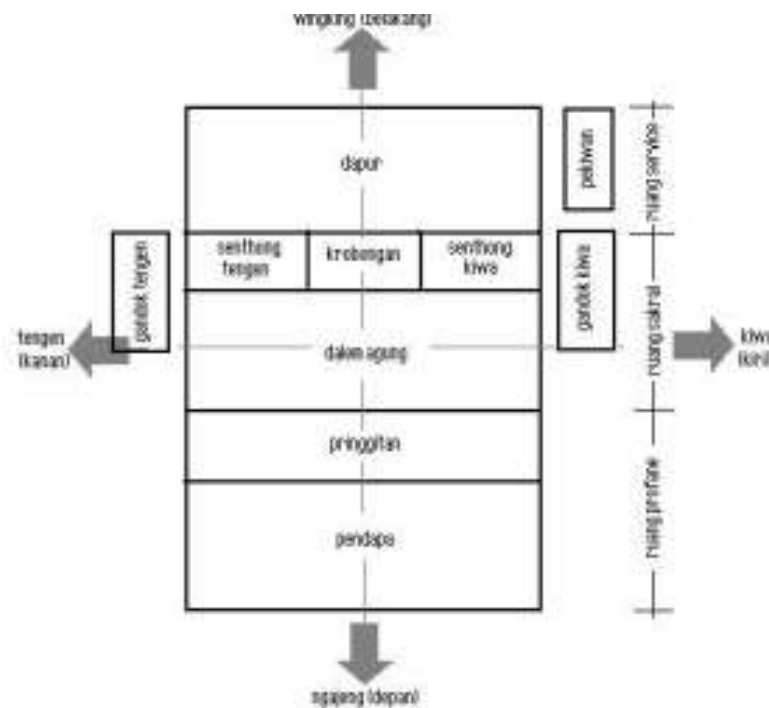


Figure 53. Common layout of Rumah Limasan, Joglo.
Source: Pitana (2019)

- Dalem ageng, which is situated behind the pringgitan and is a secluded, sacred, and private room. This room's presence can be compared to a woman's body, which is sacrosanct and needs to be covered with garments. Senthong (senthong kiwa, senthong tengah, and senthong tengen) is something more sacred that is found inside this hallowed chamber, though. Because of this, the lady wears knickers in addition to clothing to hide their bodies because there is more private and sacred material that needs to be covered and preserved.
- Senthong tengah, senthong kiwa, and senthong tengen. Arranged in a row behind the dalem ageng are these three rooms. Senthong tengah is flanked symmetrically by senthong kiwa and senthong tengen. The sleeping areas are located in both rooms. These rooms have a door and are physically covered. This room's existence can be compared to women's tights, which need to be closed and robust. The existence of senthong tengah, which serves to store seeds for superior agriculture and is only partially covered by a white curtain, will be seriously threatened if it is not strong and securely closed. The concept of senthong tengah might be compared to a woman's womb, which is solely shielded by her virginity membrane. Thus, symbolically, the messages are that if the "senthong kiwa and tengen" are strong and shielded so that the "senthong tengah" is not easily torn, a woman will be able to maintain and give birth to superior seed, and if the stored seeds can be maintained and taken by "wild birds" so that they can eventually be "sown, cared for, and given the best result."
- Topengan (kuncungan): This public, front portion of the structure has the option to remain or be removed. This indicates that the mask serving as a face mask is what's being seen here, rather than the owner's face, which is usually positioned front and centre.
- Pendapa, which is located behind the topengan (if one is present) and serves as a public area for hosting visitors. This section can be thought of as the owner's real face. It implies that this pendapa room's appearance conveys something about the hospitality or character of its inhabitant.
- Pringgitan: This room can be found between ong and Pendapa. As of its name, this room is used as a place to hold ringgit (wayang kulit/ wayang purwa). The presence of this chamber can be compared to a woman's neck, which seems more attractive and acceptable when jewellery is worn. Wearing finer and more costly jewellery typically elevates one's social standing. Similarly, from the perspective of society, the social status of the home's residents will rise if the more frequent owners have a ringgit.

MIXED-USE BUILDING

The term "mixing of uses" refers to the proper arrangement of different purposes within one building or location in a neighbourhood where most residents have access to a variety of different life activities, including working, shopping, and living. Using these ideas of mixed land use as a basis, three aspects of urban design are examined that result from the spatial and economic processes of combining uses: the spatial location of the building; the mix of uses it can house, primarily residential and commercial functions; and the spatial form in which the combination of uses occurs (Narvaez & Penn, 2016). Considered in a broader context, the concept of mixed uses has been brought up in the context of urban planning to emphasize the requirement of providing diverse and sustainable urban neighborhoods.

According to Narvaez & Penn (2016), the commercial and residential building (CRB) designs are designed to be able to adjust spatially to suit various uses. For example, if residences are on higher floors and shops are situated on the ground or street level, the arrangement and separation of uses affects how access is granted to each. Topological linkages also affect how residential and commercial uses are distinguished from one another. The two types of uses pertain to the same street (e.g., shops clustering for mutual competition), the building's unit (e.g., residential and commercial tenures), and the position and pattern of the urban block that offers close proximity to other complementary uses (e.g., a shop's storage facilities located within two blocks of a high street). In terms of economics, the CRB stands for the need for people to work from home in order to reduce travel distances, time, and expenses, especially for independent contractors, small firms, and startups, as well as the potential financial rewards of raising rents.

Mixed-use and vertical development are required because development in highly populated areas necessitates a thorough analysis of land intensification. A process of unification, collaboration, and interaction is needed for the integration of multi-level and inter-function buildings with open space. Achieving mixed-use development projects requires careful consideration of factors such as space and mobility efficiency. In a similar vein, factors that promote vitality and growth must also be considered. The prevention of horizontal growth and the efficacy and efficiency of land usage are the basis for this. When integrating intricate components of subsystems, the symbiosis-mutualism principle and complementary parts must be carefully applied. The initial impact of architectural works is the quality of space. It is mostly decided by how well space is transformed into a location, which serves as an efficient means of establishing a connection between space and the user. Therefore, **the effectiveness of inter-space use, inter-user, and inter-zone** interactions heavily influence our understanding of the unification/merging of activity functions. In addition to understanding how to combine zoning and activities, the management of these kinds of interactions needs to be structured inside an interaction framework (Prayitno, 2017).

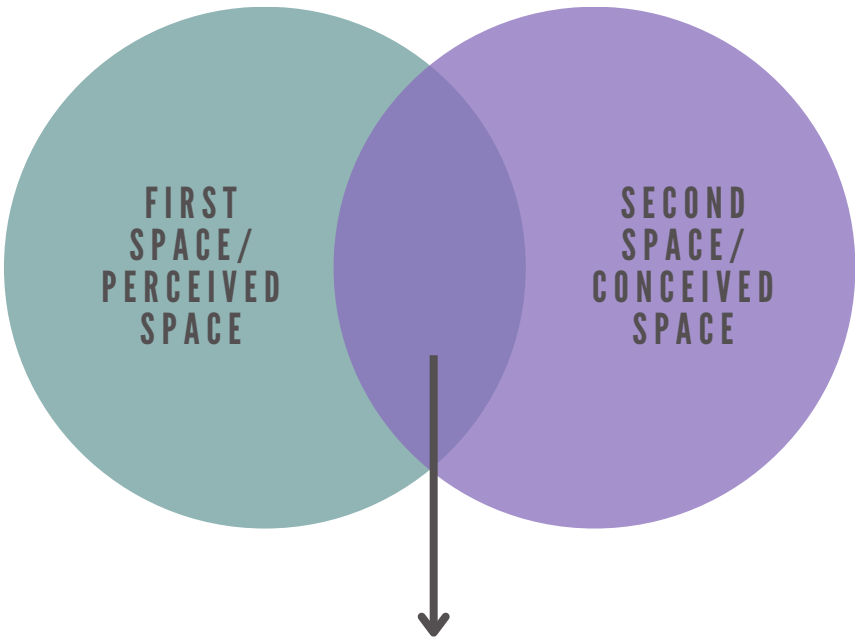
As from this case, Kampung Baru settlements with bad living condition and high density as well as variety of activities conducted in one point in a space, hence, Through an evaluation of its inhabitants' perceptions as users of integration compatibility with the new functions of hybrid system and its sustainability as a place, the observed kampong settlement will be modified. In addition to providing a physical shelter, this location serves as a conduit for the settlement's members' movement and means of subsistence, neighboring activities, protection from natural calamities, and preservation of the kampong's surrounding surroundings (Prayitno, 2017). With considering the values and potential-commodities aspect possible to be sold as the identity of the kampong itself.

THIRD SPACE

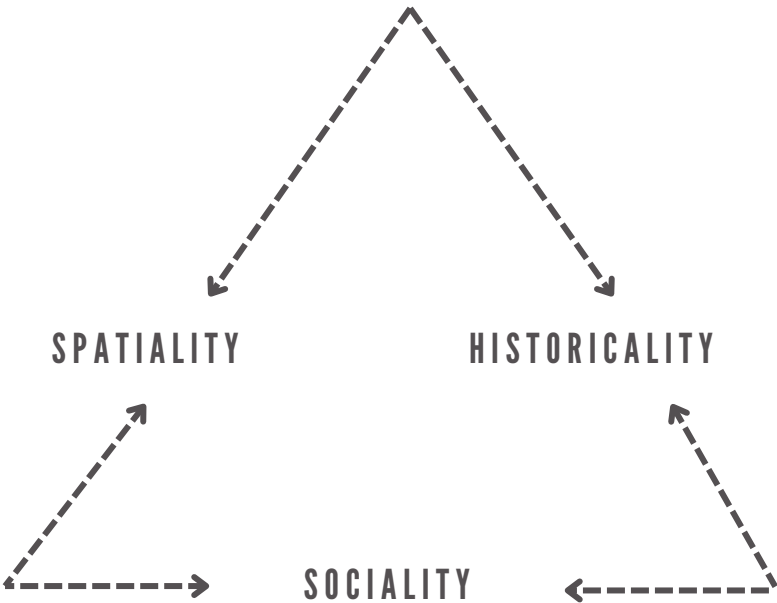
Third spaces are places of transition that promote equality and social contact between people. This place is easily accessible to everyone and provides a space for social interaction and cultural exchange. In the face of increasing urbanization and globalization, these areas foster a feeling of community and enhance well-being.

According to Edward Soja, Third Space is a dynamic and ever-evolving conceptual space that encompasses both the physical and mental realms and combines the lived experiences, imagination, and perceptions of reality held by individuals and groups. Bell Hooks' radical openness, Foucault's Heterotopias, Henry Lefebvre's Lived Spaces, and other ideas, philosophies, and points of view are all referenced in Soja's thesis of Third Space.

The decision to "third" is a method of perceiving things as intrinsically interconnected and suggests different interpretations that may arise from the first perception rather than rejecting any of the potential binaries offered in the interpretation of space. Third space is a place for leisure and rethinking as well. He also emphasizes the importance of politics in the concept of Third space, saying that these lived spaces of representation serve as the groundwork for the creation of "counter spaces" by "combining the real and imagined, things and thought on equal terms, or at least not privileging one over the other a priori."



Trialectics of spatiality



Trialectics of being

First Space

This is the actual physical realm. It stands for the real, physical areas and shapes that we come into contact with on a regular basis. This covers architectural designs and urban environments. First Space includes both the observable aspects of space and the activities that take place there. Human interactions and activities take place in the realm of objective reality.

Second Space

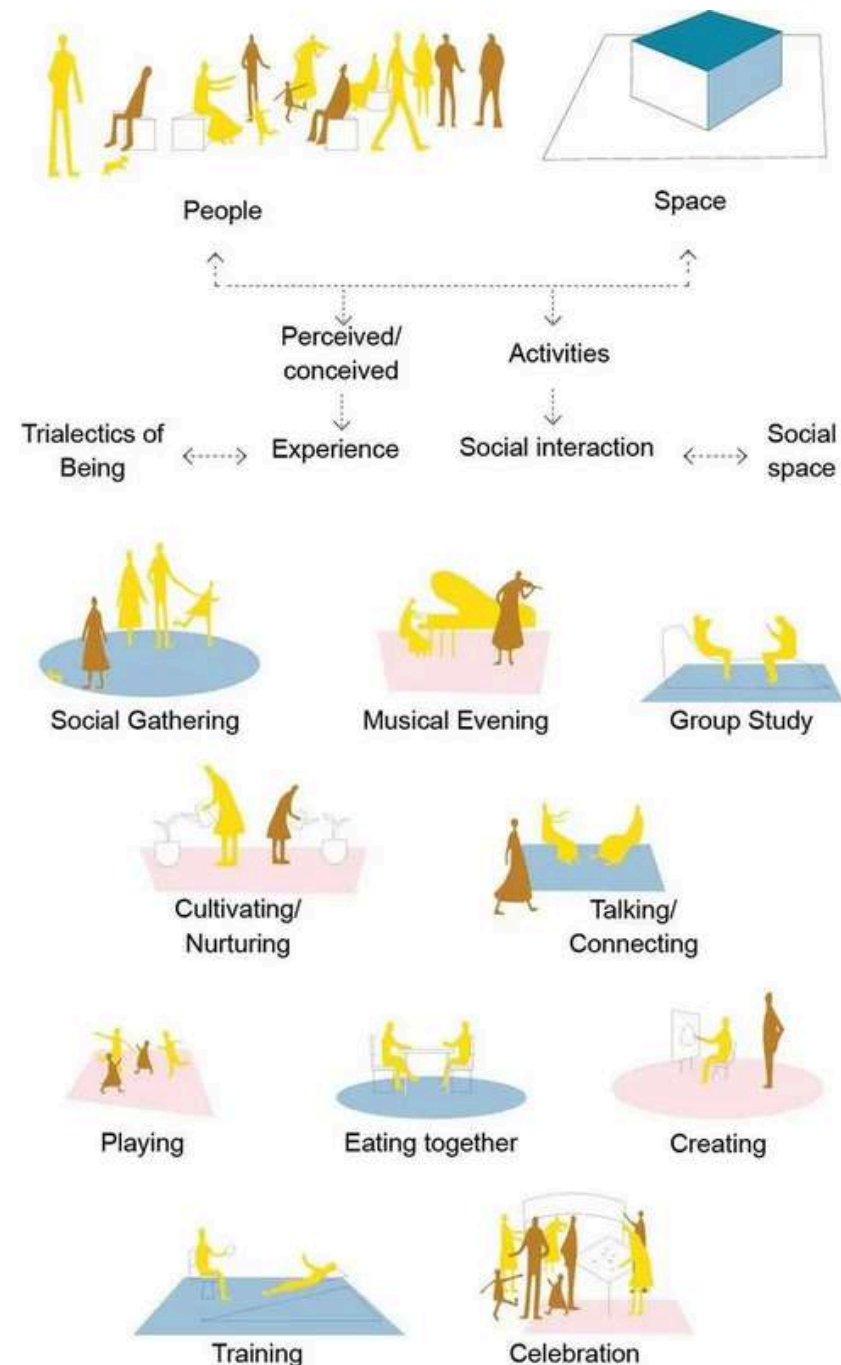
A viewpoint that uses "imagined" spatial representations to understand this reality. It is the way in which humans understand, interpret, and depict physical environments in a variety of ways, such as mental images, maps, diagrams, and cultural narratives. It includes the ways in which we understand, comprehend, and provide meaning to the physical universe. Second, space takes into account the psychological, social, and cultural elements that shape our understanding and experiences of it.

Third Space

The word "third space" is intentionally ambiguous and adaptable, aiming to encompass a dynamic environment of concepts, occurrences, manifestations, and interpretations. It is a location of abundance, possibility, and creative change. Third, Space is made up of the stories, memories, imaginations, and lived experiences that shape how we perceive and interact with the real world.

Features of Third Space by Edward Soja:

- A social space that is situated geographically
- Triple Dialectic: Historicity, Sociality, and Spatiality as Transdisciplinary
- Every location is clearly visible from every angle, but there is also an unidentified, mysterious item that is full of clues and speculation. This common area is known as the "unimaginable universe," and it is shared by all of us.



EXPERIENTIAL APPROACH

Experiential architecture is the idea of a comprehensive approach to design that changes and adapts throughout time. An emotional connection between architecture and its users allows the message to be felt more profoundly, which makes it easier for them to have an 'impression'. Designing with the five senses in mind: touch (somatosensory perception), taste (gustation), smell (olfaction), hearing (audition), and sight (vision). A felt and memorable atmosphere can be created if sensory elements are carefully considered during the design process. Perhaps the other sense we need to record is memory. Maybe a fantastic building can just inspire someone to make a decision based on these elements.

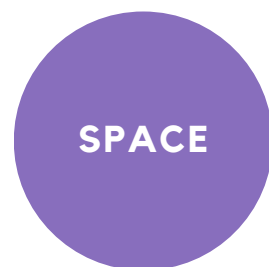
DESIGN FACTORS OF EXPERIENTIAL LEARNING ACCORDING TO PHILHOUR (2020):



The path offers the chance for interaction between areas whether it is a straight way, a path around spaces, a free path, a path through spaces, a transitional path, or shifting vistas. Understanding your preferences enables designers to work with you to develop the best course of action that will best fit your business model and increase end-user income.



The imagination might be influenced by the color of interior walls. Each hue evokes in the observer a distinct and varied emotional reaction (this is also very contingent upon culture).



The visual perception at the level of the human eye is called spatial experience. Things positioned higher or lower on this scale could be interpreted differently. It is crucial that the design moves the visual axis in a horizontal direction to maintain motion throughout the user experience. The employment of barriers or hurdles creates spaces for reflection or respite, which may be necessary for impulsive purchases. Through the concept of space, architecture may create a comprehensive experience that makes your customers feel as though they are physically present in your establishment.



- The height of the ceiling also influences our way of thinking; high ceilings encourage free thought, while low ceilings aid in concentration. It has to do with the distinction between "relational" and "item-specific" processing.
- The types of flooring affect how humans move across areas. Having a carpet can lengthen the time that people spend together.
- Mood is influenced by lighting, both artificial and natural. Dim lighting promotes relaxation and sunlight enhances memory.
- Socialization is impacted by furniture. Small groupings of furniture promote conversation. Semicircle configurations boost involvement. Configurations in a straight line promote independence.

MODULAR ARCHITECTURE

The basic principle of modular architecture is the integration of interconnected modules that together create a certain structure. Modular homes are not built on-site, in contrast to traditional structures. This sets them apart from prefabricated houses, which they share numerous characteristics with, as well as from conventional homes. Each module is built separately and delivered to its destination in a same fashion. This gives the building process more control and keeps it out of the path of bad weather and other potential degradation. It also makes the approach safer, more convenient, and easier to check and manage.

Its architecture is incredibly flexible and enables customization. Versatile in the sense that it may be utilized for both temporary and permanent installations; additionally, it can reach isolated locations where it is not feasible to construct a traditional dwelling. Because of its constructive system, which accepts all types of finishings as well as the addition, replacement, and removal of basic units, it permits customization.

Flexibility: By facilitating the simple replacement or modification of individual components without affecting the system as a whole, modular architecture offers increased flexibility. This facilitates adapting to new technology or shifting requirements.

Cost Savings: By restricting customisation to particular system components, the total cost can be decreased. This is so that just the essential parts—rather than the entire system—need to be updated or changed.

Design Interoperability: Standardised interfaces are a common feature of modular systems, which promotes interoperability. This implies that several modules from various manufacturers can function together flawlessly, improving the system's overall effectiveness and functionality.

Sustainability and Resilience: Because modular designs make it simpler to replace and repair individual components, they may be more resilient. By doing this, the system's lifespan is increased and electronic waste is decreased.

Freedom for Personalisation: Modular design gives users more influence over their system. Customers can create customised configurations by selecting the exact parts that best suit their requirements.

Simple Repairs: Since malfunctioning parts are easily found and swapped out, modular systems are typically simpler to fix. This lowers maintenance expenses and downtime.

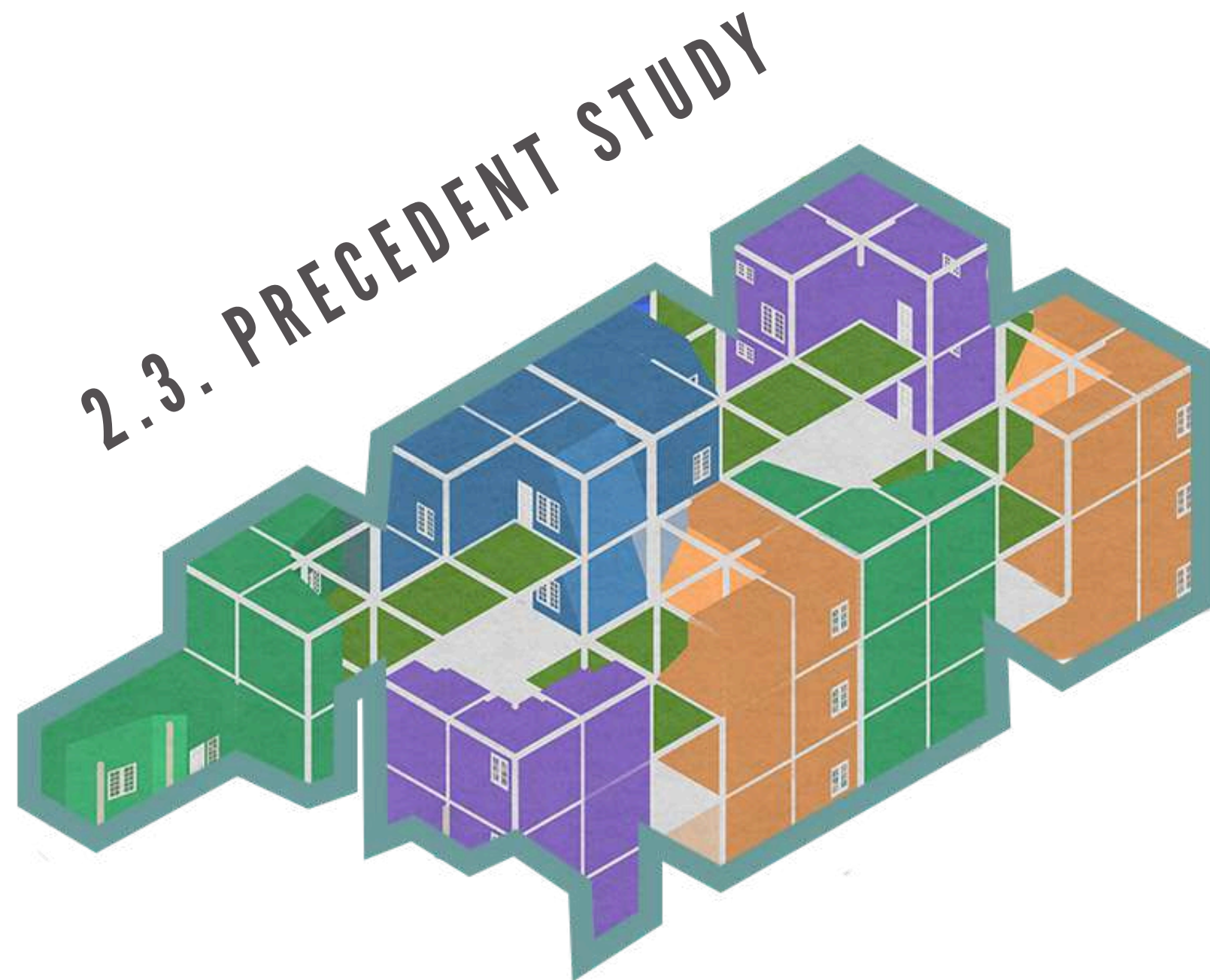
FLOATING MARKET

These food marketplaces were originally known as "ตลาดนัด," or "market on appointment," which did not relate to regular markets but rather markets that happened at specific times and locations. The tale of the floating markets first revolved around the "appointments"—the times when a group of boats carrying vendors and their wares came together and interacted—rather than specific locations, sellers, commodities, or watercraft in and of themselves. In order to allow locals to visit several floating marketplaces, floating markets were arranged in accordance with the lunar calendar, usually not taking place on the same day in the same area.

Floating markets served as social hubs in addition to being significant for food trade. The physical design of the canals had an impact on how the floating markets operated. For instance, individuals from other provinces would visit floating markets situated in huge canals that connected to the main rivers, whilst locals from neighbouring localities tended to attend floating markets situated in smaller canals. These two types of floating marketplaces are known locally as "big appointment" and "small appointment."

Floating market	Focal actors	Main (new) objects	Vendors	Main customers	Time	Space
Original version	Buyers and vendors	Local products	Local and non-local people	Local and non-local people	Certain dates in lunar calendar	Open public space
Damnernsaduak (DFM)	Port owners and tour agencies	Souvenirs Postcards Ports	Local and non-local people	International tourists	Morning, every day	Open space owned by private entrepreneurs
Thaka (TFM)	Local government	Homestays Walking and biking paths	Local people	Local people and Thai tourists	Morning, certain dates in lunar calendar and weekends	Open space organized through the negotiation between local municipality and landlords
Amphawa (AFM)	Local government	Fire fly boats Homestays Tangible heritage	Local and non-local people	Thai tourists	Afternoon and evenings, weekends	Open space owned by local people
Pattaya (PFM)	Private investor	Souvenirs for Asian tourists Thai houses from entire Thailand	Non-local people	Asian tourists	Every day from 10:00 am to 11:00 pm	Closed space owned by private entrepreneurs
Bang Namphueng (BFM)	Local government	Outdoor recreation facilities	Local people	Thai tourists	Weekends from 8 am to 2 pm	Closed space owned by the local municipality

- a. Adding tourism facilities that do not yet exist in the Lok Baintan floating market area such as lodging, restaurants, shops souvenir, proper toilets, information centers, or tourist guide offices, security posts.
- b. Improving the quality of human resources (HR) by improving the skills of tour operators (traders) and tourism awareness groups in terms of innovation in tourism products.
- c. Increase river culture events aimed at preserving and promoting river culture by involving tourism actors in these activities, which are carried out routinely every year.
- d. Promotion of tourism not only through events but through social media and local government websites.
- e. Increasing the role of young people in tourism activities to preserve the Lok Baintan Floating Market tourist area Baintan by packaging these attractions becomes more interesting.
- f. Increasing the source of funds to improve the quality of tourism and tourism facilities in collaboration with the private sector and businesspeople.
- g. Increased tourism product innovation and product competitiveness to increase the income of tourism actors (traders).
- h. Establish tourism policies that align the desires of local governments and communities, by increasing the role of the community in planning the development of tourism areas.



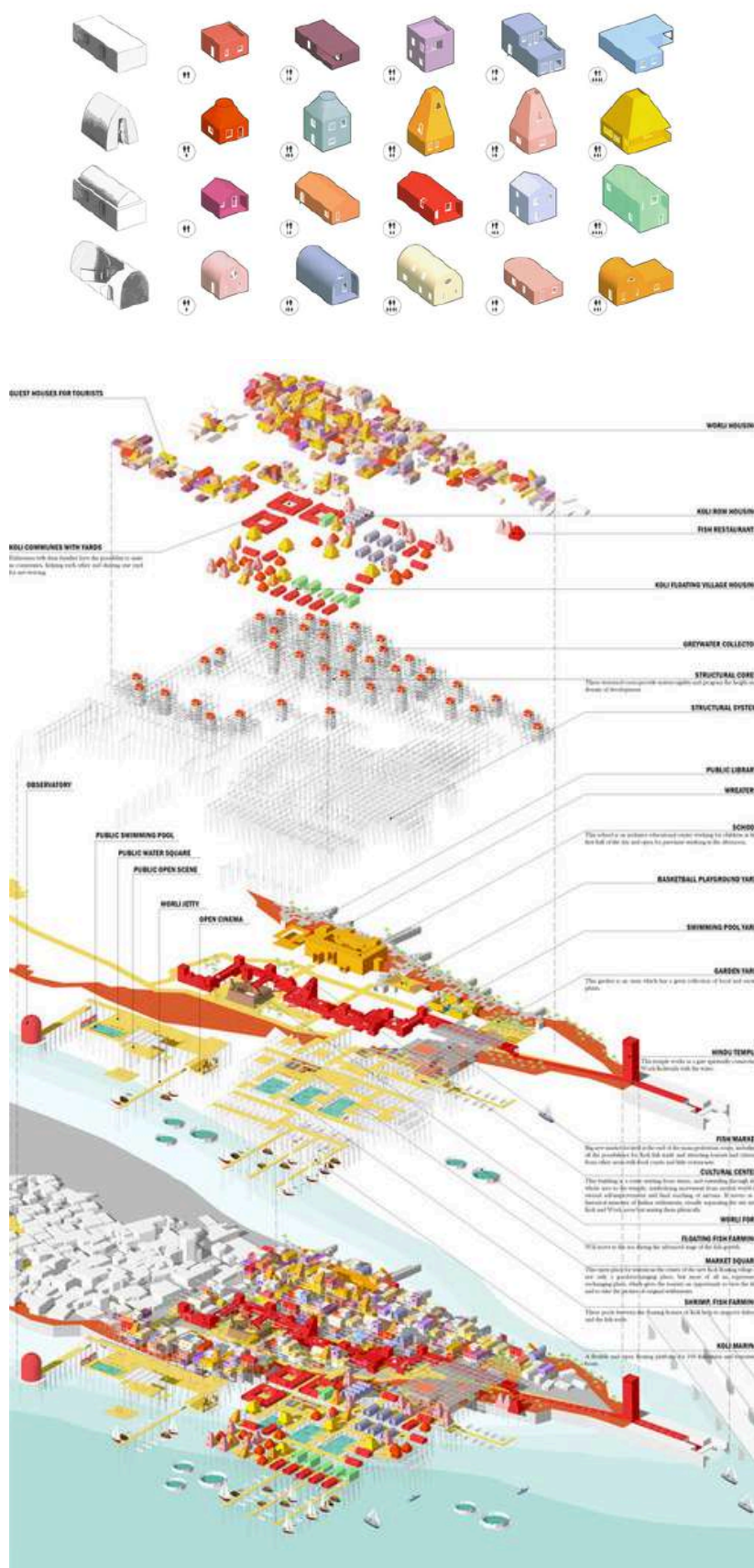
REINCARNATION NETWORK



LOCATION WORLI KOLIWADA, MUMBAI, INDIA

YEAR 2018

ARCHITECT YASMINA ALAKHANOVA, IVAN MARCHUK,
VICTORIA TSUKERMAN



The urban fabric of the city of Mumbai with such a great historical and cultural background should experience the similar process of rebirth saving the spirit of the place with its unique context and traditions. We invented the new typologies borrowing forms and colors from national Indian dwellings, but taking into consideration modern rapid urbanization. We install the modules of different typologies into a continuous flexible structural network, which provides Koli and Worli with all the possible scenarios that the inhabitants are able to create.

Keeping all the pathways intact, the new development extends from the Worli Koliwada village. The land is divided into two sections: the floating village of Koli, which has all the amenities for fishing and fish trade, like a marina and fish fanning, and the flexible, rising, and transformable Worli housing with its own neighbourhood amenities, like a school, public library, pool, and garden. The new historical and cultural edifice emerges in the middle of the area, unifying the whole area and acting as a museum, public walkway, and offering up breathtaking vistas that lead to the recently constructed Hindu temple. In order to engage both tourists and locals, they construct new open public places like the fish market, observatory, public squares, open cinema, public swimming pool, and the scene.

To ensure the safety of the occupants during the monsoon season, the houses are elevated above the flood level. To safeguard the area from floods and waves, a system of breakwaters is constructed and the site's coastline lines are reinforced.

DAMNOEN SADUAK FLOATING MARKET IN THAILAND

Around Bangkok, there are at least five major floating marketplaces. However, the most well-known is the one located approximately 1.5 hours' drive from the city in the Damnoen Saduak district of the central province of Ratchaburi in Thailand. Since King Rama, the founder of the Rama Dynasty in Thailand, was born here, the name Ratburi means "the land of the king." This district, which borders Burma, is rich in historical landmarks, gorgeous scenery, and cultural legacy (Qayyum, 2020). The Damnoen Saduak Floating Market used to be a hub for exchanging products from the local farmers, including fruits and vegetables in season. Damnoen Saduak Floating Market is a semi-land floating market as of right now. Things are for sale in boats as well as on land. People from Samut Sakhon, Samut Songkhram, and Ratchaburi congregate along this canal to meet one another. Its connotation is synonymous with "Damnoen Saduak," which denotes easy transit. Even if the primary reason for travel has changed, traders and tourists still make up the majority of travellers (Thailand Tourism Directory, 2021)

"The markets are a celebration of diversity and cultural exchange, bringing together people from all walks of life and backgrounds. They offer a glimpse into the lives of the locals, who have built their communities and livelihoods around these waterways", Samuel stated on his writings. While according to Melissa and Damon (2023), Communities relied heavily on the waterways, and floating marketplaces developed as thriving centers for the interchange of produce and commerce among locals.



Figure 54. Crowds at Damnoen Saduak Floating Village with modification by author
Source: Canva/Fokke Baarssen

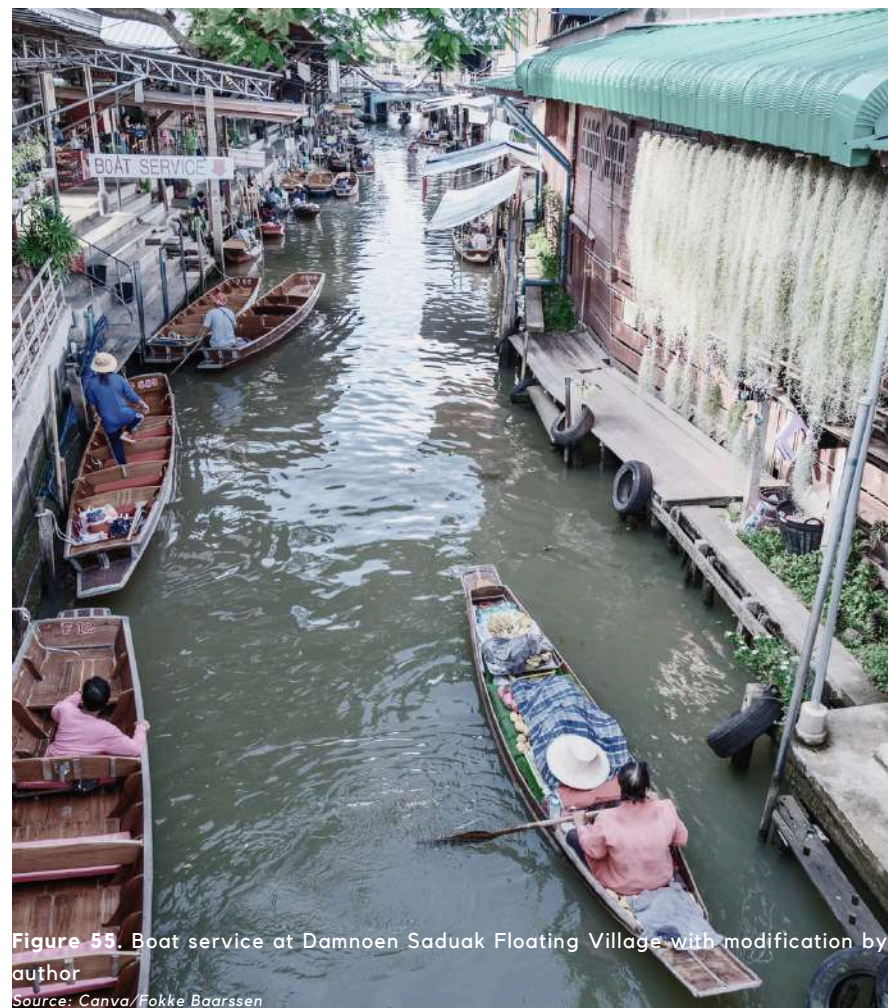


Figure 55. Boat service at Damnoen Saduak Floating Village with modification by author
Source: Canva/Fokke Baarssen



Figure 56. Boat service at Damnoen Saduak Floating Village with modification by author
 Source: [Preparetravelplans.com](https://www.preparetravelplans.com/)/Josh

Rice paddies gave way to oil palm farms and coconut groves as one approached the Damnoen Saduak District. In some areas, trained monkeys are used to harvest ripe coconut fruit from the lofty trees. Thailand possesses a special quality in that it has a "Monkey training School" where the domesticated animals receive this instruction, also referred to as "monkey business" (Qayyum, 2020). There are no other training facilities like this one in the area. Arriving the market, people can easily spot a plethora of business activities going on. The shops beside the canal were lined with rows of them, but what was really interesting to see were the floating shops where the vendors wore brightly colored costumes and big bamboo hats while they paddled around the waterways. In addition to a sizable fleet of floating stores to serve the requirements of the guests, there were many boats transporting the tourists.

The merchants were calling out to potential customers loudly and even dragging the boats towards them with hooked poles. Floating markets have evolved in the days when daily living depended heavily on water transportation. To make room for the highways, the majority of the streams have now been filled in (Qayyum, 2020). These marketplaces, one of which is located in the Damnoen Saduak area and is ranked among Thailand's ten most famous locations, perform a significant job by preserving the intriguing old style traditions. The region's cultural fabric is greatly influenced by the floating marketplaces, which are more than just places for trading only. The rich tapestry of Thai traditions and customs is on full display here, from the exquisite dances and performances to the delicious food and regional specialties (Samuel, 2024).

AD CLASSICS: INSTITUT DU MONDE ARABE

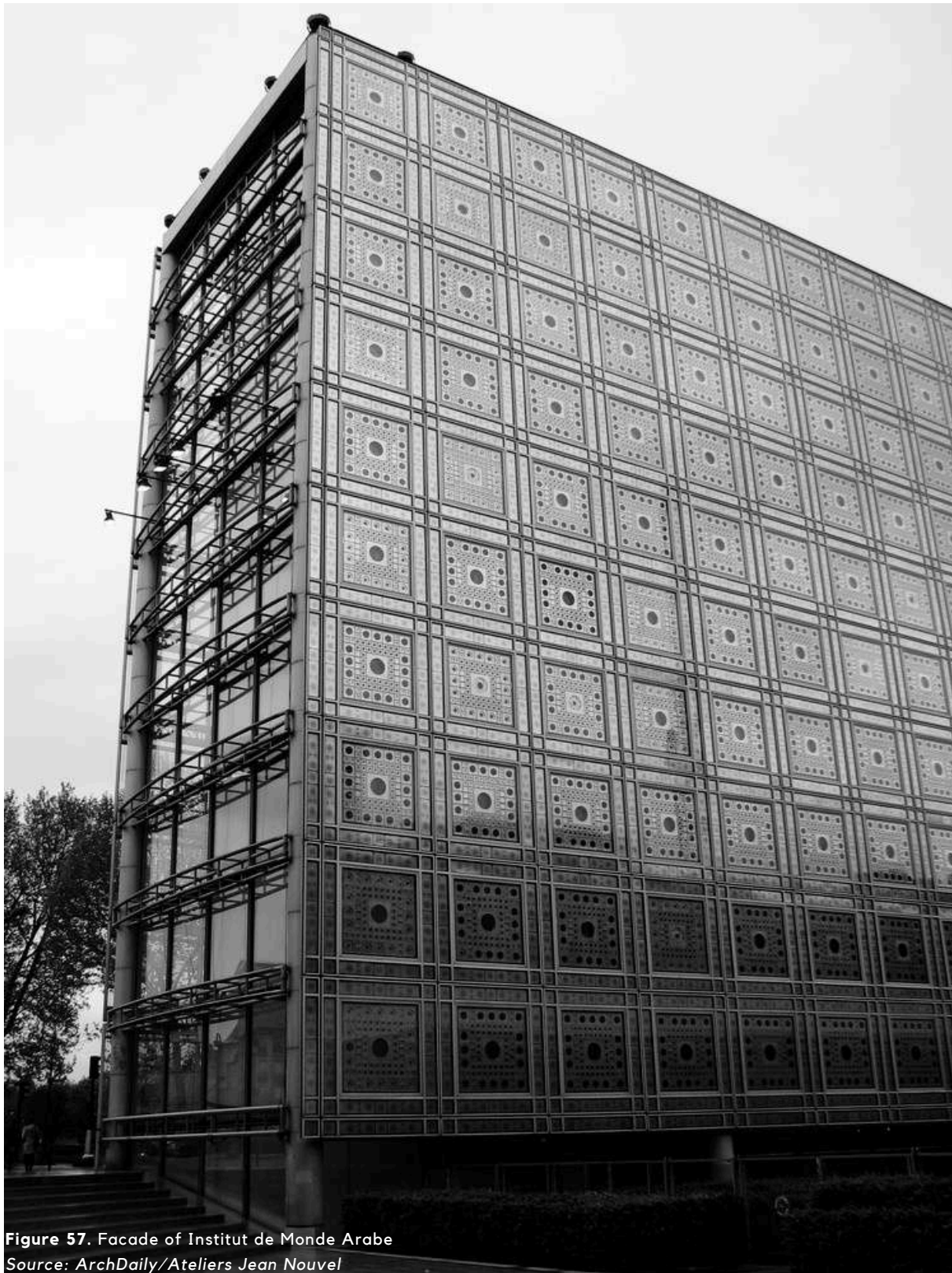


Figure 57. Facade of Institut de Monde Arabe
Source: ArchDaily/Ateliers Jean Nouvel

LOCATION Paris, France

YEAR 1987

ARCHITECTS Architecture-
Studio, Ateliers Jean Nouvel: Jean
Nouvel, Architecture-Studio,
Pierre Soria and Gilbert Lezenes



Figure 58. Interior of Institut du Monde Arabe
Source: ArchDaily/Ateliers Jean Nouvel

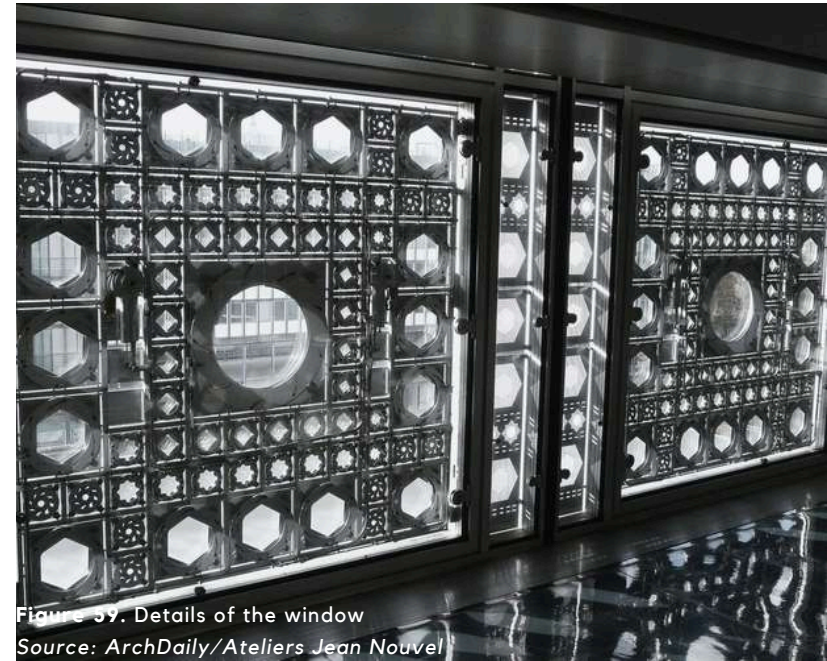
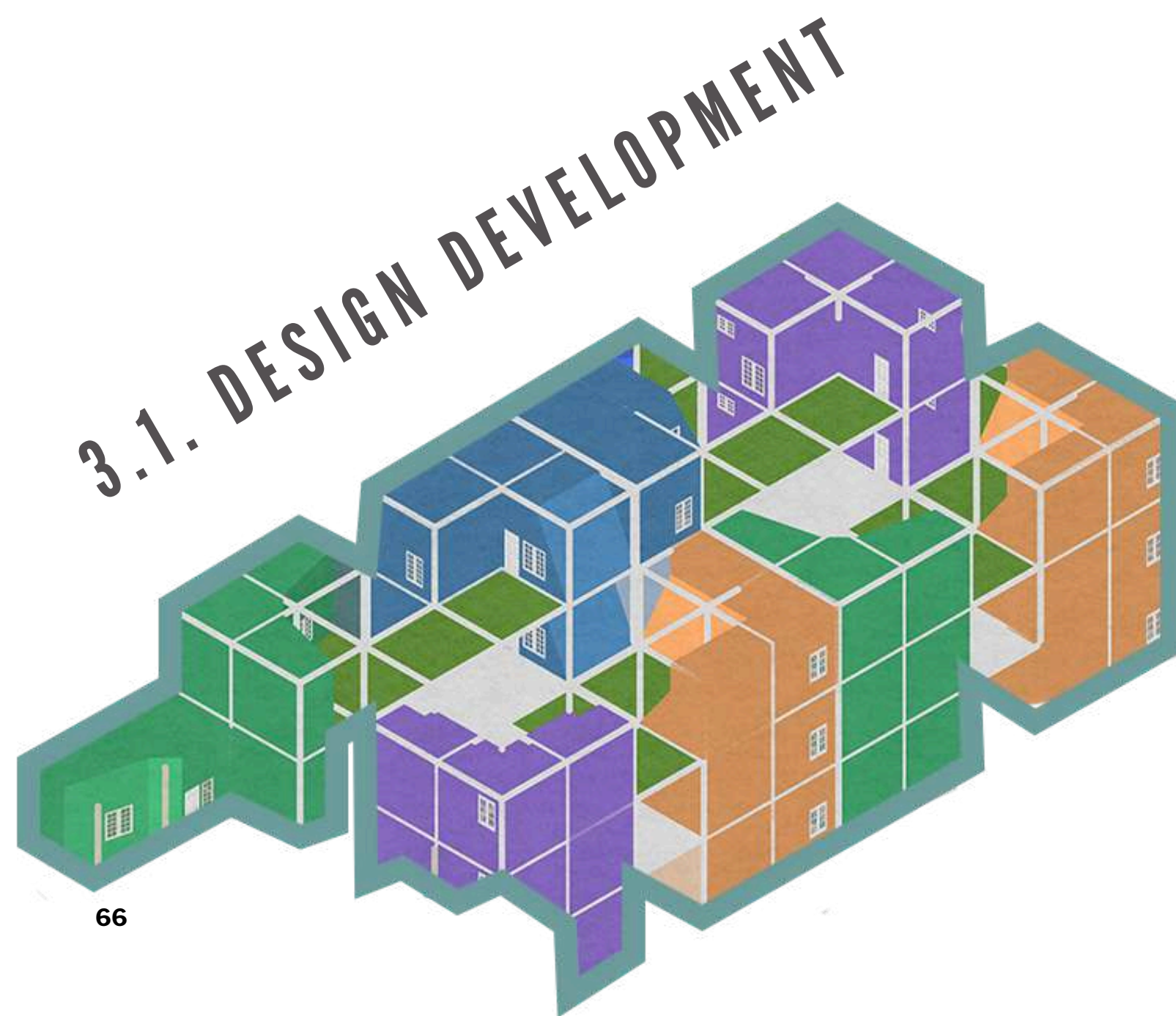


Figure 59. Details of the window
Source: ArchDaily/Ateliers Jean Nouvel

After it was finished in 1987, both locals and visitors soon found it to be a popular attraction. The creation of a destination honouring the cultural ties between France and the Arab world was a primary motivation for the establishment of this institute. Situated at the confluence of the Seine and Paris's ancient peripheries, the building adapts both in layout and elevation to its surrounding environment. Its layout complies with the road's curvature, which is determined by the river's shape. Its two main volumes, the north mass rising nine stories and the south mass reaching eleven stories, encircle an interior courtyard.

The paving that replicates the façade's patterning further enhances the outdoor areas. Recessed ground lighting enhances the nighttime light show produced by the building's interior. Many typologies are housed in the interior spaces, such as an auditorium, restaurant, museum, library, and offices. A steel staircase encircling a multi-story glass atrium with exposed elevator lifts inside. There are more floor to ceiling heights in the library and the northern part of the fourth floor, along with multiple terraces and a mezzanine. Jean Nouvel's attention to façade detailing is characteristic of his work, and this design is no exception. The IMA's highly advanced and inventive metallic brise soleil located on the south façade is a standout feature. Nouvel's design for this system was favourably welcomed since it was unique and strengthened the mashrabiyya, a fundamental component of Arabic architecture. He took inspiration from the classic lattice work that has been utilised for ages in the Middle East to offer privacy and shield residents from the sun. The technology controls how much light is admitted into the structure by including several hundred light-sensitive diaphragms. A dynamic geometric pattern is created during the lens's several stages and presented as both light and vacuum. Light modulated in parallel creates shapes in a flowing motion: squares, circles, and octagons. The external look is drastically altered, as are the interior rooms. These eyewear pieces not only have amazing visual qualities, but they also serve as useful environmental controls. Aperture diameters can be simply reduced or closed to reduce solar gain.

Nouvel created a contemporary design that evokes Middle Eastern architecture by fusing traditional Arabic architectural components. His use of light as a structural element and a spatial modulator deepens the feeling of location and improves the entire experience. It still functions admirably as a hub and meeting place for Arab culture.



MOODBOARD



- Low maintenance of safety and comfort; the current port does not properly built
- Difficulties of access; narrow and brittle road toward the speedboat pier
- Unorganized transportation system for the speedboat use; abandoned boats, no schedule of departure and arrival
- Bad habit of throwing waste directly to the sea, contaminating the water itself



- Moving the port into larger space, to have adequate maintenance for safety and comfort and providing it in closed space so the circulation inside can be more organized
- Applying vertical and elevated building to leave more space on the ground for access and other functions
- Making the port circulation in linear for departure, arrival, and making the building elongated to ease the mobility of the passengers
- Promoting environmental-friendly architecture and landscape so that the habit of throwing rubbish recklessly can be managed



Accessibility and circulation, organized port transportation system, structure and infrastructure management

- Has been becoming the identity of the area because of its uniqueness being above the water but there is no attractive point of the floating market itself
- Local entrepreneurs from local people seem deserted because it offers nothing different from other markets in the city despite of its potential promoting the culture
- Inside the floating market looks compact, sultry, and dark due to lacking of natural ventilation and natural daylighting



- Improving the quality of the floating market by adding culture and traditions into the design and utilizing the water as a way for people to go around the market; with boats
- Enhancing the local products by providing place for local entrepreneurs to conduct workshop so the visitors not only can buy stuff there but also can involve in the making process; education tourism
- Making the floating market to be a semi-open area to enable the flexibility of circulation, daylighting, and ventilation



Floating market, boats, tourist attraction



- Balikpapan's cultural tapestry is woven from diverse backgrounds such as Bugis, Banjarnese, and Javanese
- Residents create a harmony lifestyle despite their difference; which can become a potential to promote their culture and traditions in one space
- Identity of Balikpapan as diverse city



- Creating a melting point for every newcomers in Balikpapan to feel like they belong in a home and uniting the various tribes, mainly Paser, Bugis, Banjarnese, and Javanese in one space
- Enhancing the culture and architecture from each region with unique characteristics
- Preserve one similar traditions of those tribes, for example Sedekah Laut as a routine celebration inside the space to showcase the magnificence of Indonesia's culture as well as being a tourist attraction
- Providing stage for art and tradition cultural performance



Connection, diversity, traditions above the water

SPATIAL ANALYSIS

According to analysis and observation of the site and context, hence the design of port in Kampung Baru will have the functions based on Third Space theory from Edward Soja (1996):

FLOATING MARKET

as perceived space



Port and floating market are acting as the tangible structures that accommodate human's interaction withing and becomes the connection between the place and the people.

Based on the observations, common activities happen in the port and in the floating market are; *boat passengers looking for boats, selling activity, relaxing and taking picture, sitting.*



NUSANTARA ARCHITECTURE

as conceived space

Using Nusantara Architecture as a symbolic meaning of embracing the diversity that happens in Balikpapan. Giving the sense of belongings for every tribe in the city.



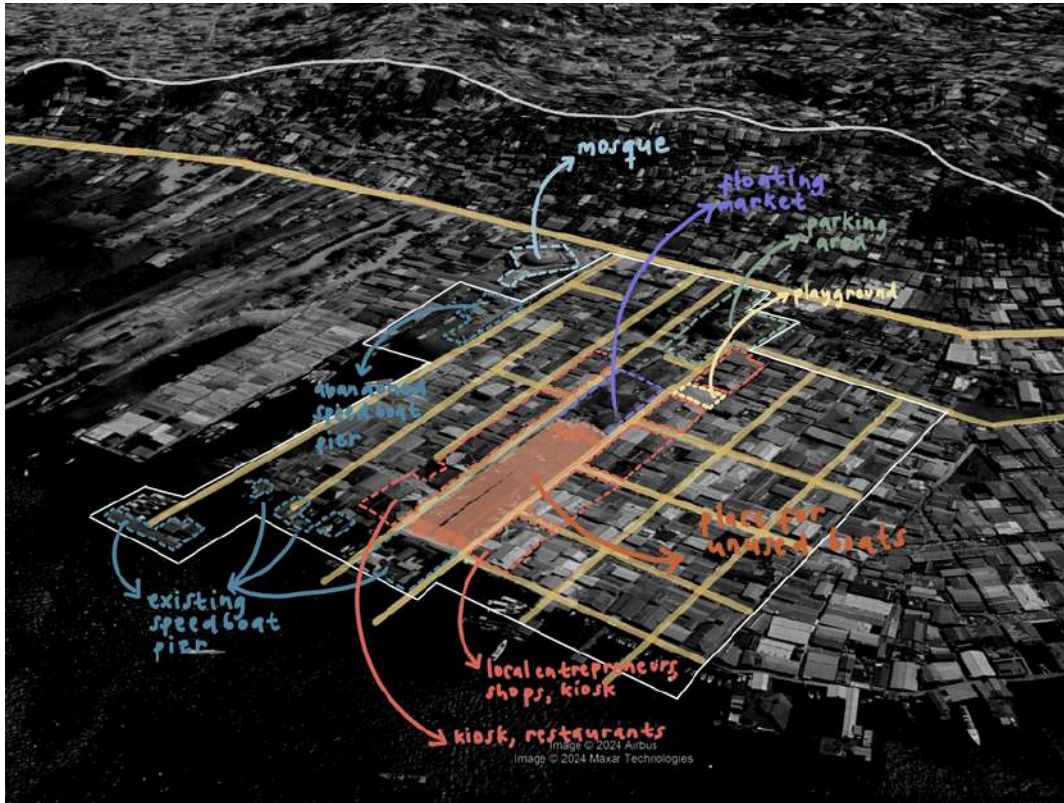
Enhancing the tradition of locals and providing the celebration of cultures within the space; creating a haven for everyone.



SIMILAR TRADITIONS OF SEASHORE VILLAGES IN INDONESIA

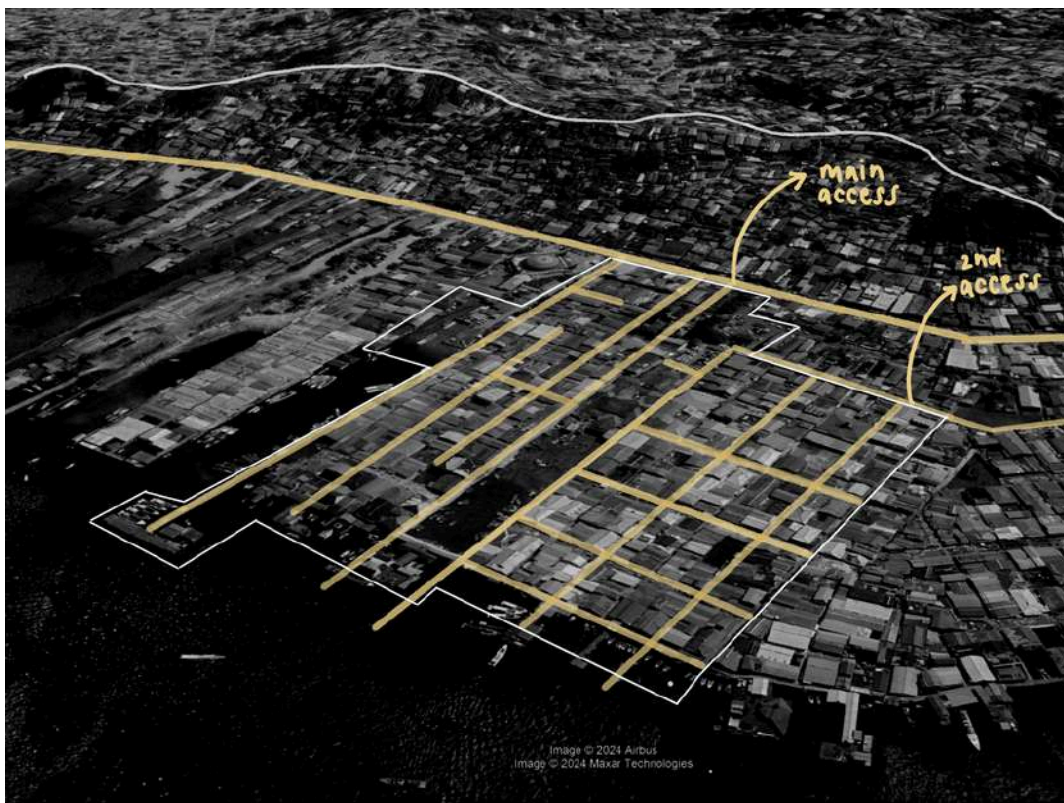
Indonesia is renowned for its diverse cultural heritage from various regions. As a city known for its diversity, Balikpapan welcomes many residents from other regions who migrate to this city in search of work or other needs. Although they are migrants, they do not abandon their traditional and cultural practices from their hometown. With the largest population of Javanese, Bugis, Banjar, and Paser in this city, they share a common cultural bond related to the sea. This tradition is called '**Sedekah Laut**', which is present in the midst of Javanese, Bugis, Banjar, and Paser communities as a form of gratitude to their ancestors for the abundant natural resources they have received. Although most residents now hold religious values, this tradition is still widely practiced. The different naming and organization of the tradition in each region do not make it devoid of meaning if it is used as a celebration in the 'melting point' to unite tribes and give them a sense of ownership, not only over the land they inhabit but also over the traditions that are part of their blood since birth.





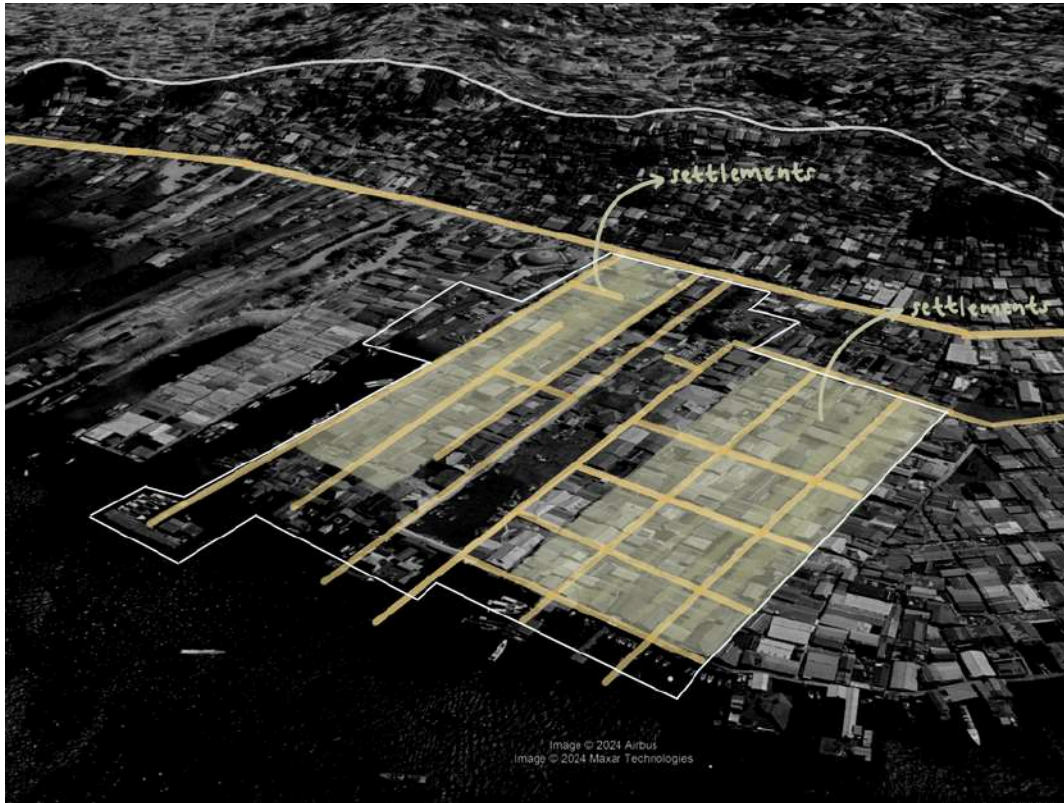
EXISTING CONDITIONS ON SITE

The selected site is the most strategic and busiest area on that region, with the existing of port and speedboat deck in almost every side of the seashore. Alongside the busy speedboat decks itself, the floating market becomes vital area because it is main facility that people choose to go to fulfill their basic needs.



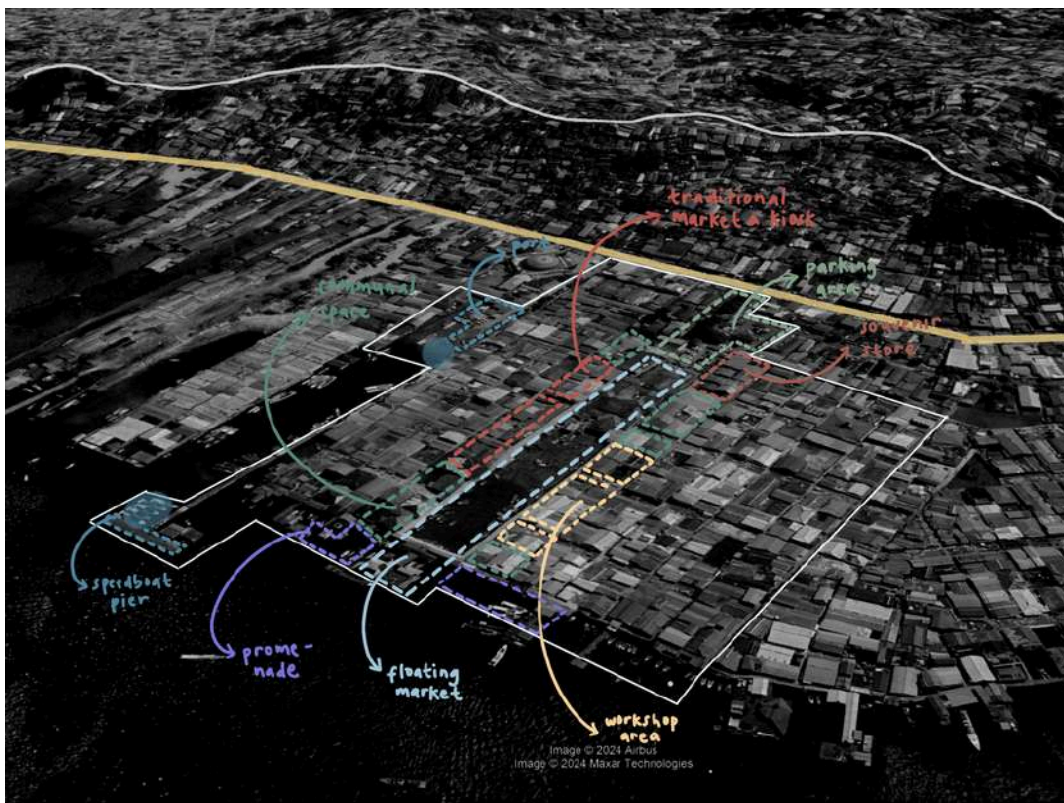
ACCESS TO GO TO THE SITE

The main access is protocol street, **Yos Sudarso** street and second access to go to the site can be passed through **21 Januari** street to go to the piers of settlements and the speedboat deck.



EXISTING SETTLEMENTS ON THE SITE

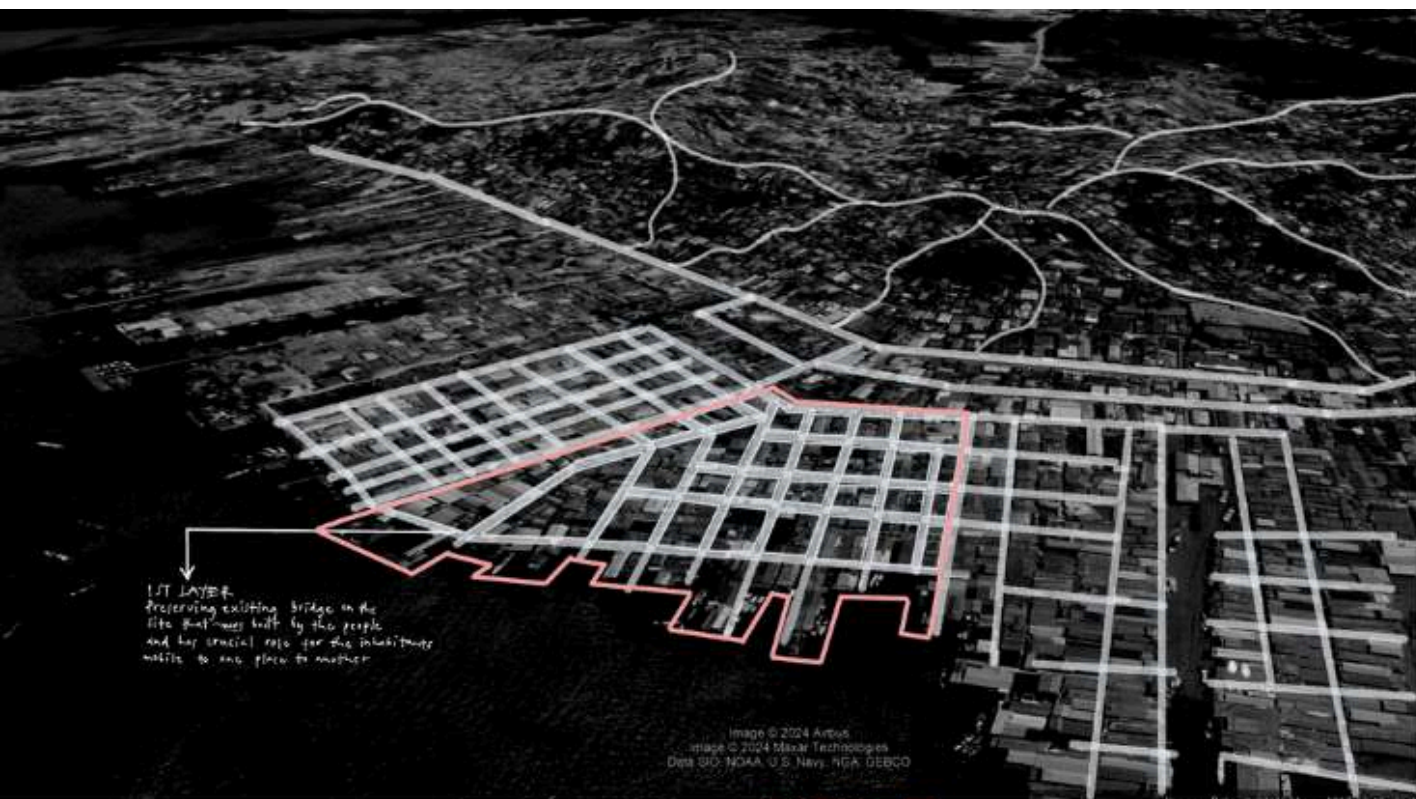
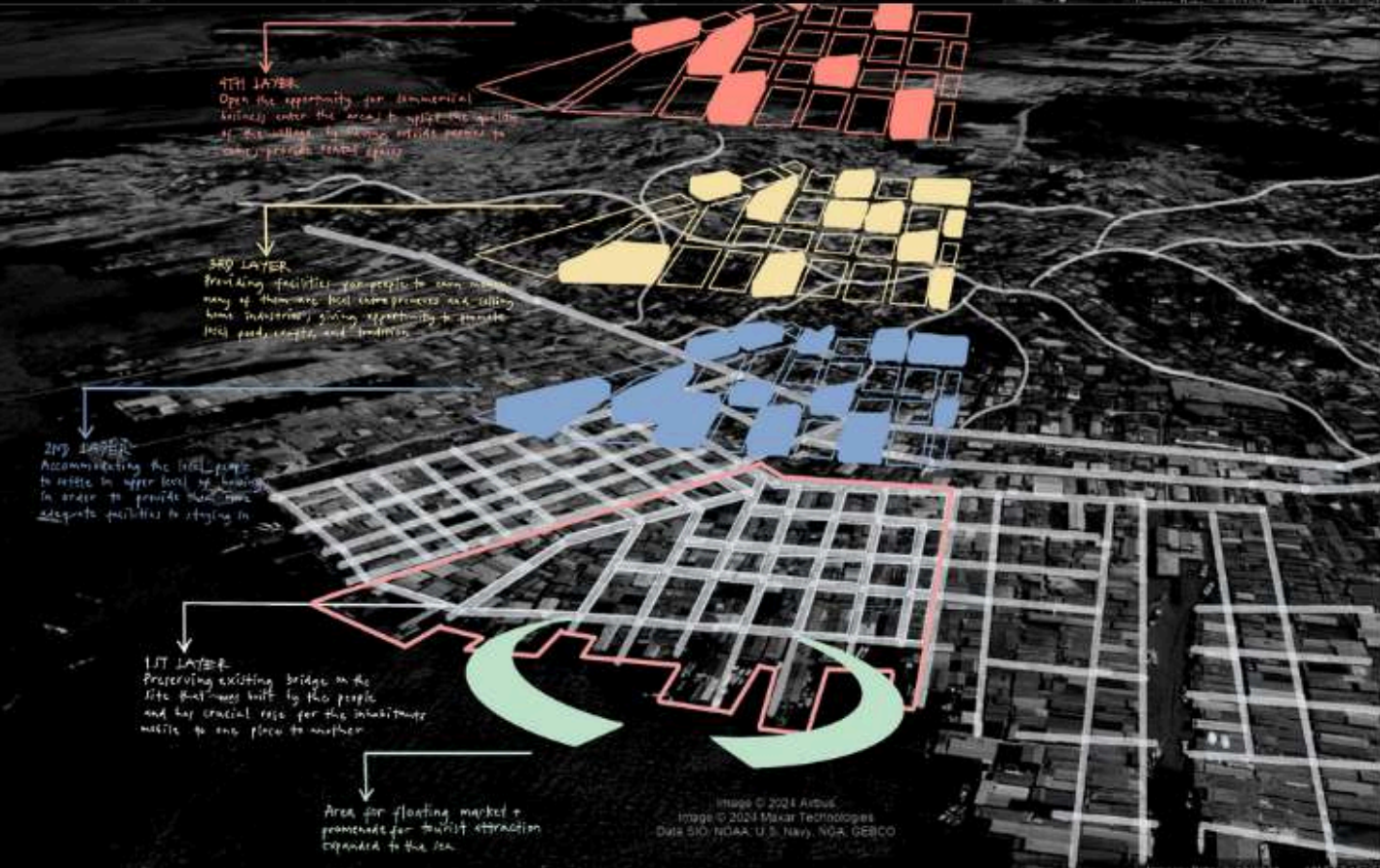
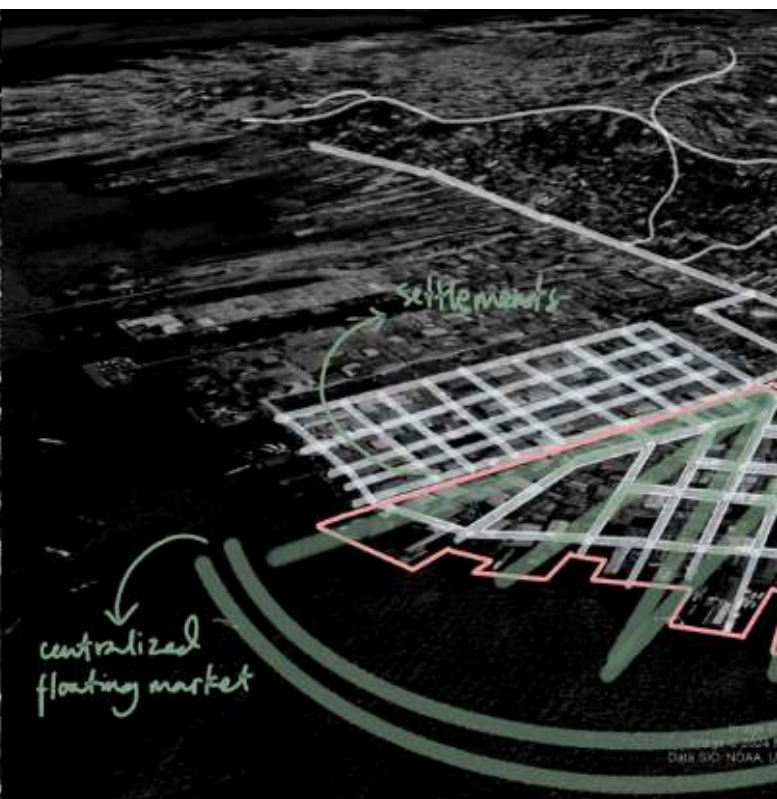
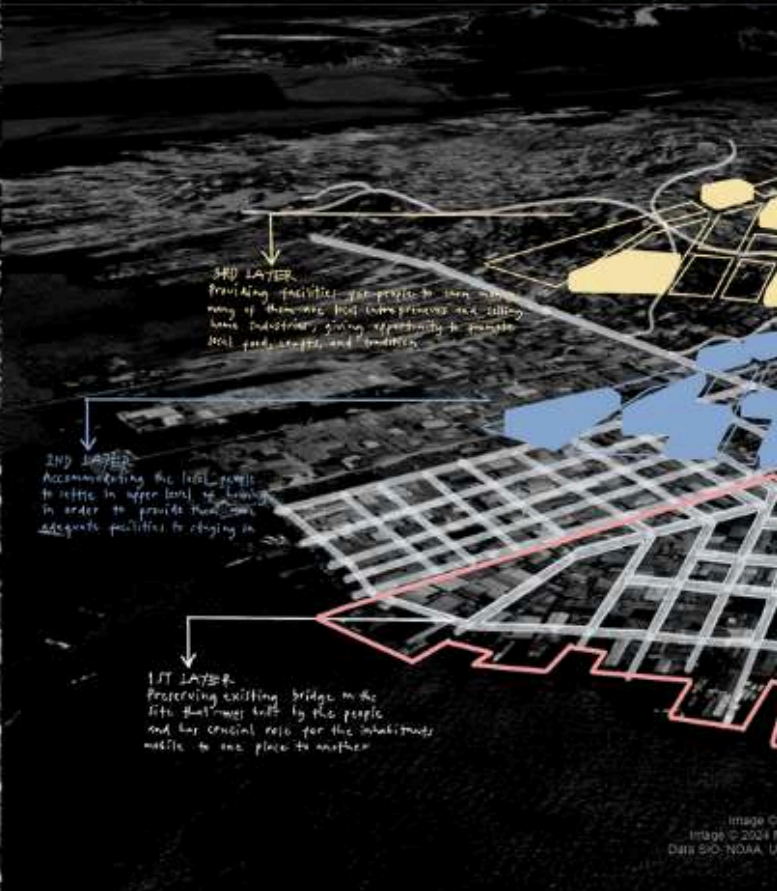
Most of local people here utilized the site, which becomes the center transportation to go to the speedboat deck, by selling handicrafts to become souvenirs for the visitors and selling traditional foods, such as *amplang*, *coto makassar*, *pisang gapit*, and many more. They use their own house to sell their stuff. Alongside of selling, many of them also utilize their veranda as spaces for motorcycle users park their vehicles.

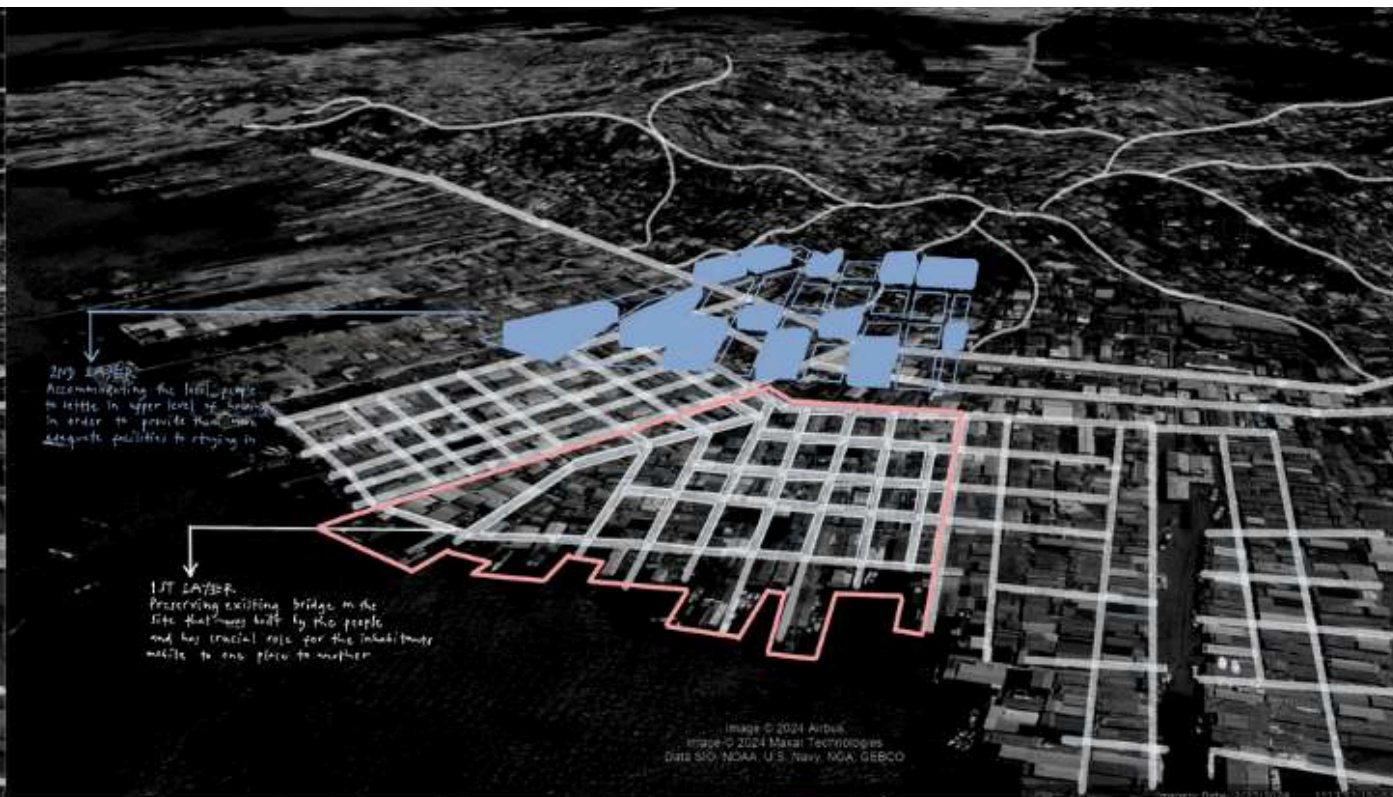
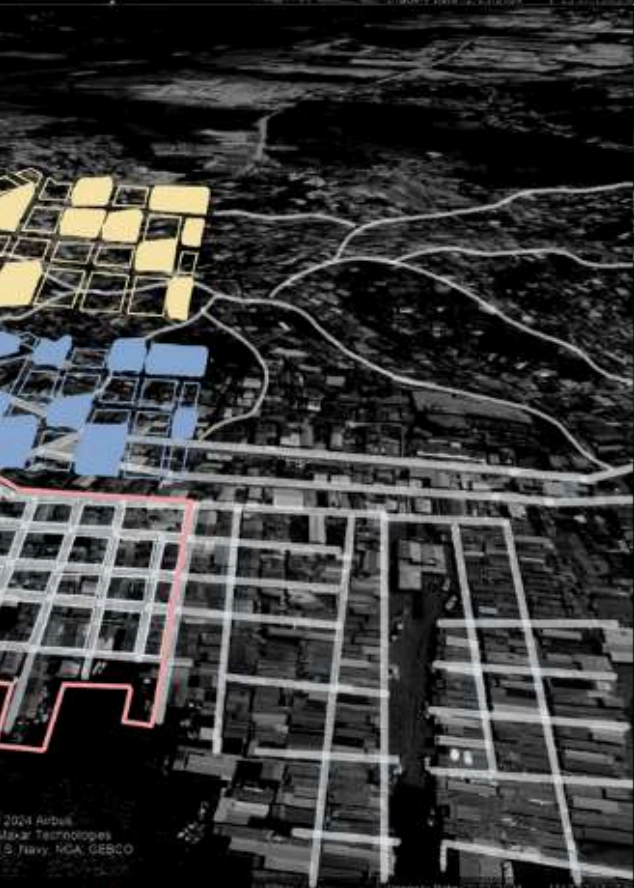


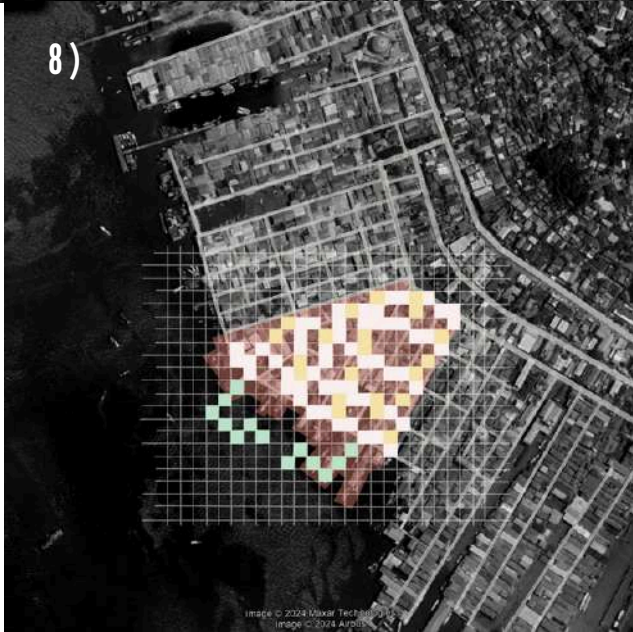
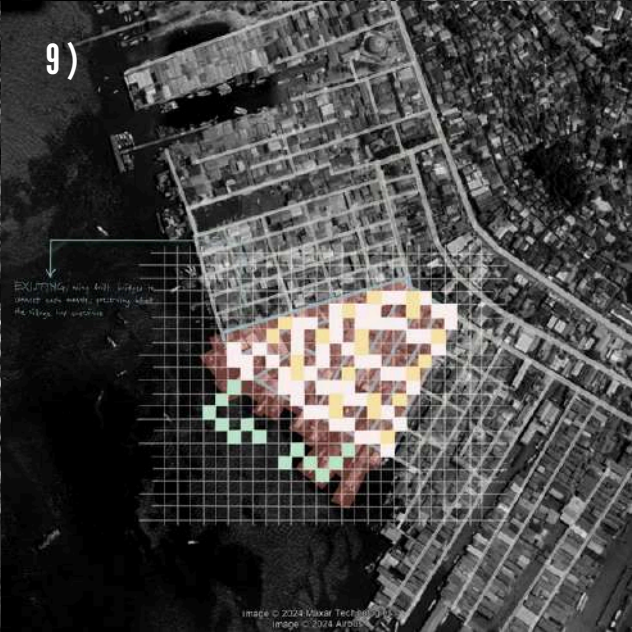
PLANNING OF DEVELOPMENT

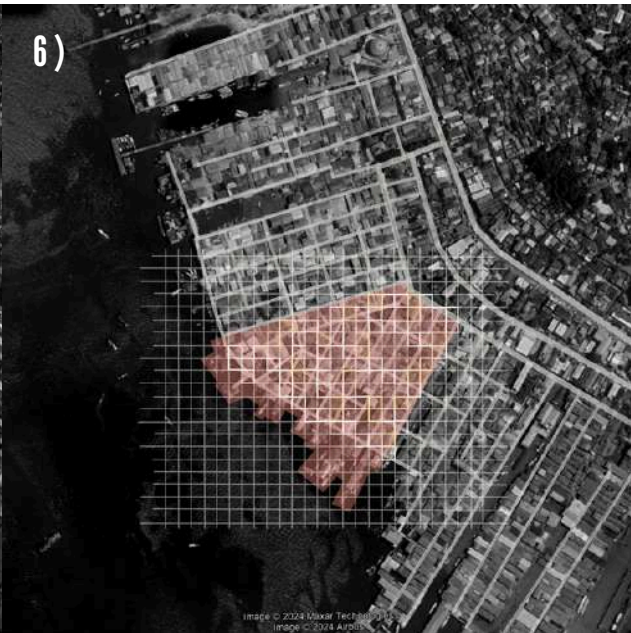
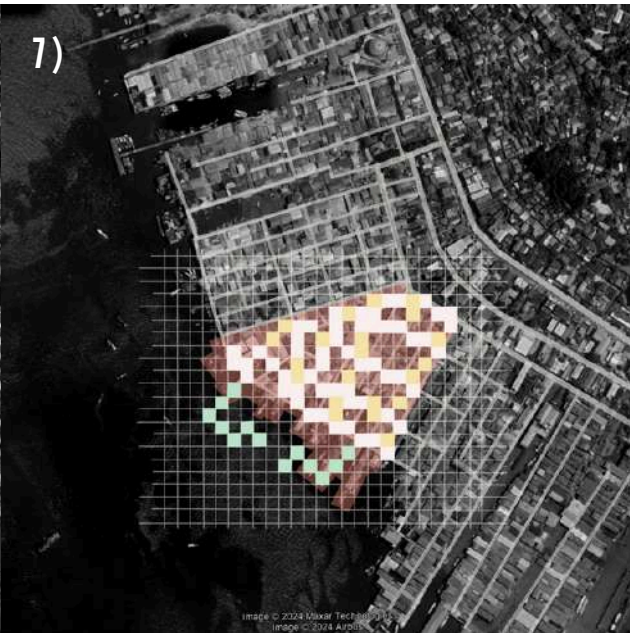
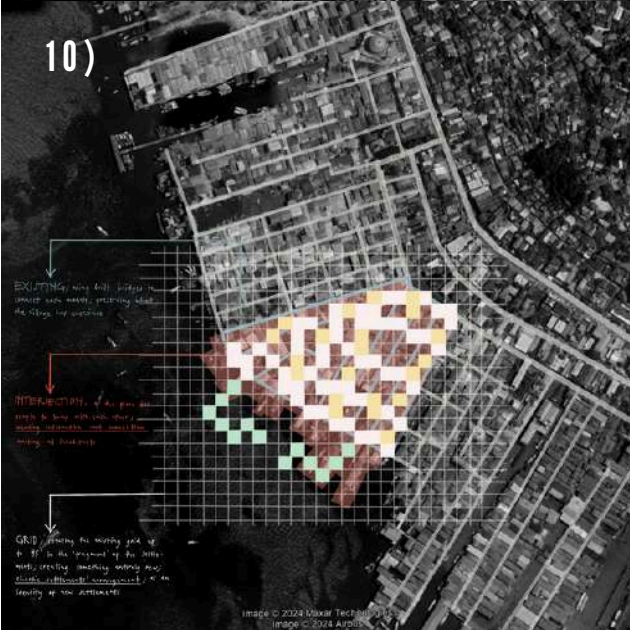
The plan of development focuses on the integrated floating market with potentials around, such as local entrepreneurs, restaurants, handicrafts-making, and enhancing the potentials of tourism. While the port will be made more systematic by having all of them united in one central place and enable flexible circulation for both the passengers and the drivers.

PATTERNS FINDING





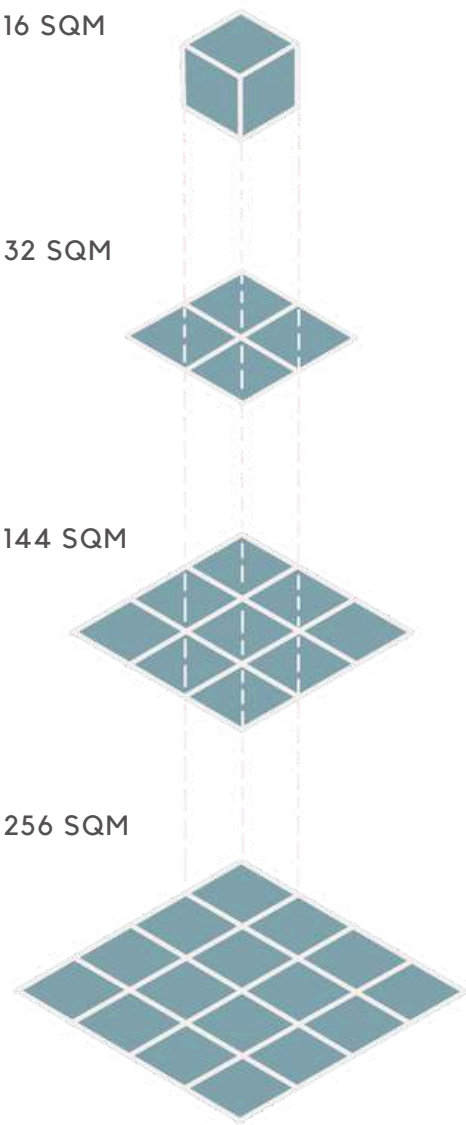
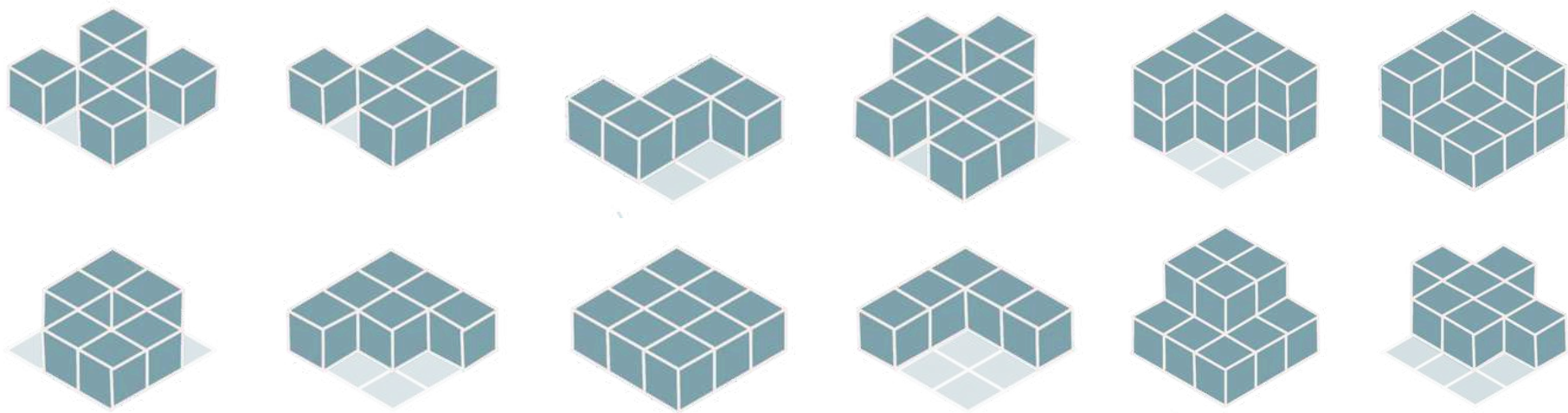




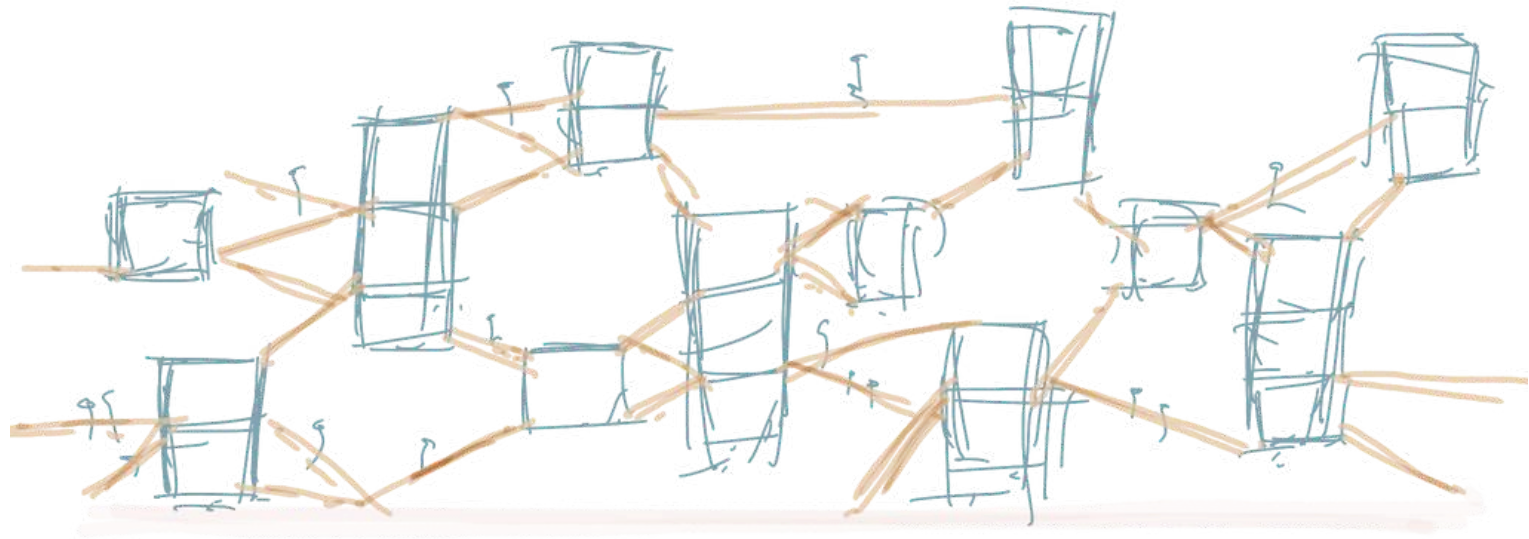
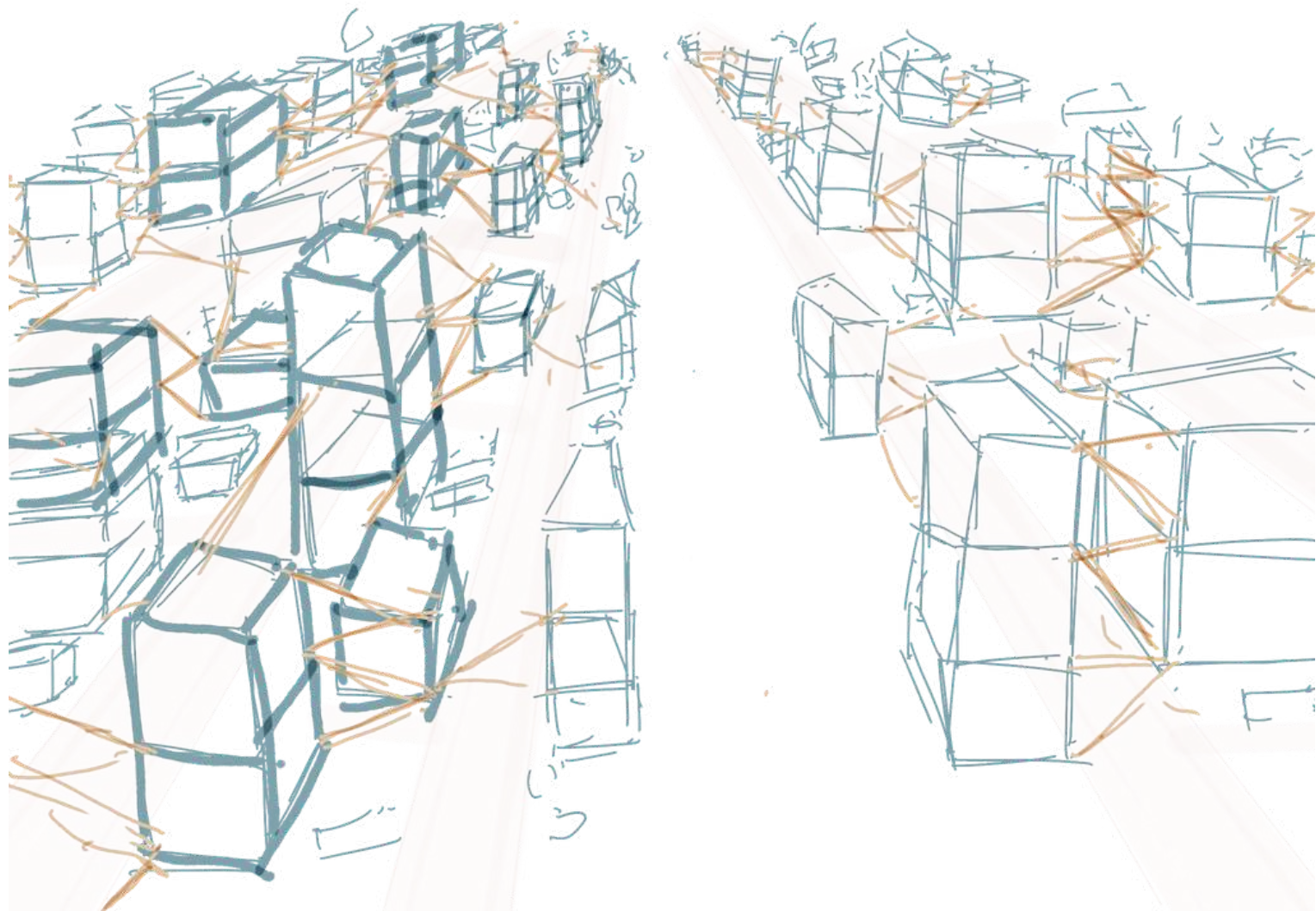
EXPLORATION OF MODULARITY

The existing site has already its main characteristic which is the pattern of the wooden bridge that looks as if it is “growing” and keep going longer to the sea due to rapid growth and the necessity of dwelling place inside the city. This unique characteristic of the existing pattern of the bridge becomes the main idea of designing the new residential area above the water.

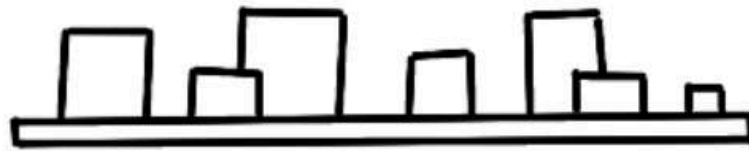
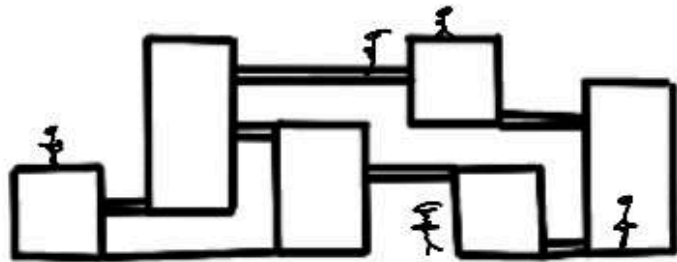
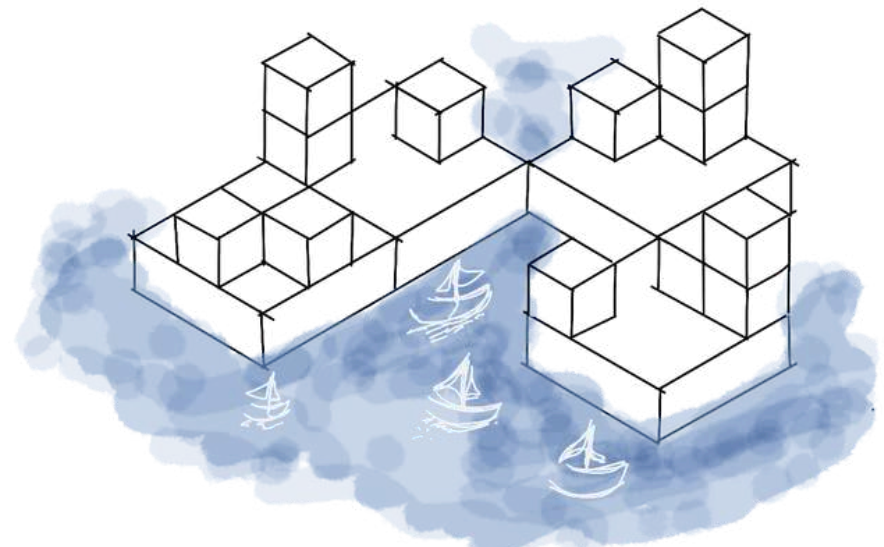
The idea becomes a total contrary between the existing bridge pattern and upcoming idea because the main intention of revitalizing the area is to connecting more storngly each tribe that is settled in Balikpapan and make everyone from every tribe feel belong to the site. Hence, the idea is to **making people to meet in intersection** where the site area will be a “chaos” member among the existing area since the direction of the settlements is rotated to make the intersection between the existing bridge becomes the starting point of the new design. After analyzing the pattern and making new pattern in different direction, then the idea of making the settlements modular is efficient due to the effectivity and appicable if looking at situation of the site which is very narrow and no more space to build a new settlemntns.



MODULARITY IN SKETCH

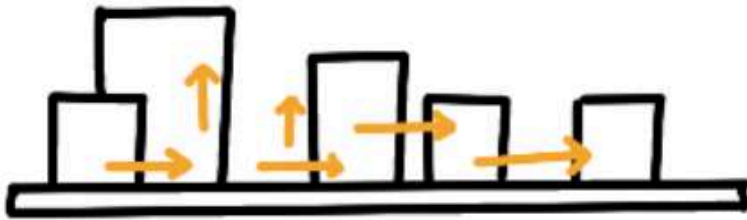
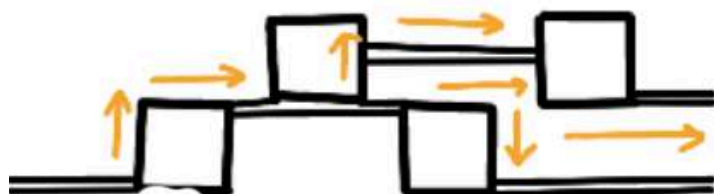
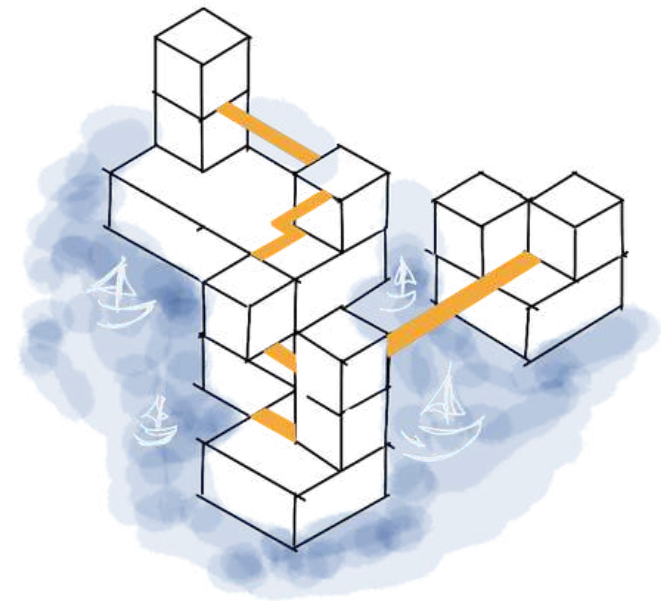


SPACE FLEXIBILITY



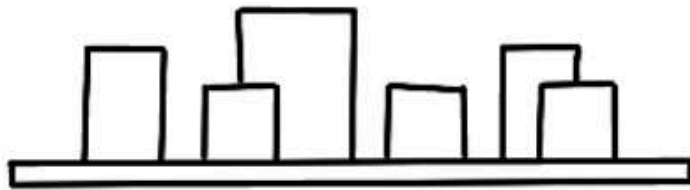
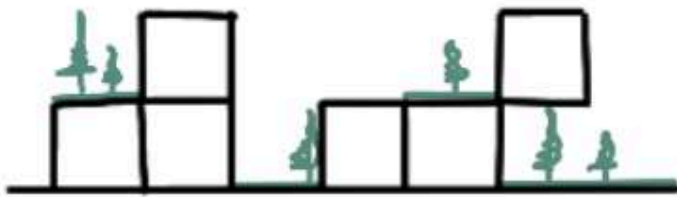
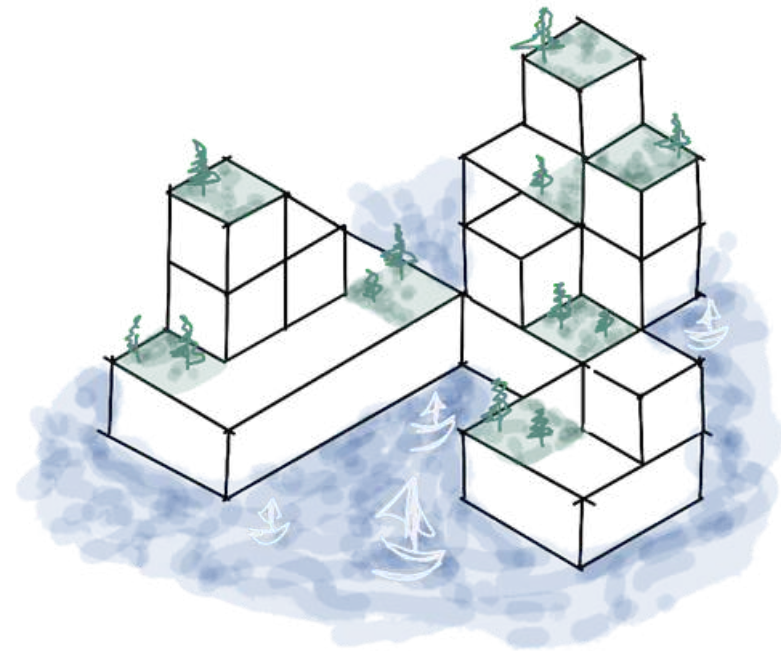
Modularity as the concept to solve rapid growth and dense settlements on the site by the time pass by; vertically arranged (max. 15 m) to enable other space as place for interact & socialize.

CONNECTIVITY



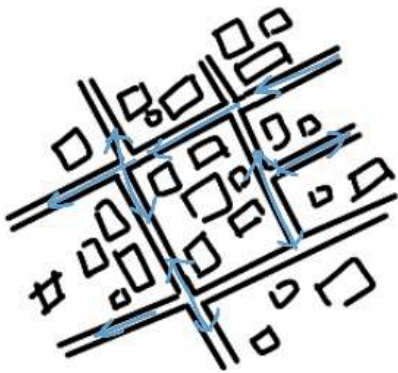
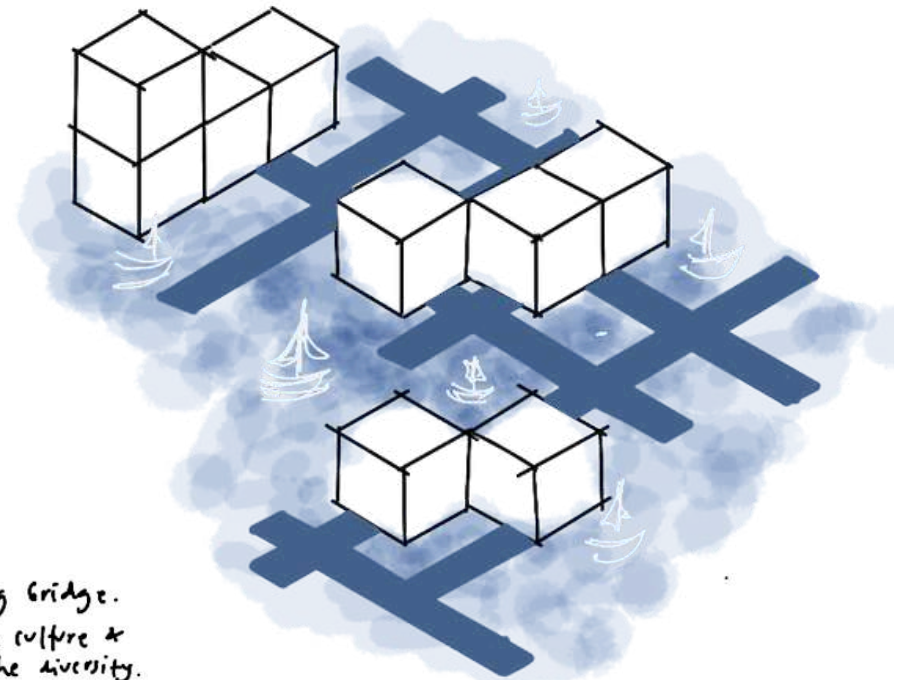
Connecting the modules directly interconnected to each other in order to enable them mobile easily from one space to another space adjusting with the necessity of the users.

OPEN SPACE



The current density of the settlements don't allow the space to 'breathe'; hence the concept of vertical garden can help the people to relieve stress and increase productivity as well as for interest.

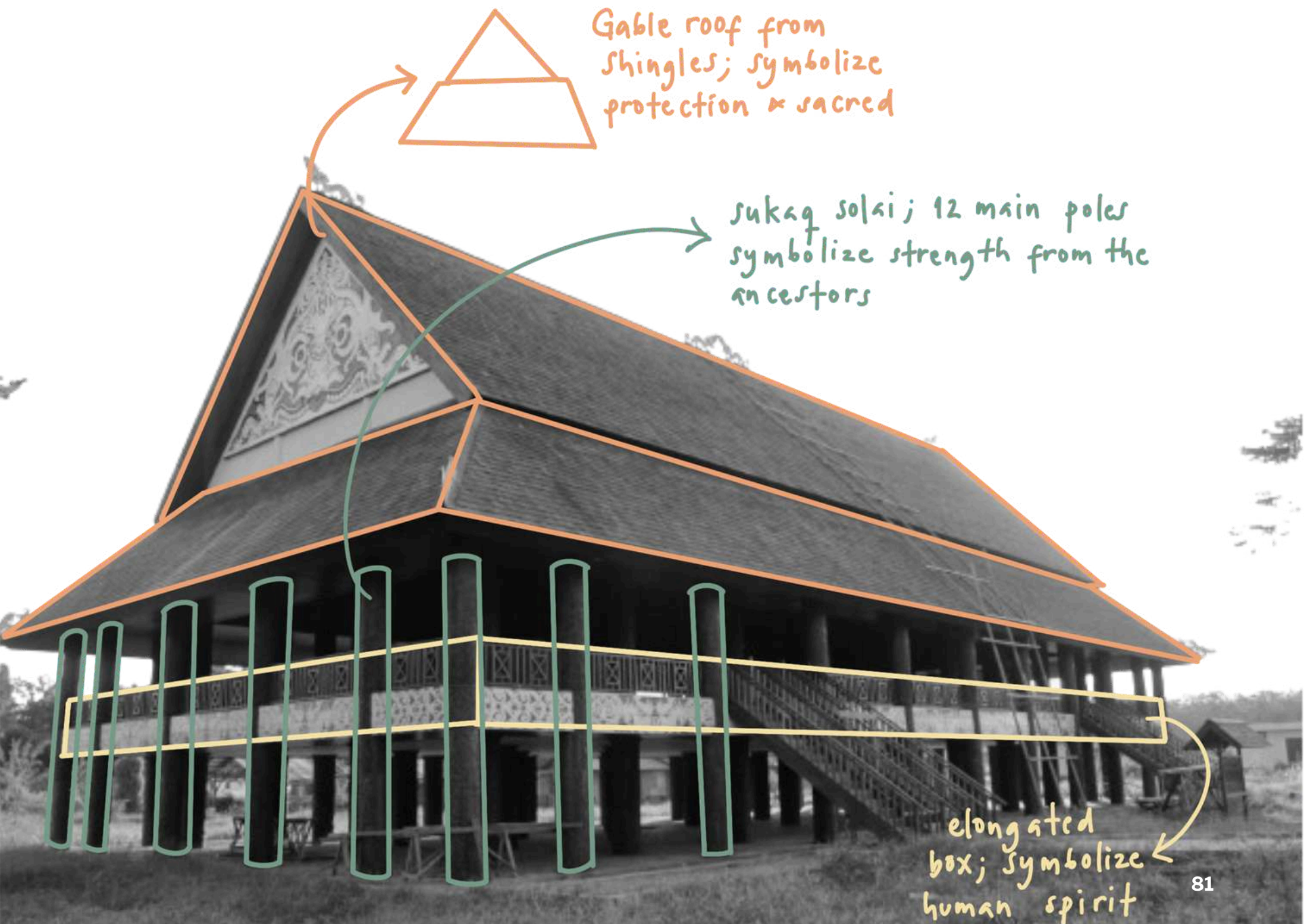
EXPERIENTIAL



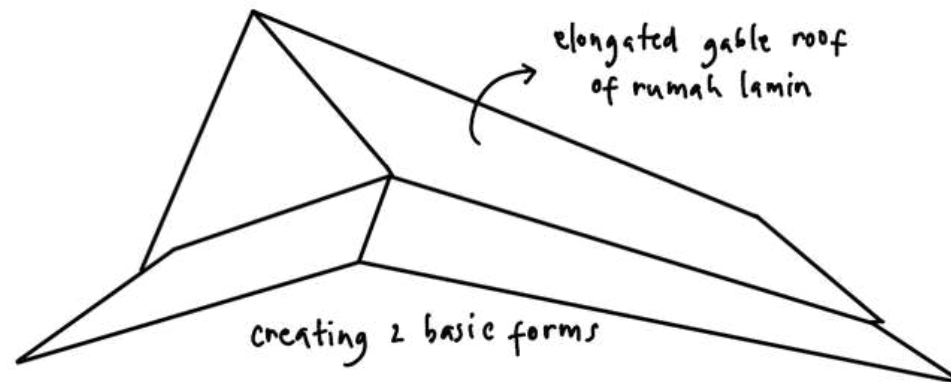
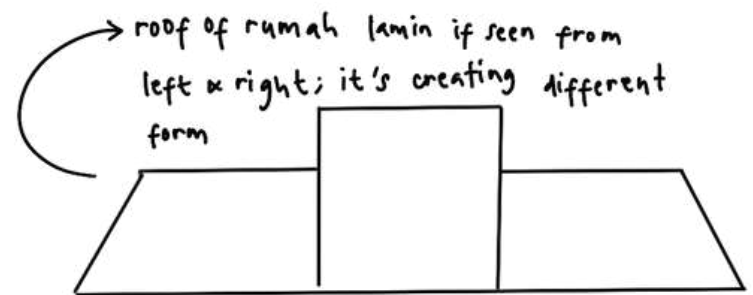
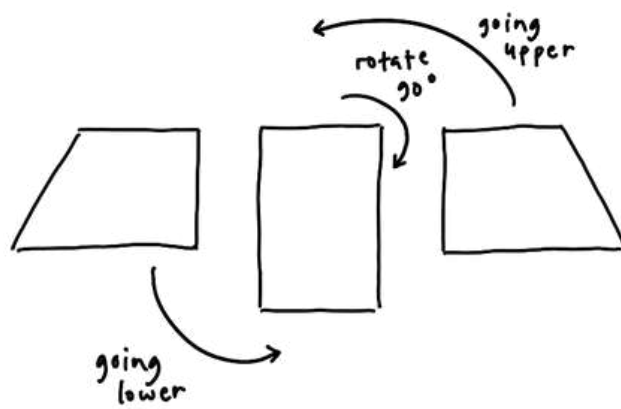
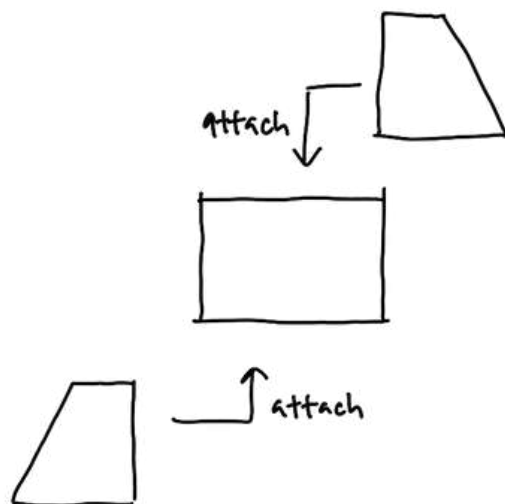
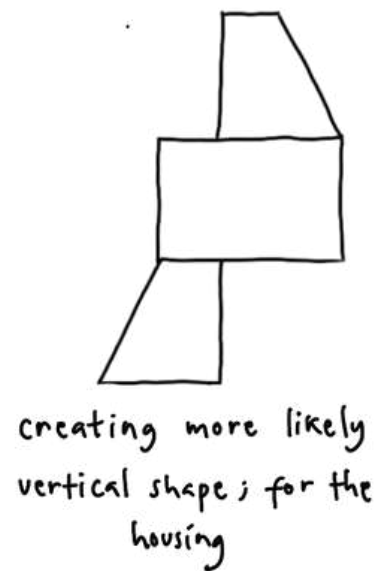
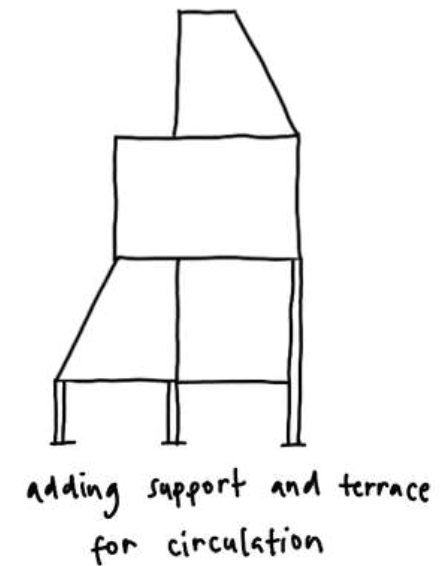
Previously the arrangement is on the blocks and separated by existing bridge. The concept of experiential will give them opportunity to experience the culture & tradition on the site by themselves and stroll around by boats to see the diversity.

BUILDING MASS EXPLORATION

RUMAH LAMIN, EAST KALIMANTAN

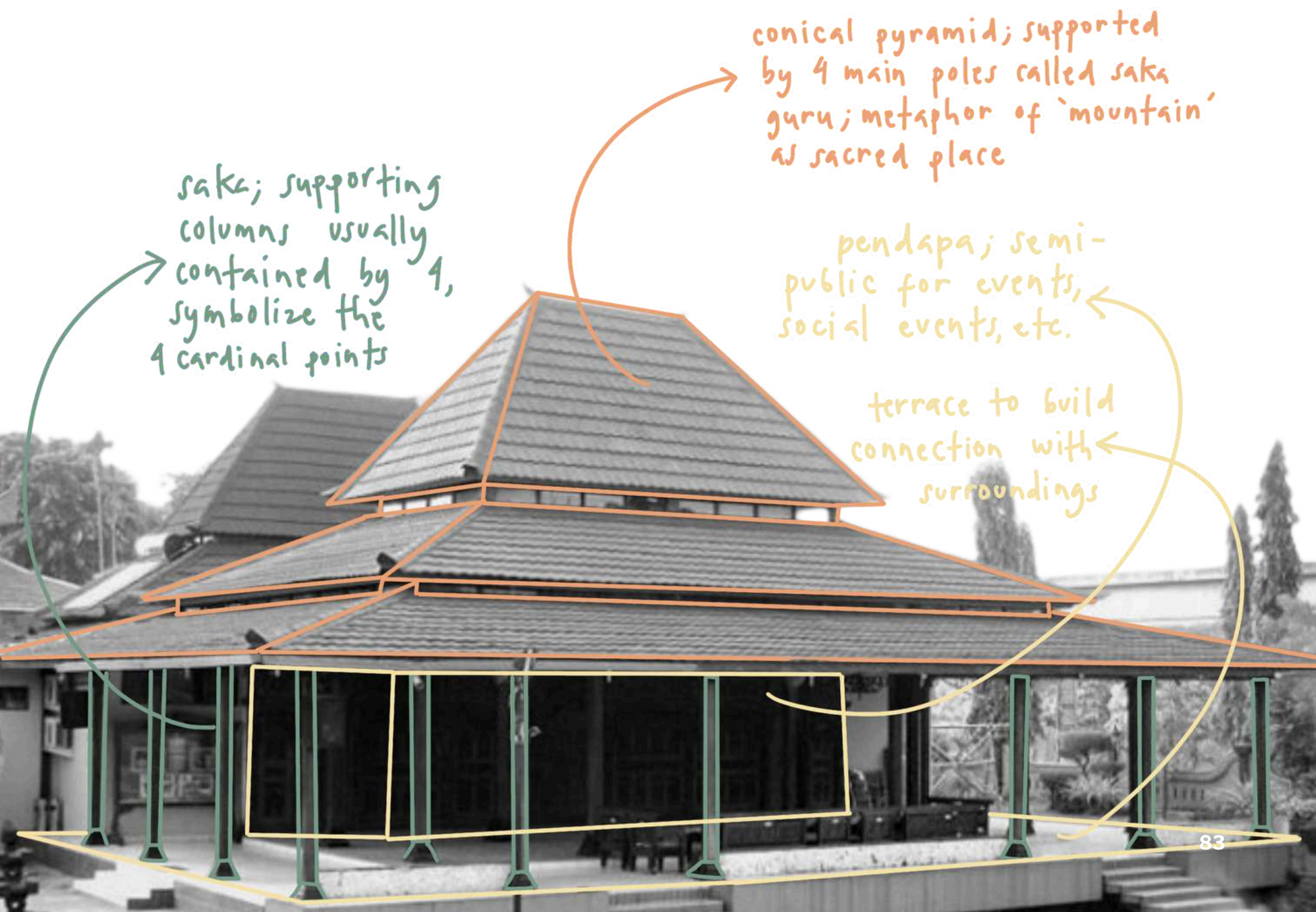


BUILDING MASS EXPLORATION

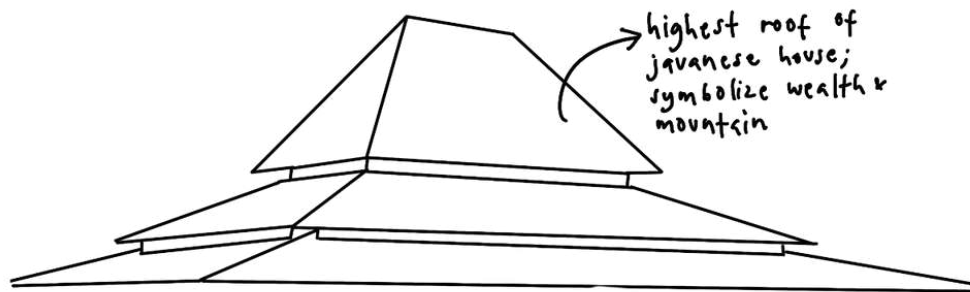
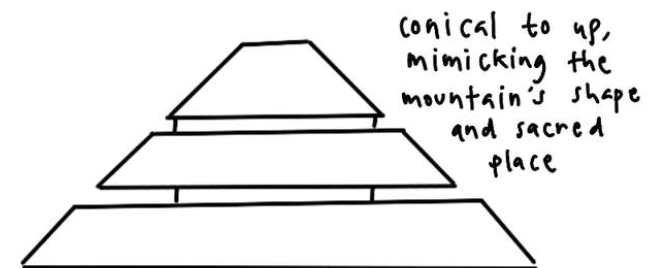
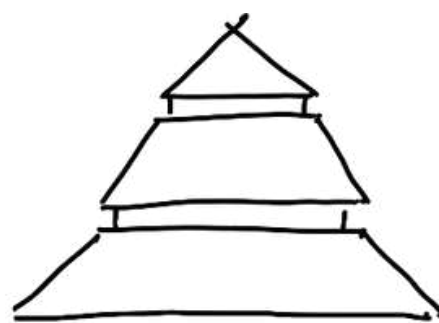


BUILDING MASS EXPLORATION

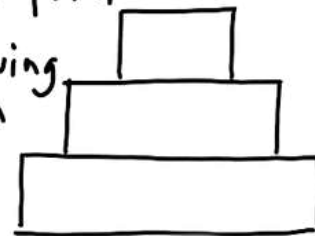
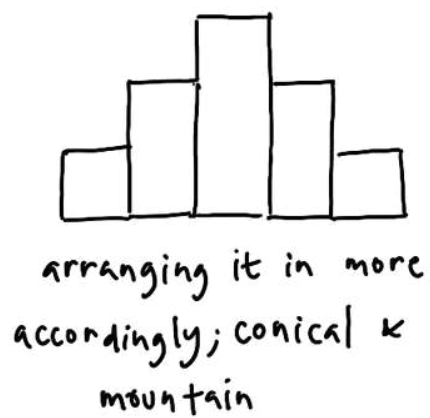
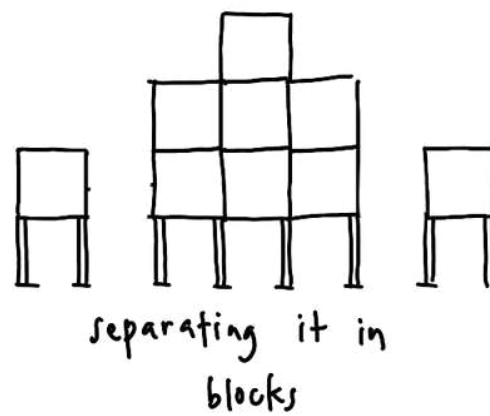
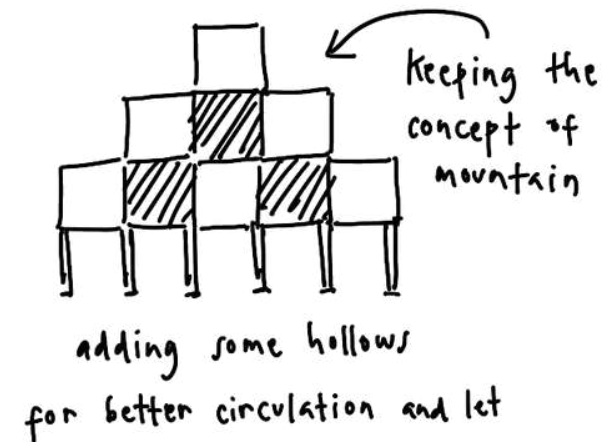
RUMAH JOGLO, JAVANESE



BUILDING MASS EXPLORATION



simplify the form
but still following
the mountain
concept



BUILDING MASS EXPLORATION

RUMAH BOLA SOBA, SOUTH SULAWESI

lego-lego; open space
for guests, for ga-
thering

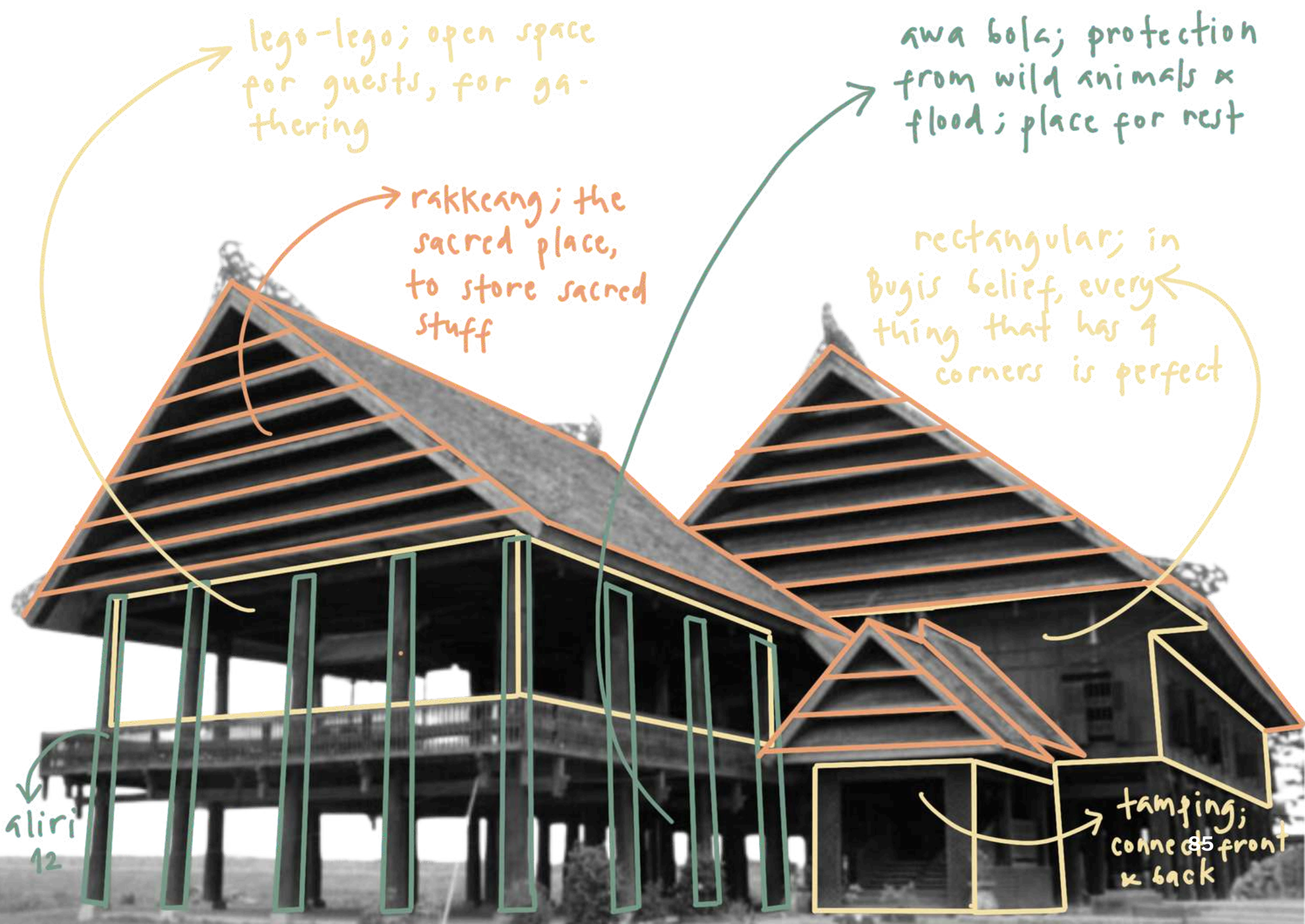
rakkeang; the
sacred place,
to store sacred
stuff

awa bola; protection
from wild animals &
flood; place for rest

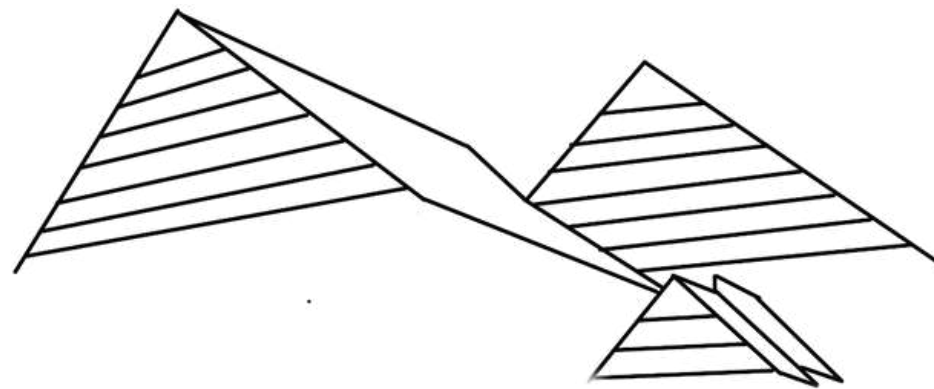
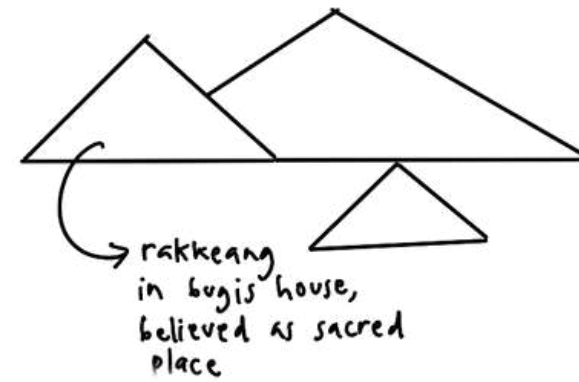
rectangular; in
Bugis belief, every
thing that has 4
corners is perfect

tamping;
connects front
& back

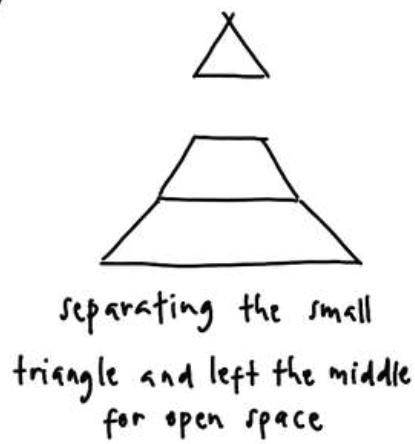
aliri
12



BUILDING MASS EXPLORATION



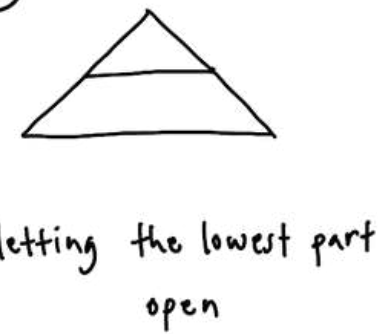
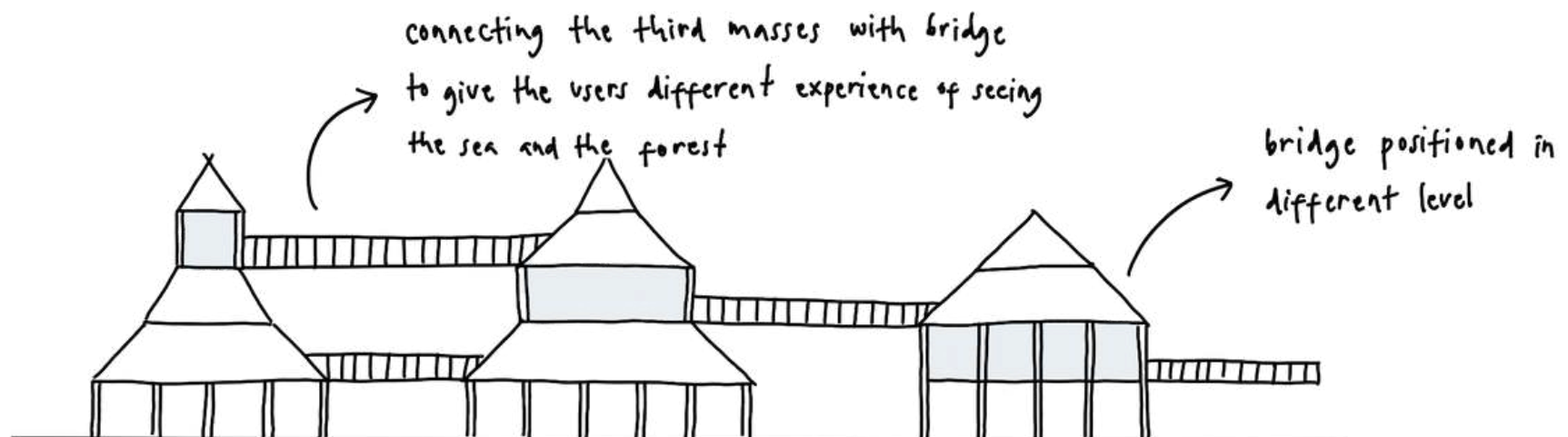
①



②

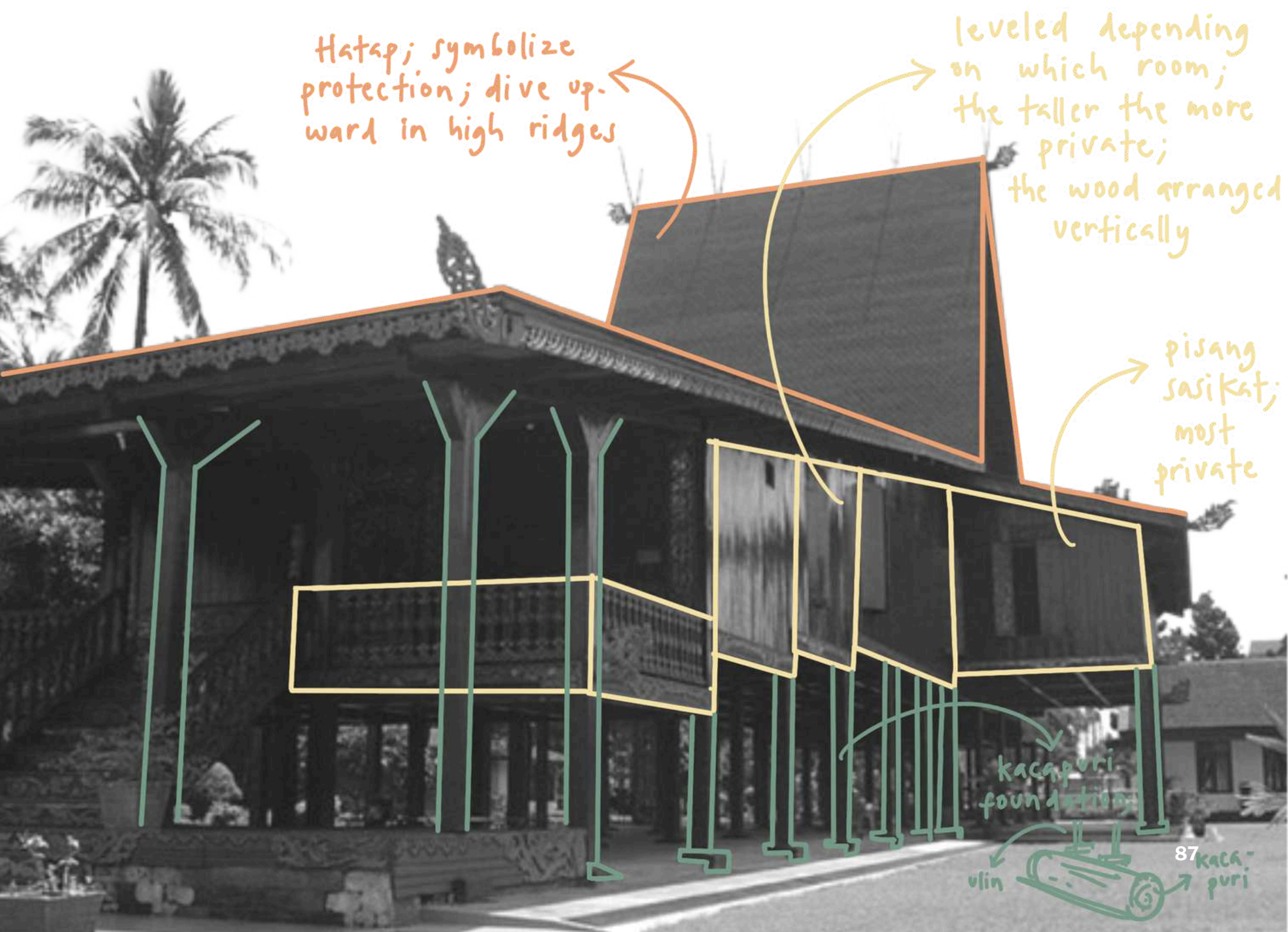


③

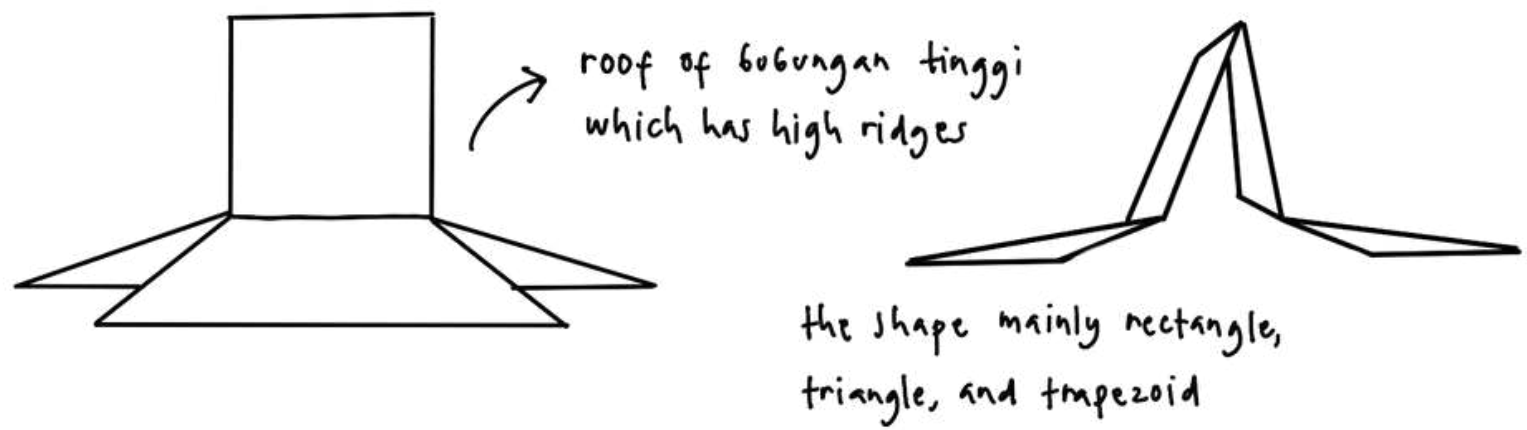
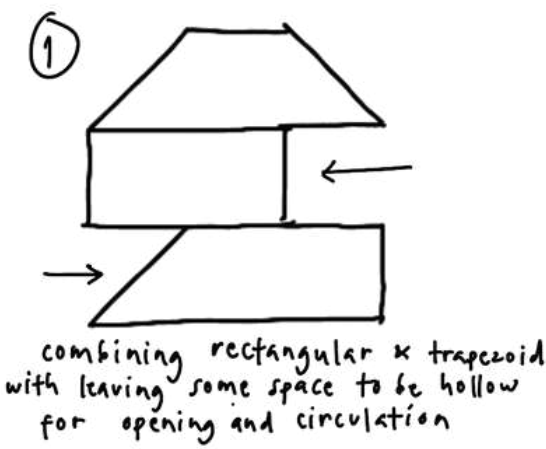
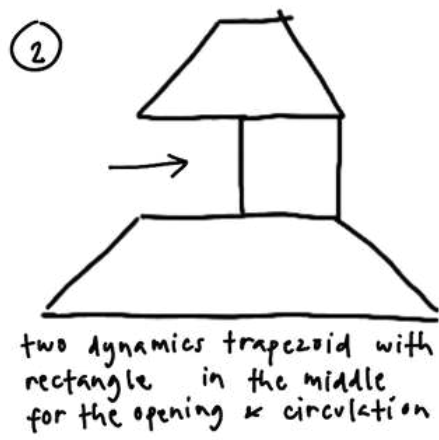
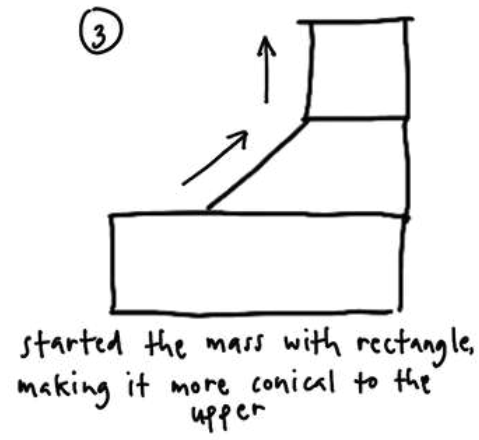
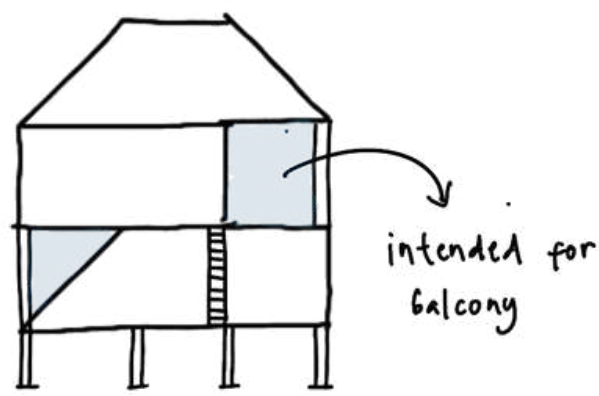
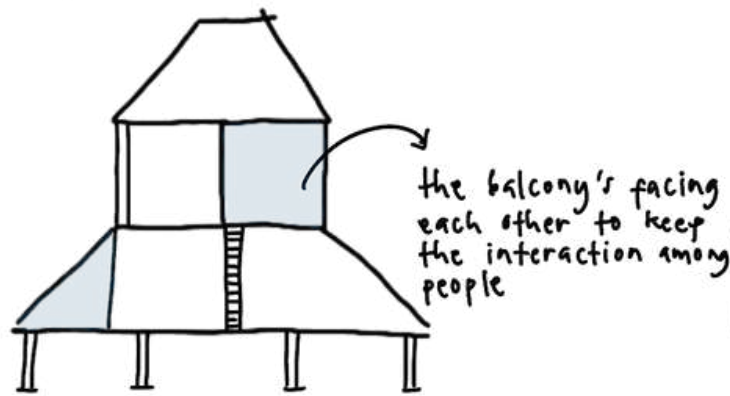
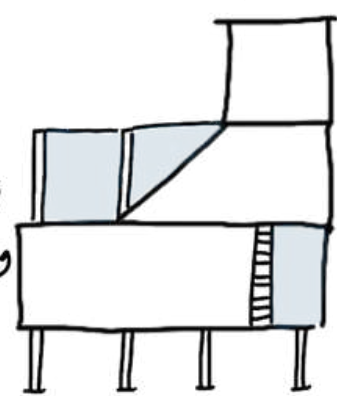


BUILDING MASS EXPLORATION

RUMAH BUBUNGAN TINGGI, SOUTH KALIMANTAN

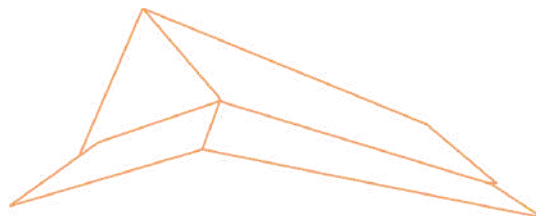
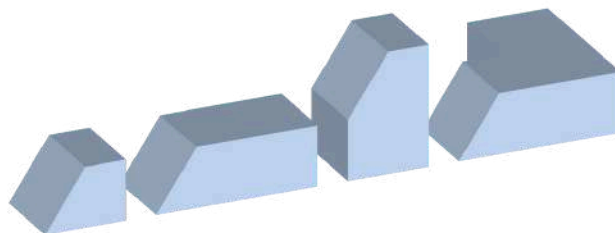


BUILDING MASS EXPLORATION



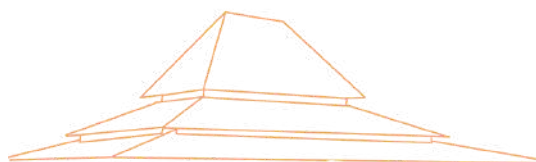
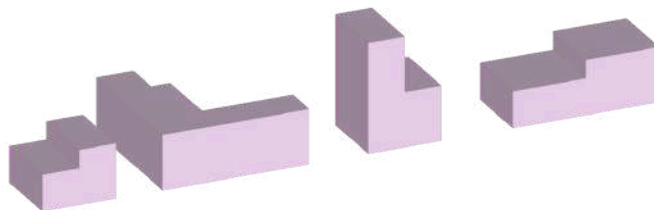
BASIC SHAPE

Lamin's house elongated and gable roof



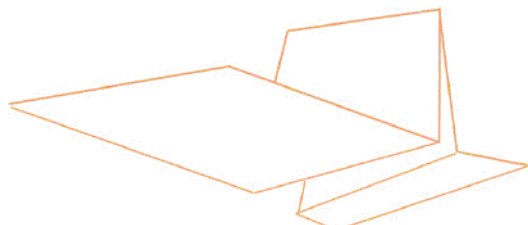
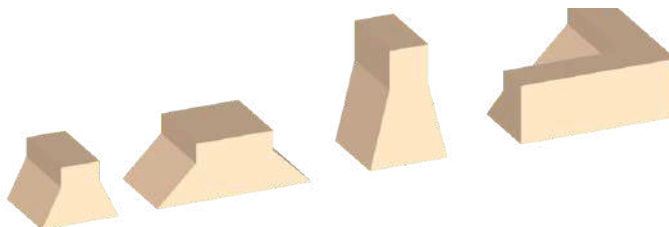
This mass is taken inspiration from Rumah Lamin's roof that has the shape of rectangle and trapezoid and modified into several typologies with different orientation and with different type and capacity.

Joglo's house repetitive roofs



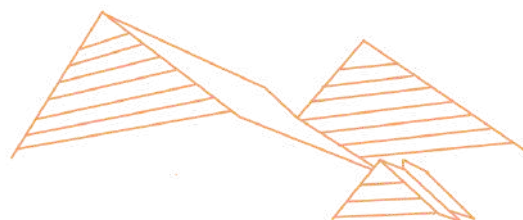
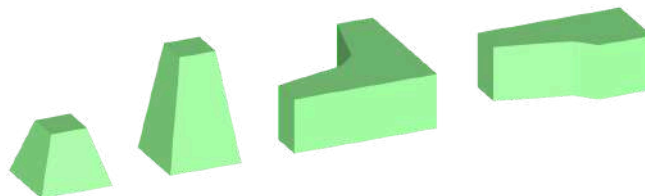
This mass is taking inspiration from the roof of Joglo House which is repetitive and getting smaller to the top. The mass is simplified by having the shape rectangular but more efficient and have more space for the occupants.

Bubungan tinggi's elongated nad high-ceiling roof



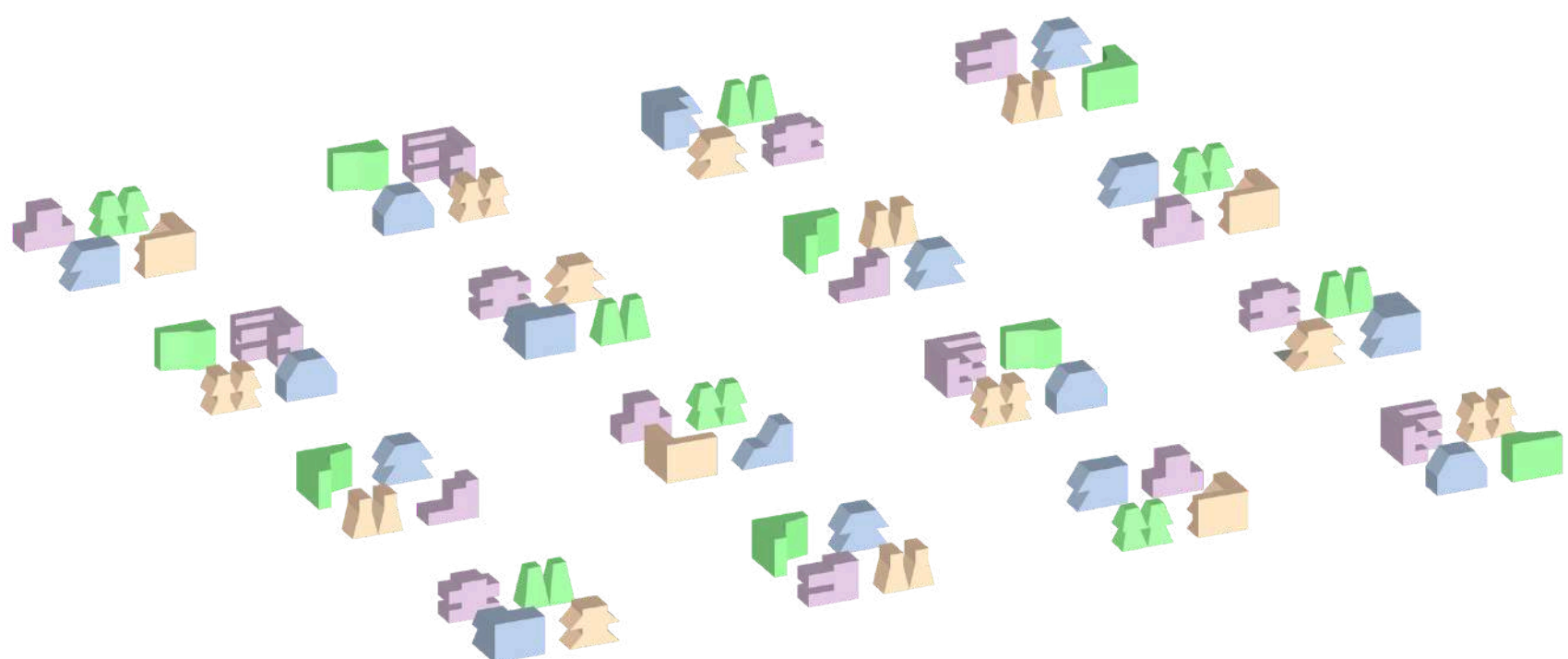
Bubungan Tinggi's house is well-known by it's high-shaped roof, hence the mass is following the elongated as well as triangle shape of the roof with different kind of typology.

Triangles in Bola Soba's house

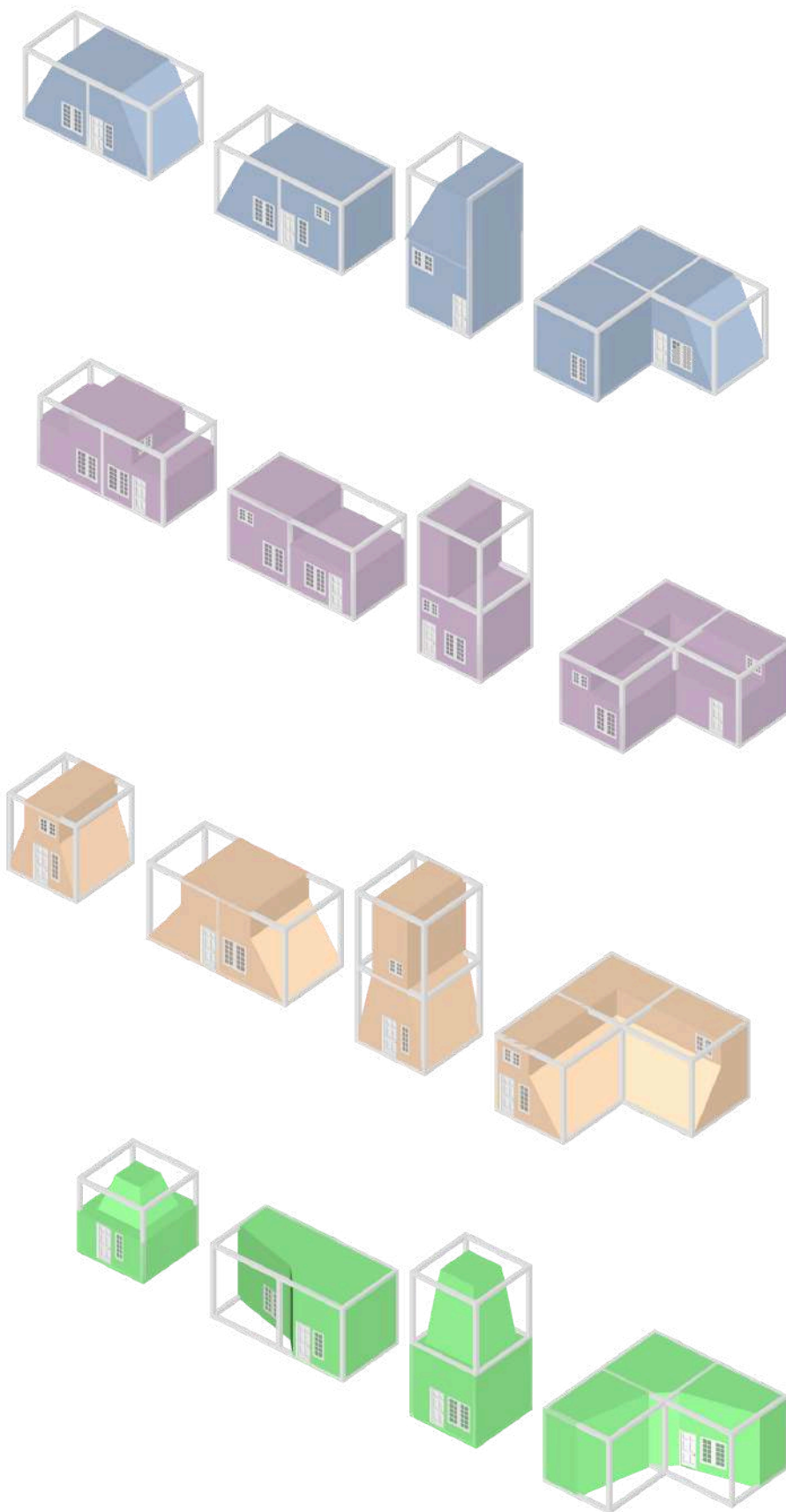


Bola Soba's roof is identical with triangles which is symbolized as sacred place. The mass is taking the triangle shape and being modified in various ways.

VARIETY OF MASS



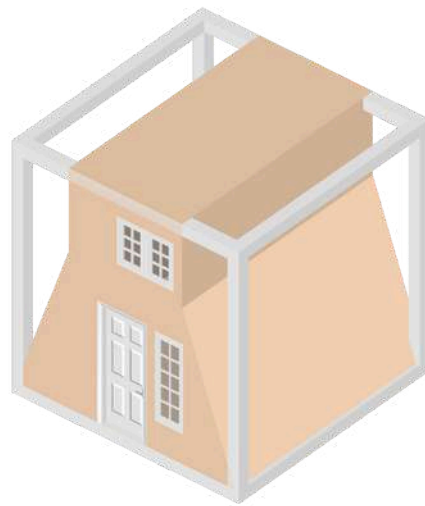
The arrangement of the block settlements inside the site will be combining each one of contemporary modules inspired by Nusantara architecture in order to create more dynamic and harmony settlements as long as uniting every characteristics of the architecture into one and adjacent area.



These are basic 16 modules which will be arranged adjusting the necessity and the capacity of the inhabitants of the area.

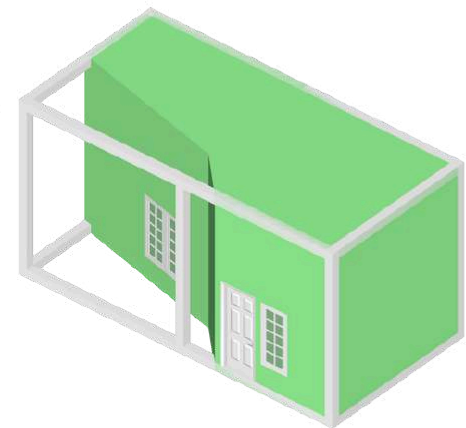
MODULE TYPOLOGY

For each typology from one Nusantara architecture, they are divided into 4 categories as well; 4x4 module, 4x8 module, 4x4 2-storeys module, and L module. Each of them functions differently and accommodate different capacity of people as well.



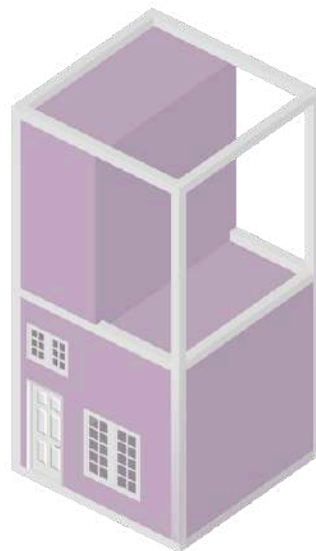
4x4 module

Able to contain 1-2 people inside. The function is maximized by having split floor inside.



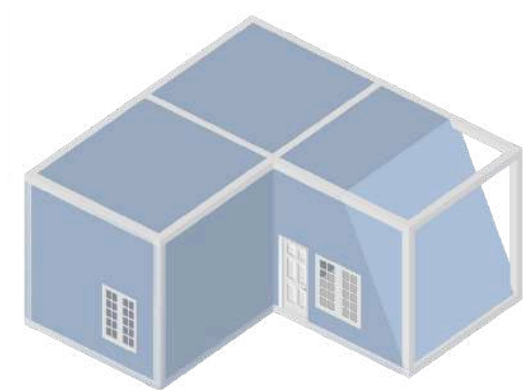
4x8 module

Able to accommodate 2-4 people.



4x4 module 2-storeys

Able to accommodate 3-4 people with having 1-2 several split floors inside the modules to maximize the space.

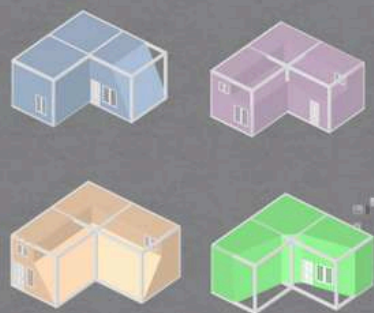


L module

Able to contain 3-4 people, even more with having split floor as well to accommodate more functions.

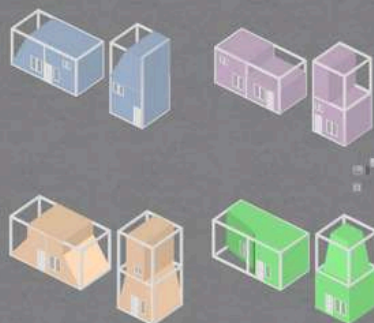
ZONE OF SETTLEMENTS

MODULES USED:



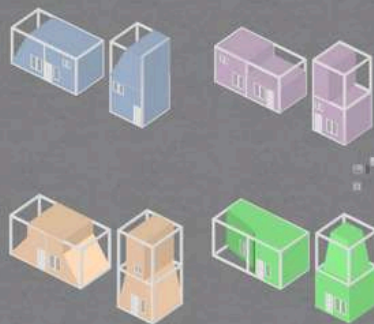
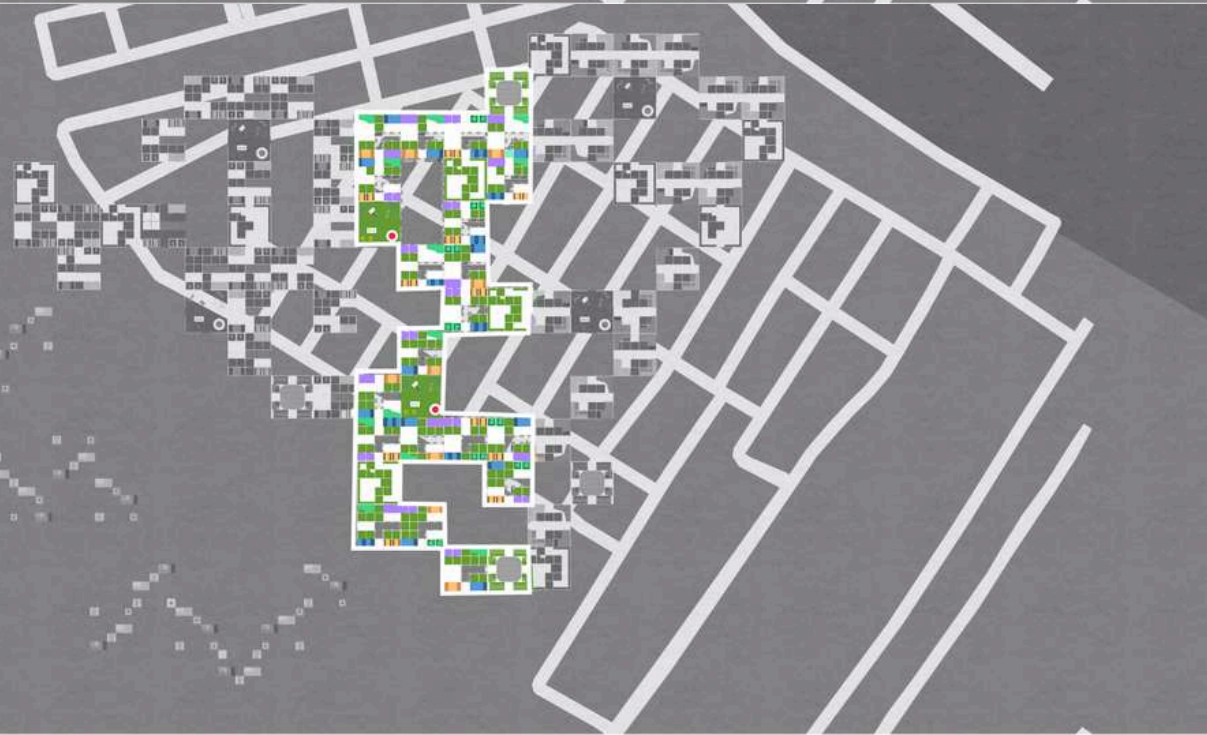
ZONE OF MIXED-USE HOUSING 2-STOREYS

MODULES USED:



ZONE OF MIXED-USE HOUSING 2-STOREYS

MODULES USED:



1.

The first blocks will be fully for settlements purpose only; dwelled by the local people and the newcomers who is looking for places to stay. Contains of 3 storeys of 4x8 meter moduls and able to accommodate 4-6 people. There are 280 modules in this blocks.

2.

Second blocks are contained by mixed-use housings that are 2 storeys which able to accommodate 2-4 people in one module. There are 112 2-storey-housings in this blocks.

3.

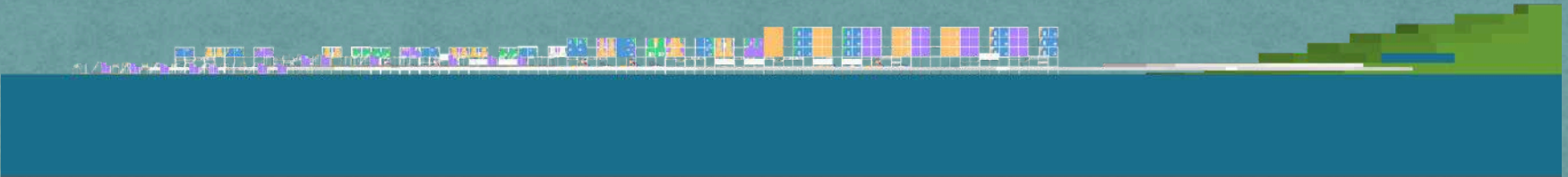
The next one is mixed-use housings but have only 1-storey. The owner can conduct their trading activity near the floating market as well as in the circulation below the modules. There are 88 housings in this blocks.

4.

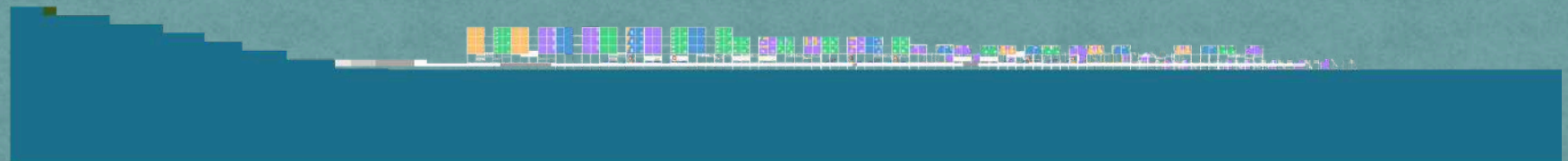
Floating market that has been the identity of the site ever since is elevated to have a real floating structure to give more authenticity of the site.

Existing patterns are still maintained in order to ease circulation and mobility between the people to move to one place to another without having to build a new structure.

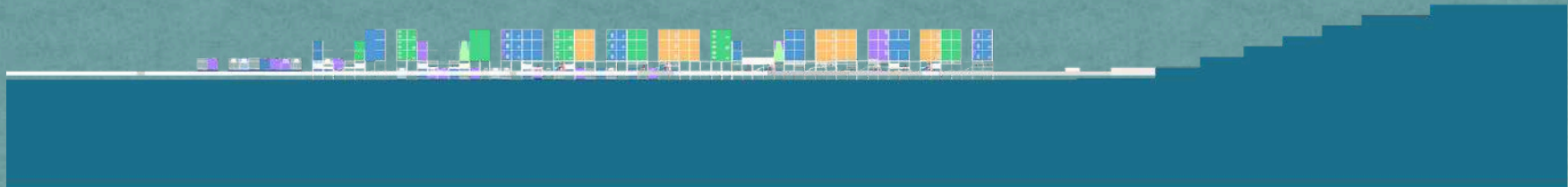
West Elevation



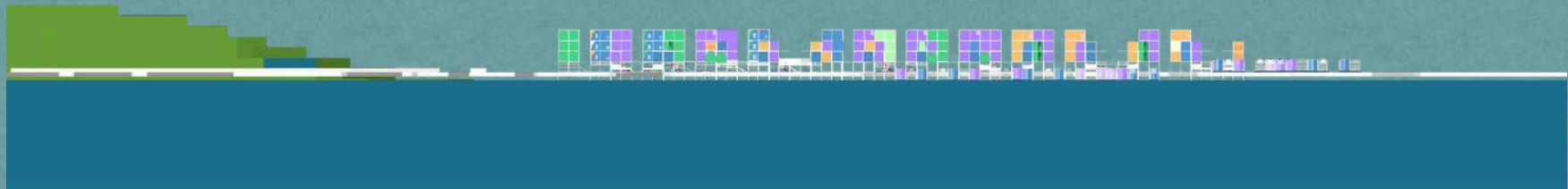
East Elevation



North Elevation

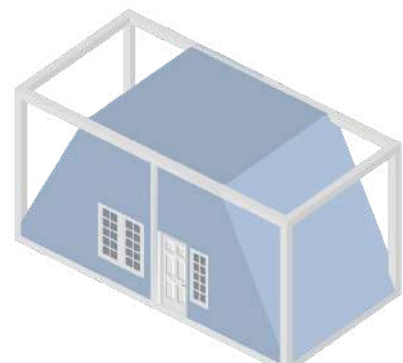


South Elevation

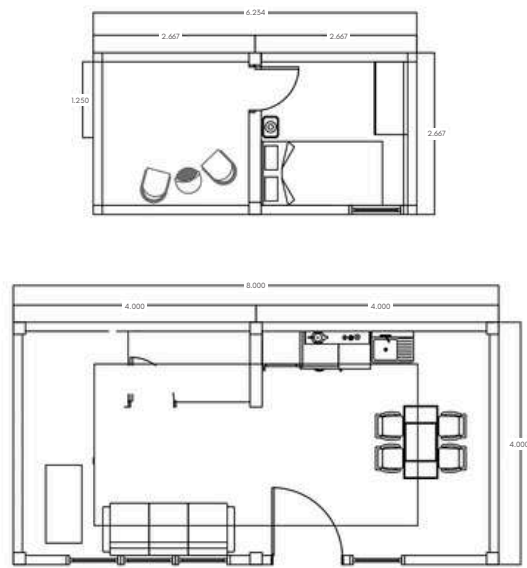


VARIETY OF MODULE LAYOUT

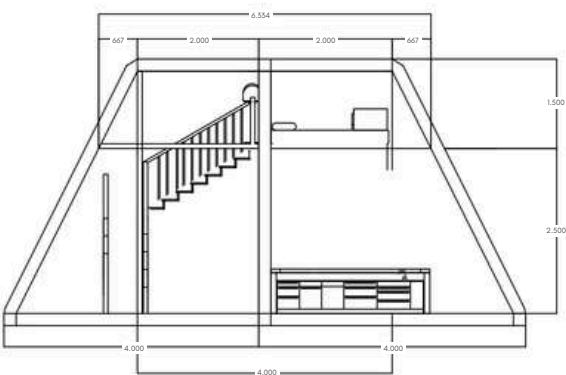
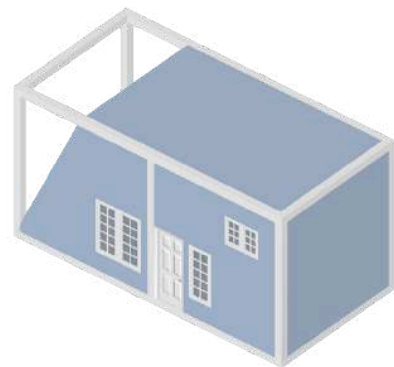
Modules inspired by Rumah Lamin



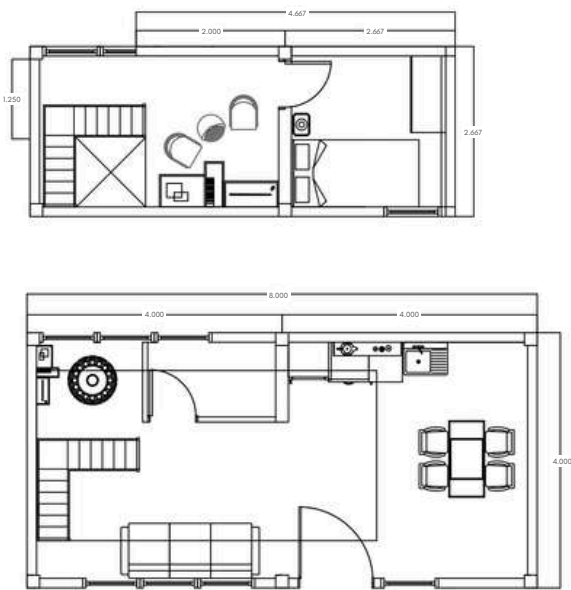
PLAN



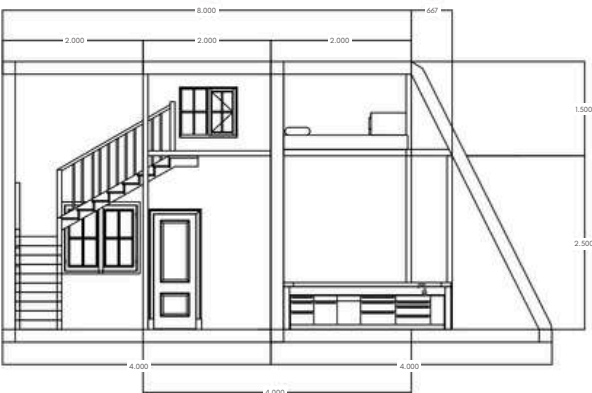
SECTION



PLAN

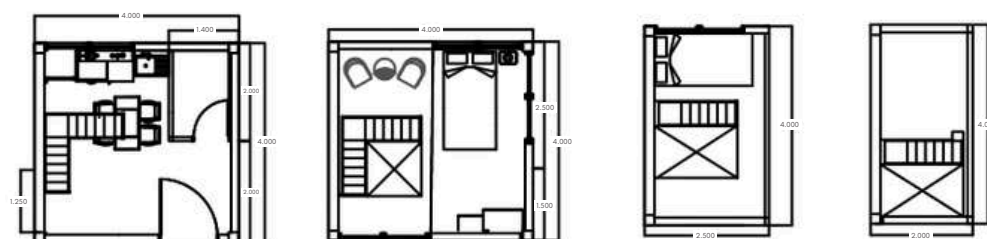


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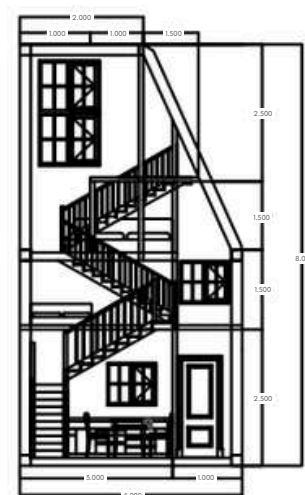
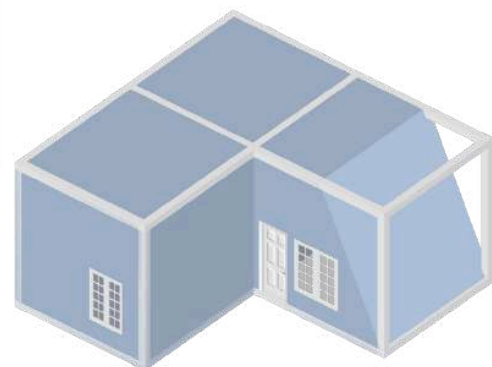




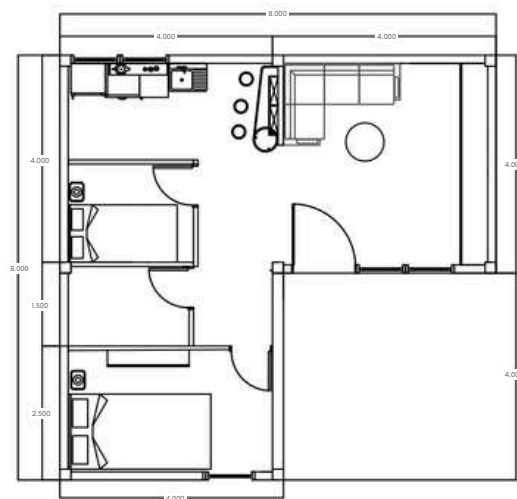
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SECTION



PLAN

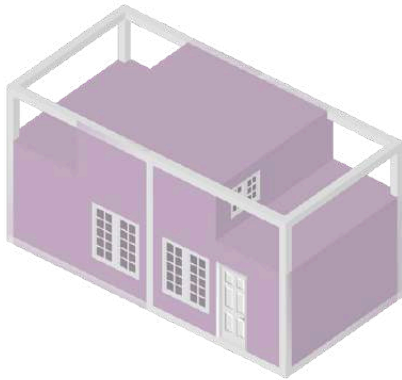
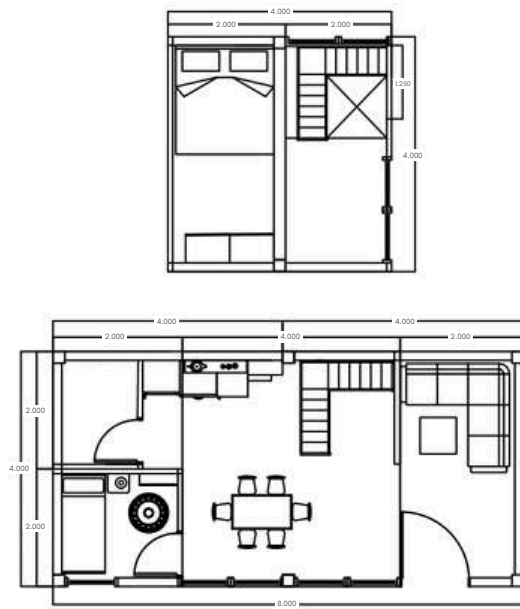


SECTION



Modules inspired by Rumah Joglo

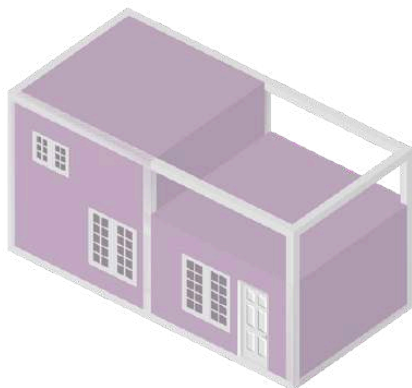
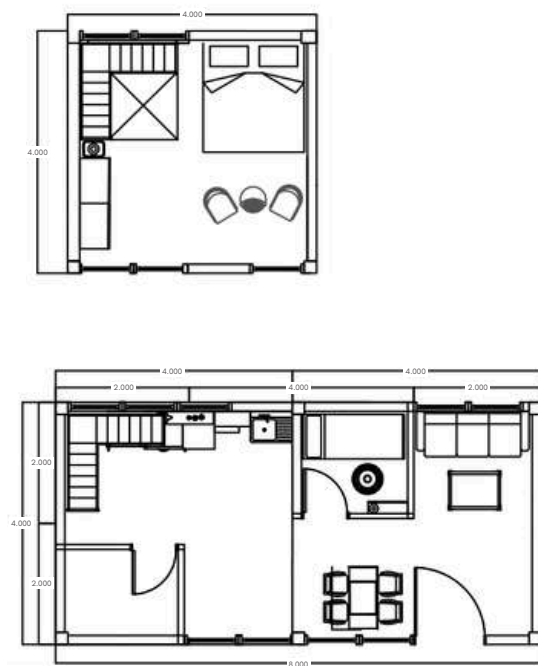
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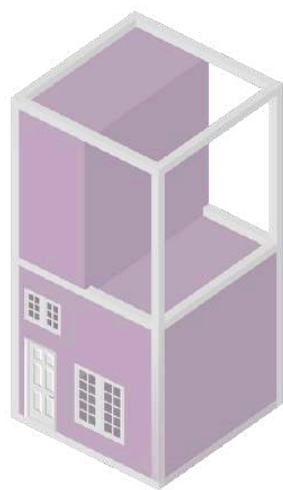


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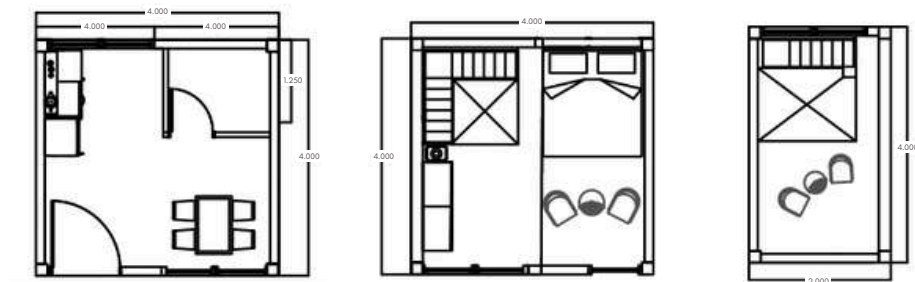


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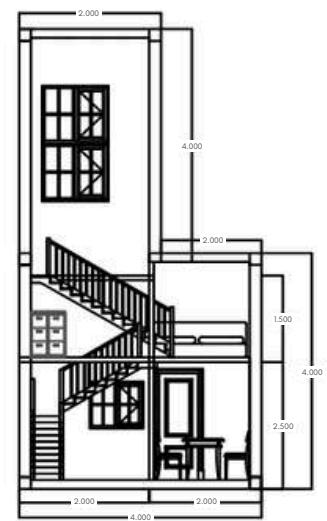
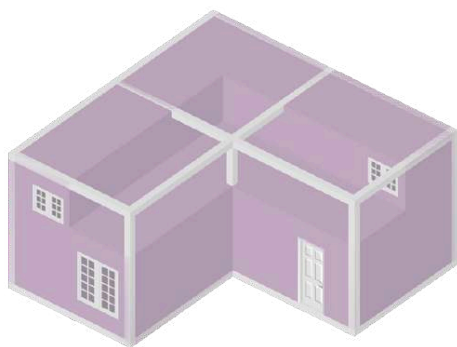




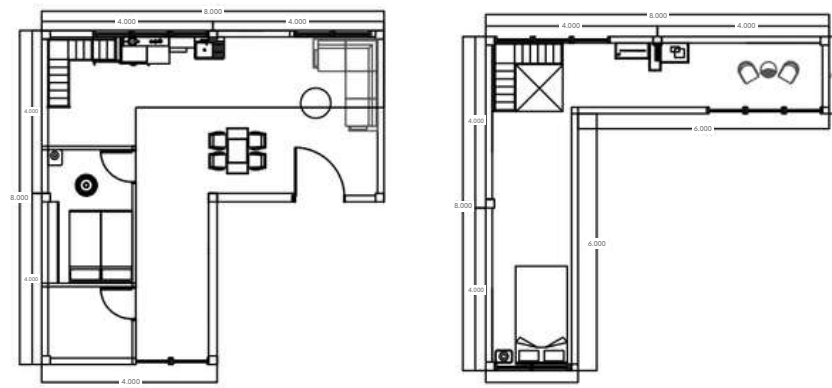
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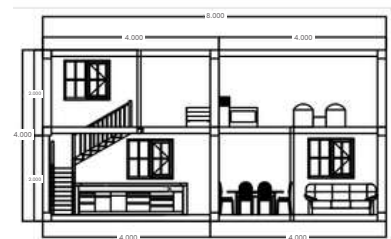
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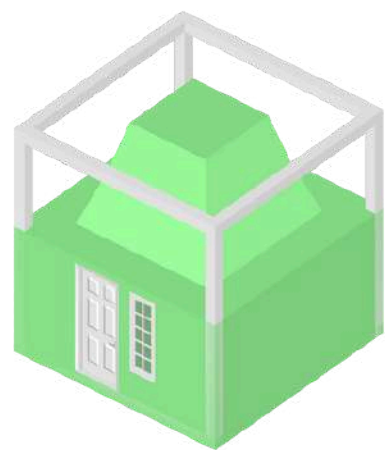
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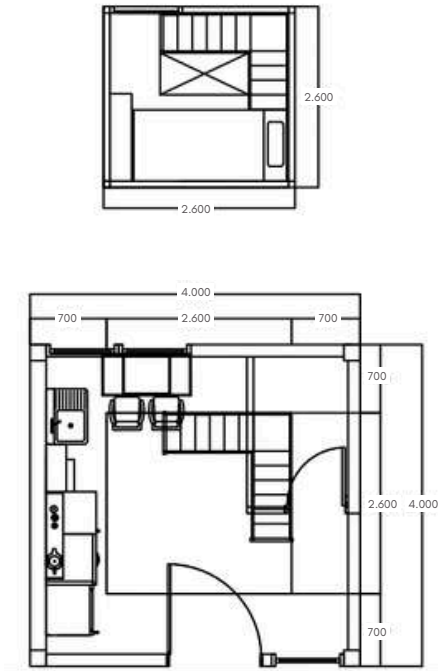
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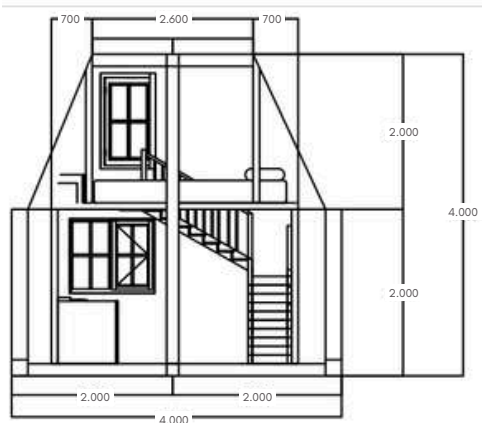
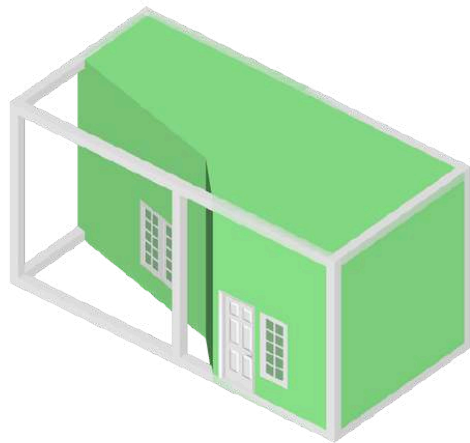
Modules inspired by Rumah Bola Soba



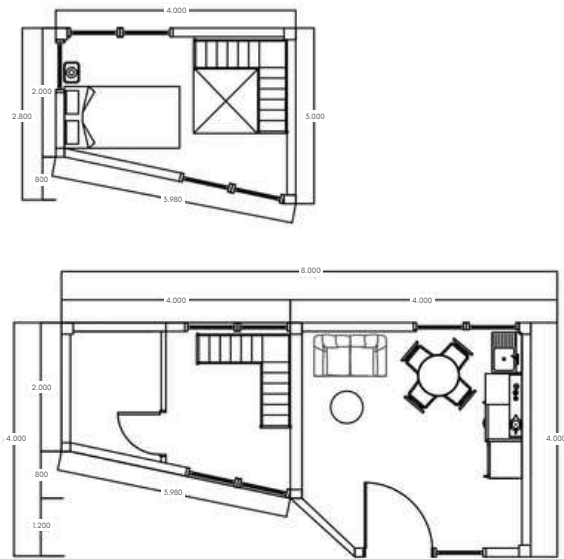
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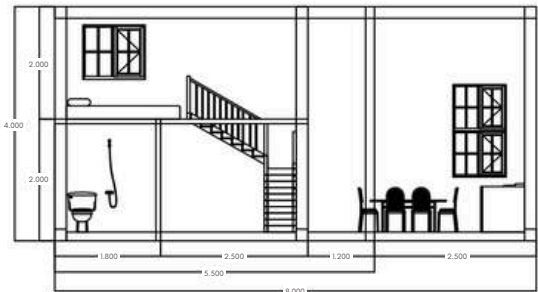
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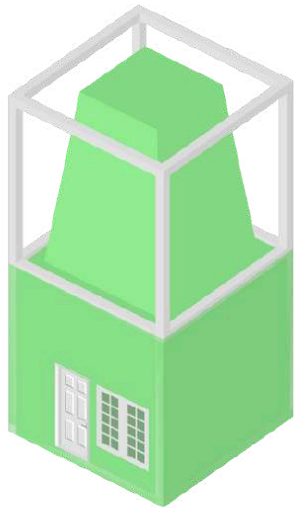
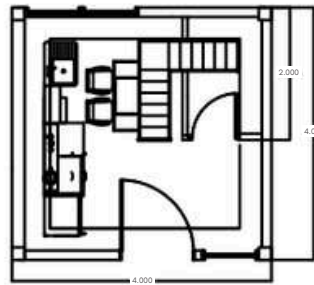
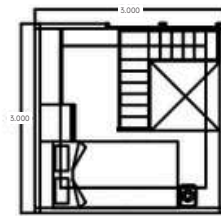
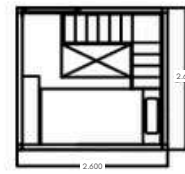
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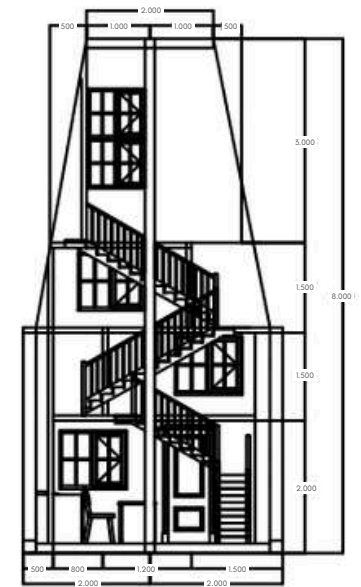
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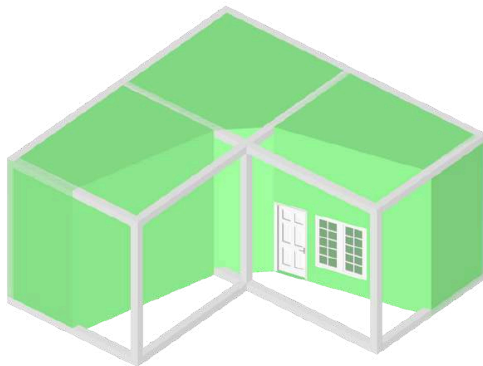
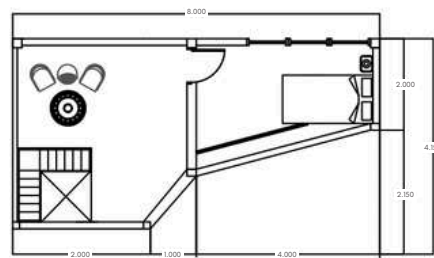
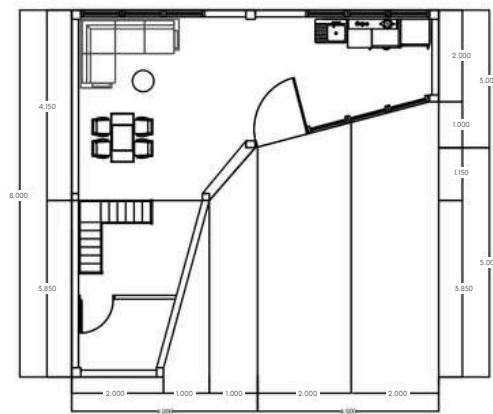
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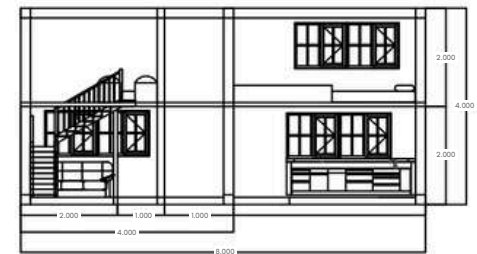
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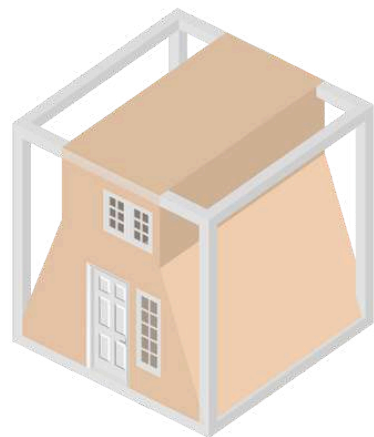
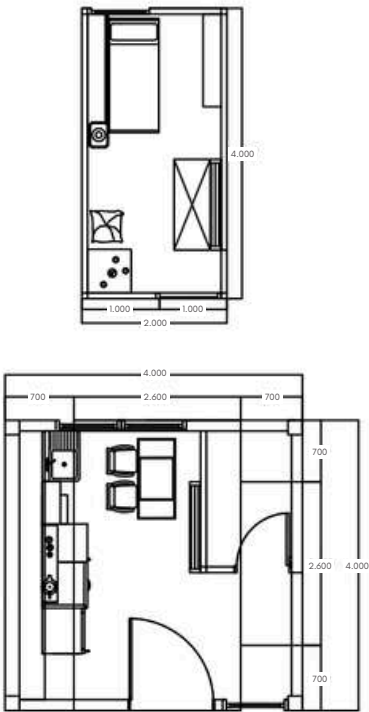


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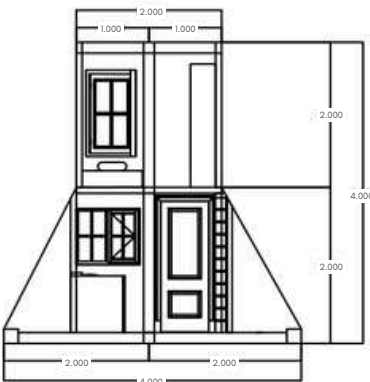


Modules inspired by Rumah Bubungan Tinggi

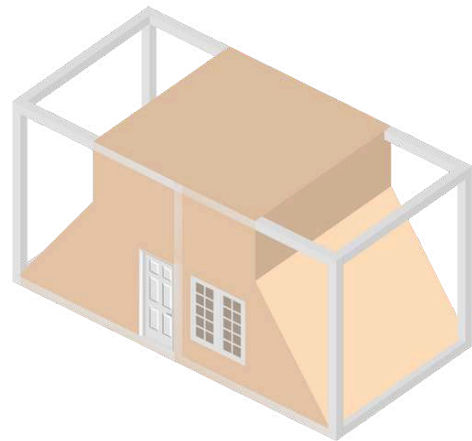
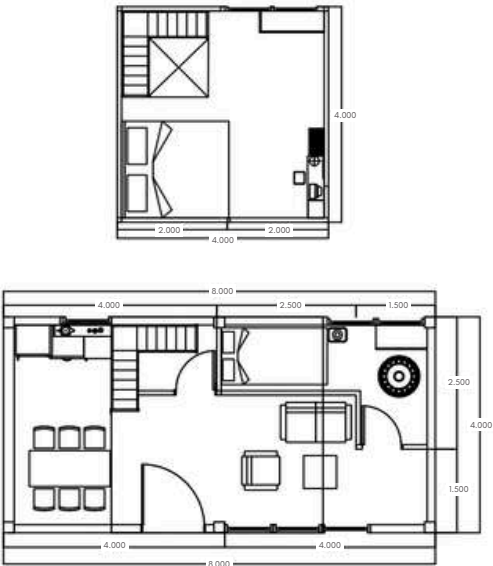
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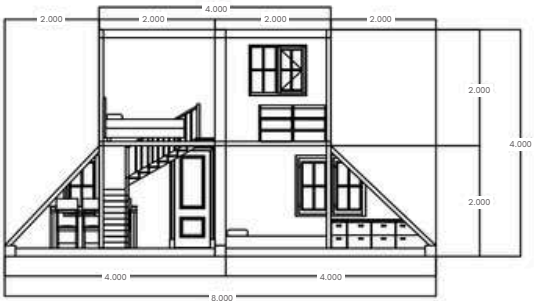
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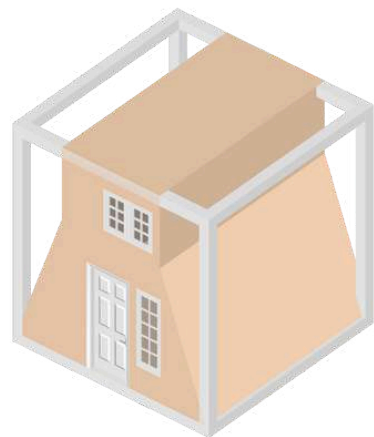
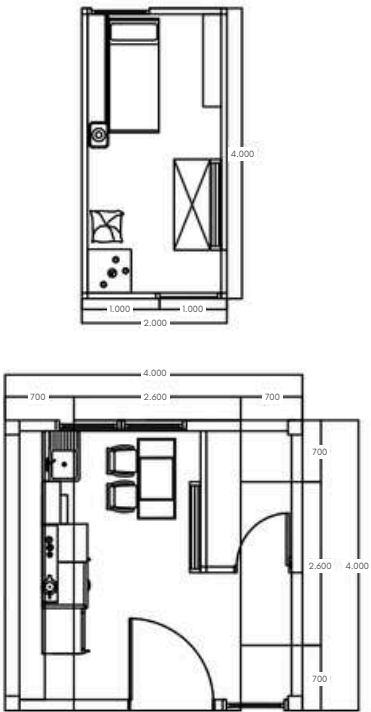


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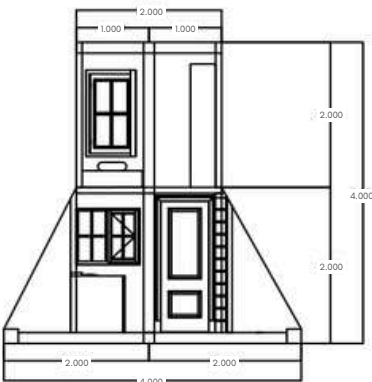


Modules inspired by Rumah Bubungan Tinggi

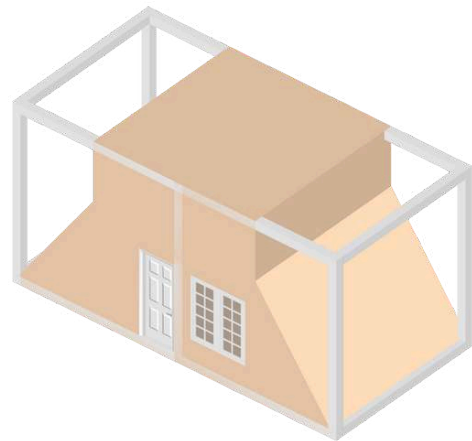
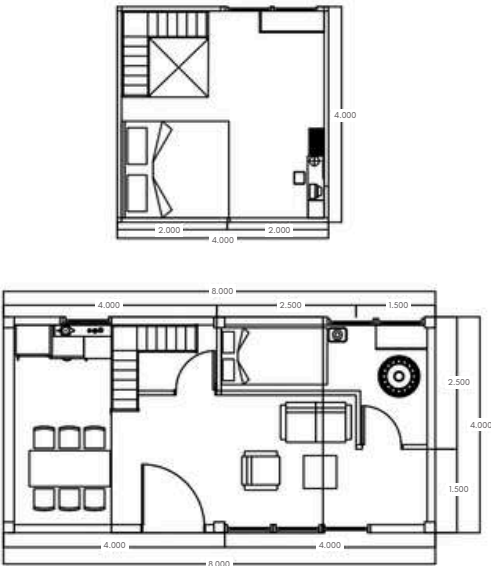
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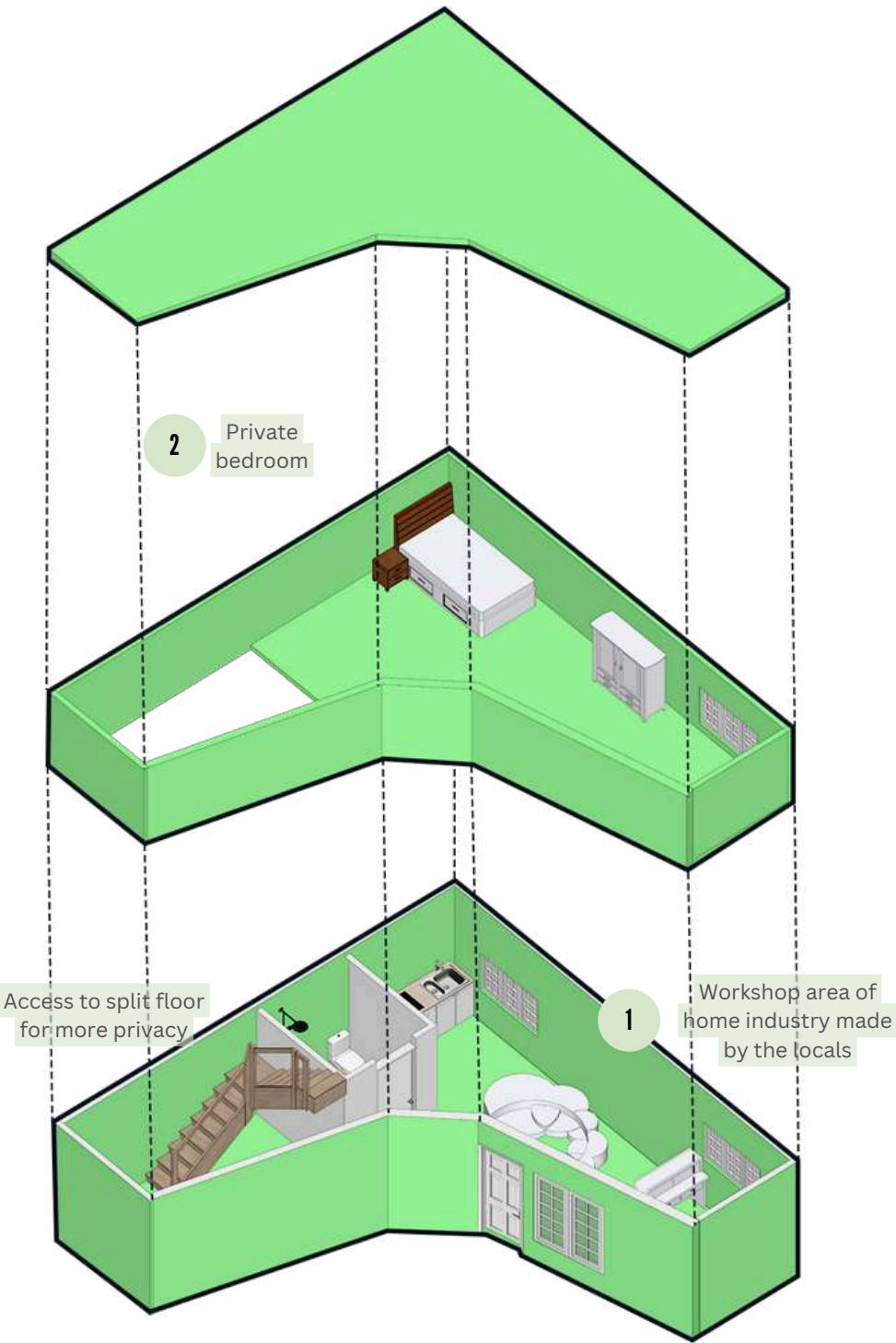
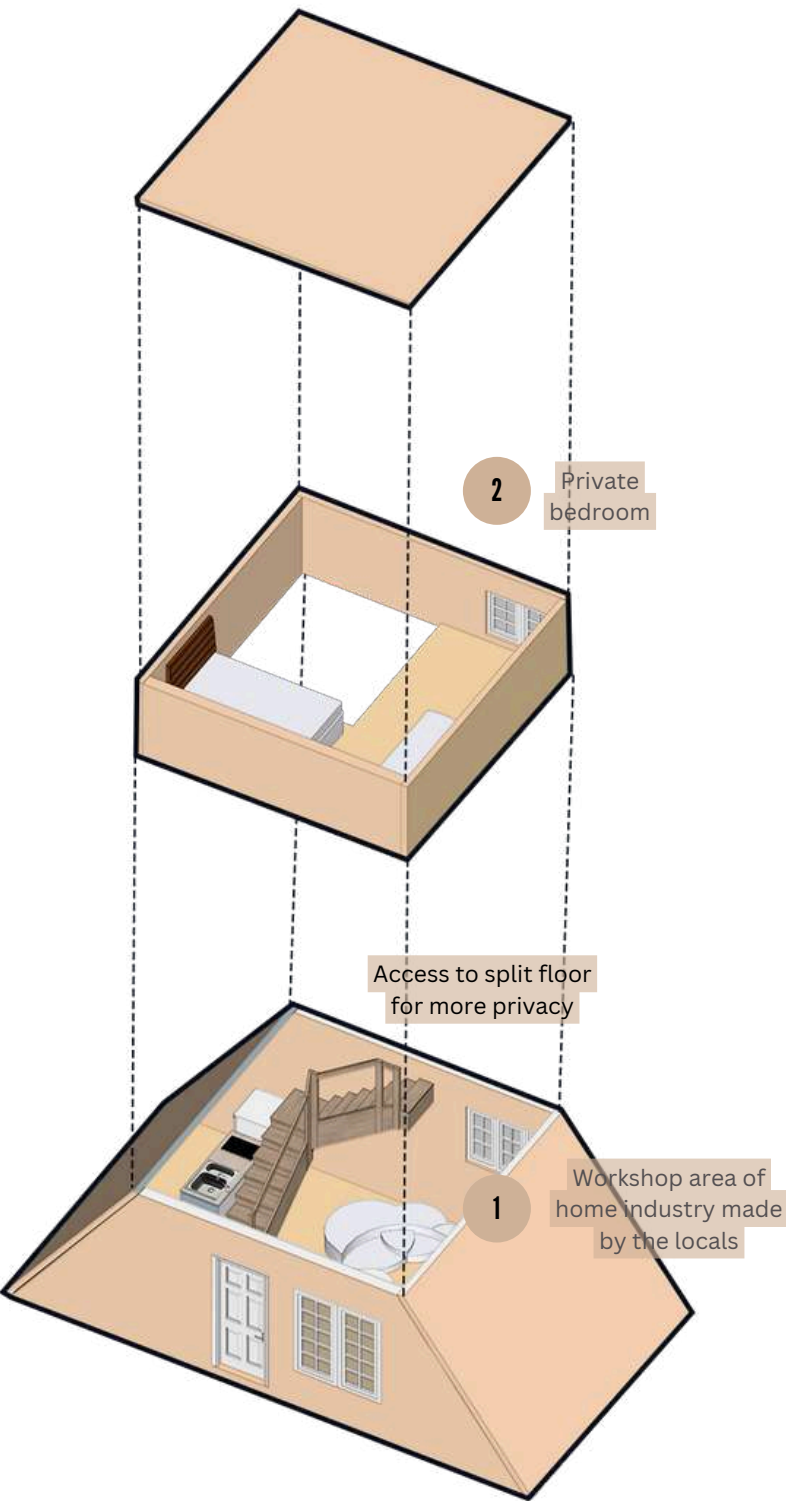
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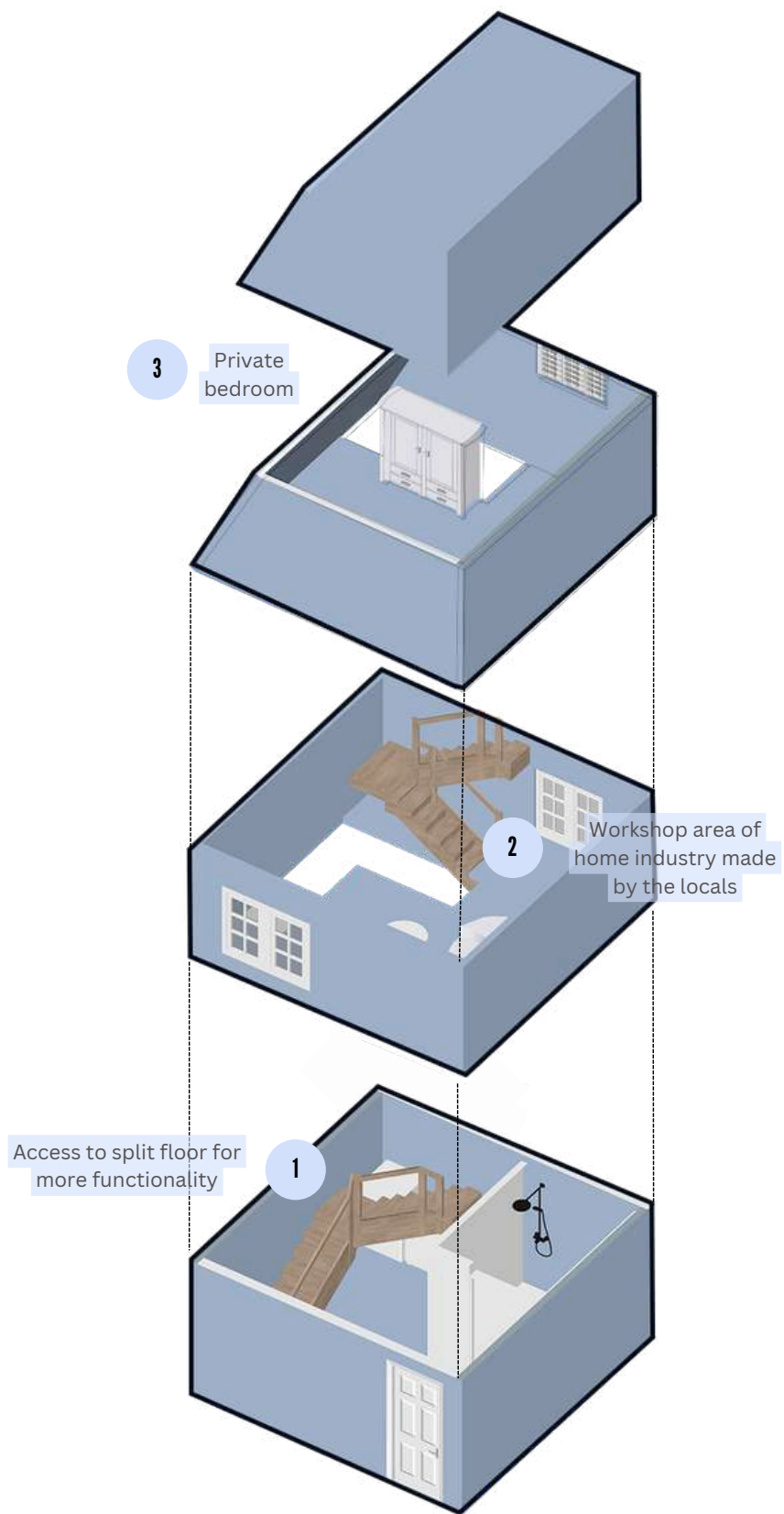
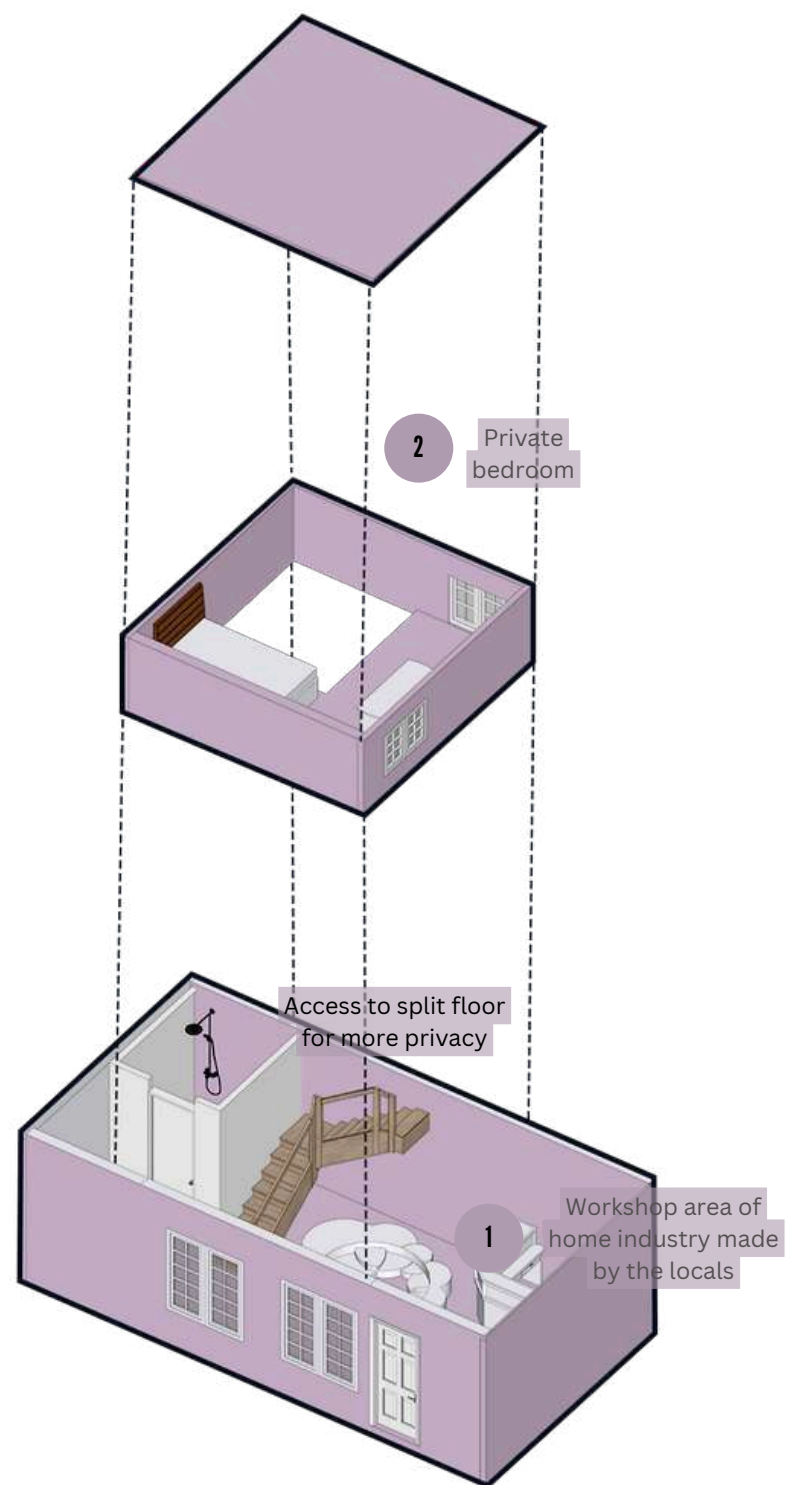


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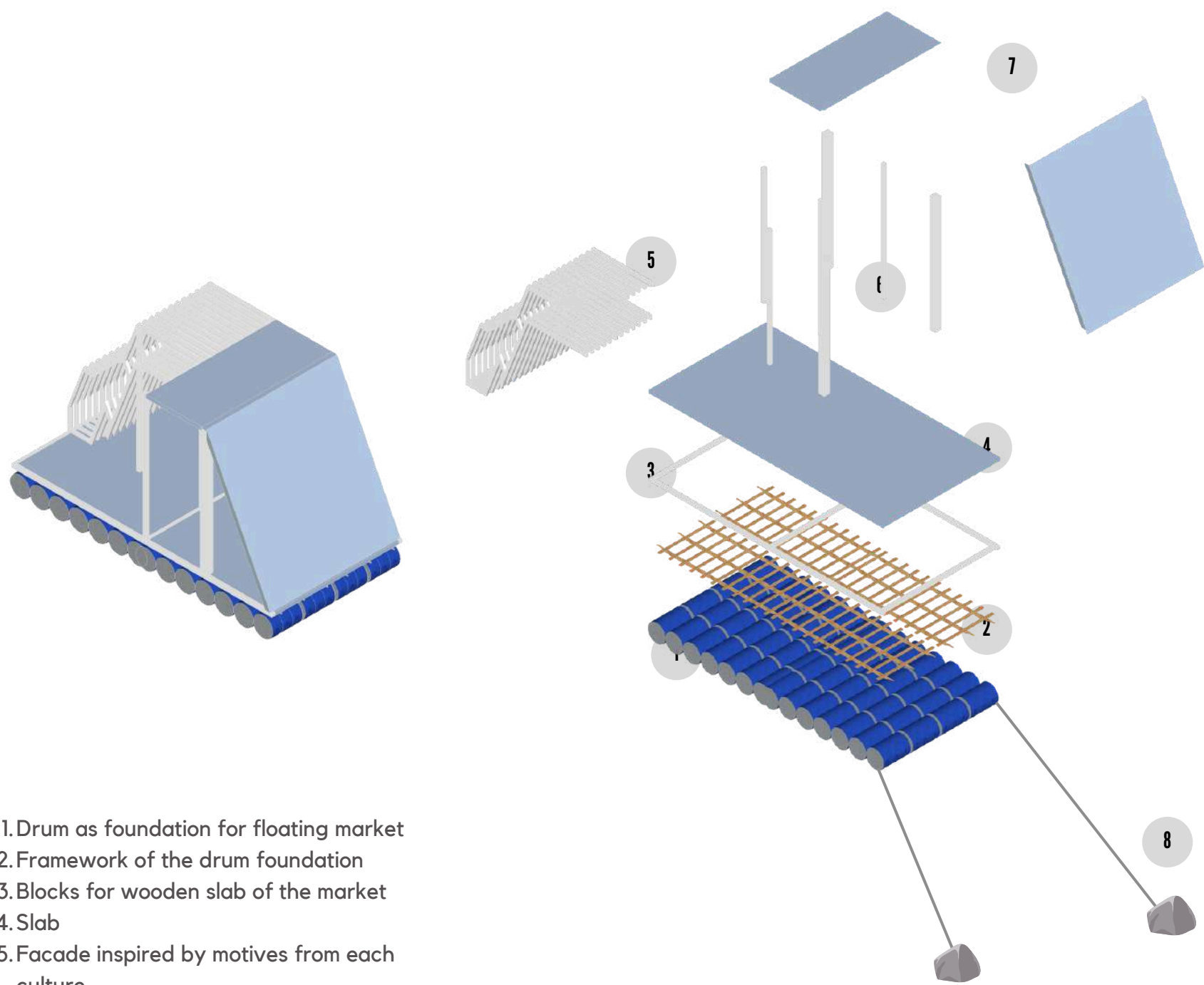


VARIETY OF MIXED-USE MODULE

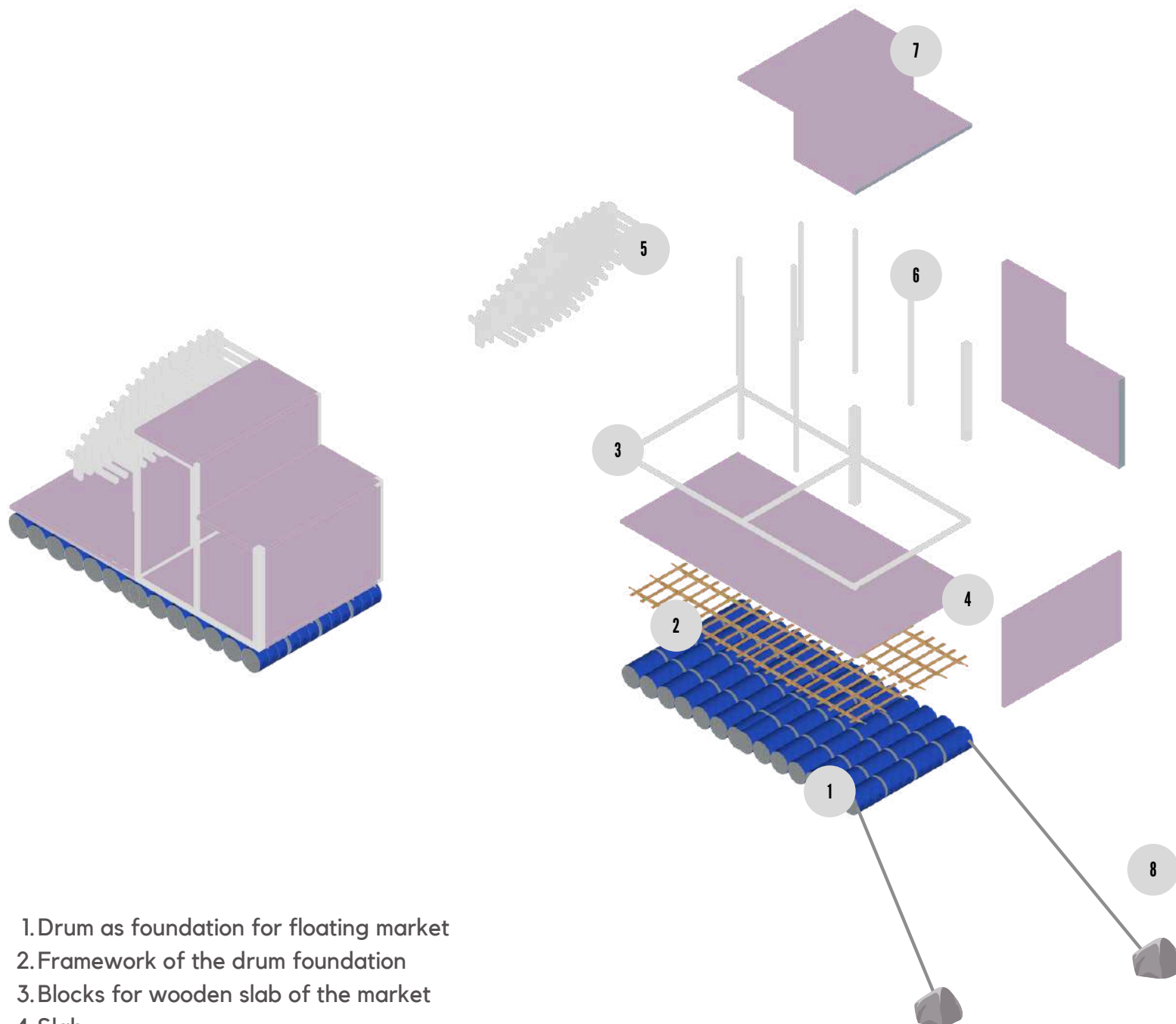




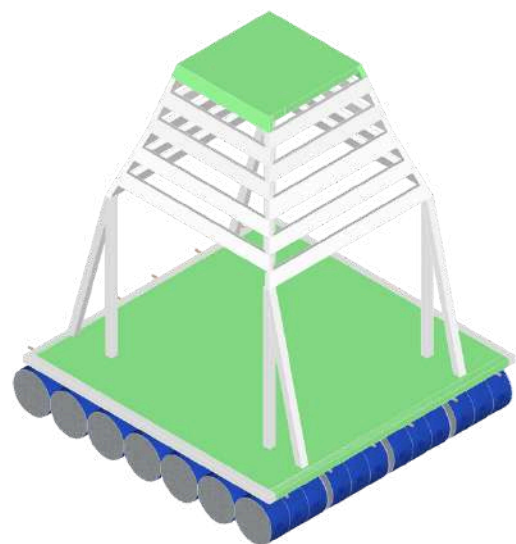
VARIETY OF FLOATING MARKET MODULE



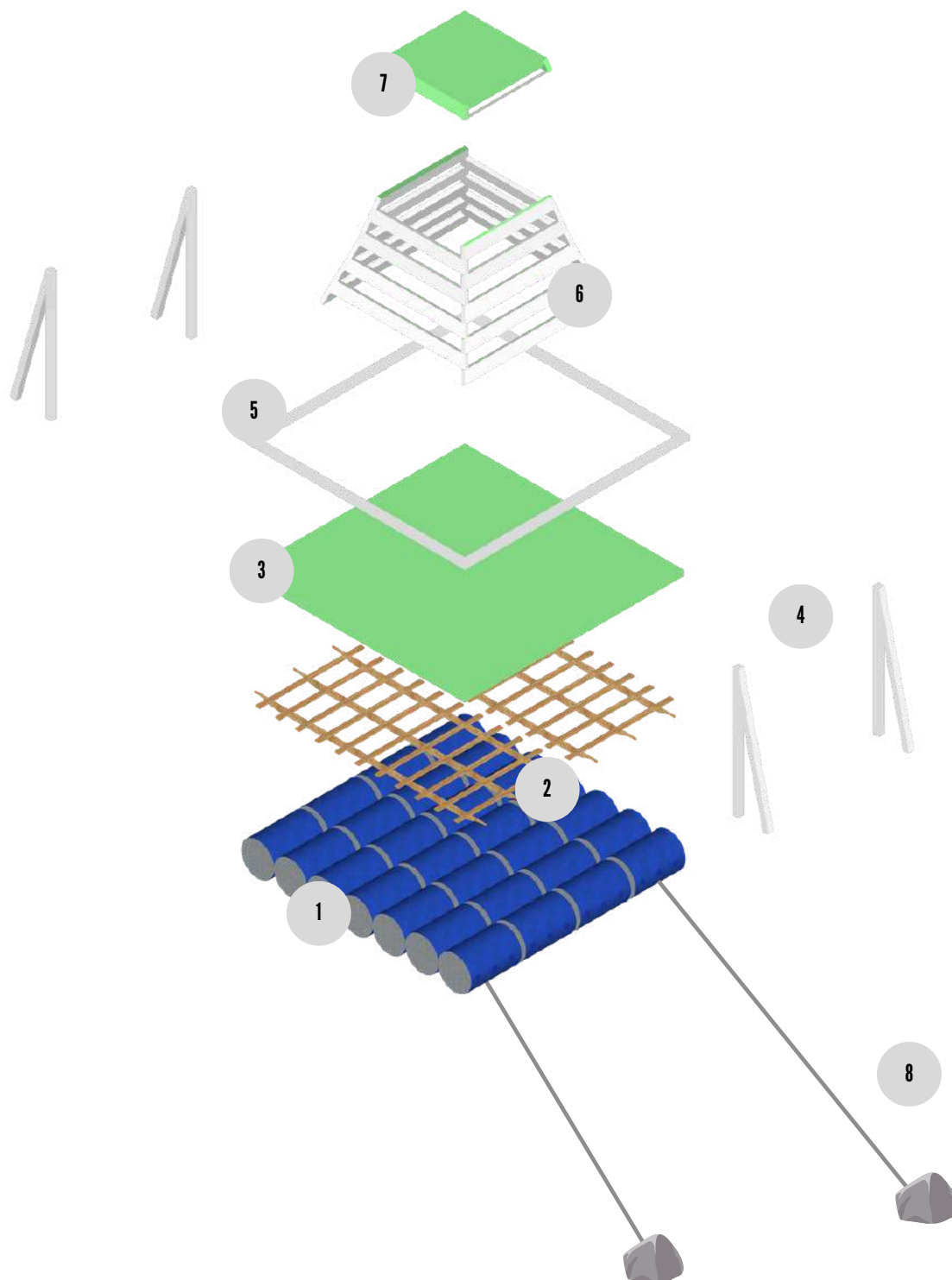
- 1. Drum as foundation for floating market
- 2. Framework of the drum foundation
- 3. Blocks for wooden slab of the market
- 4. Slab
- 5. Facade inspired by motives from each culture
- 6. Columns for support
- 7. Wooden slab as roof
- 8. Ballast

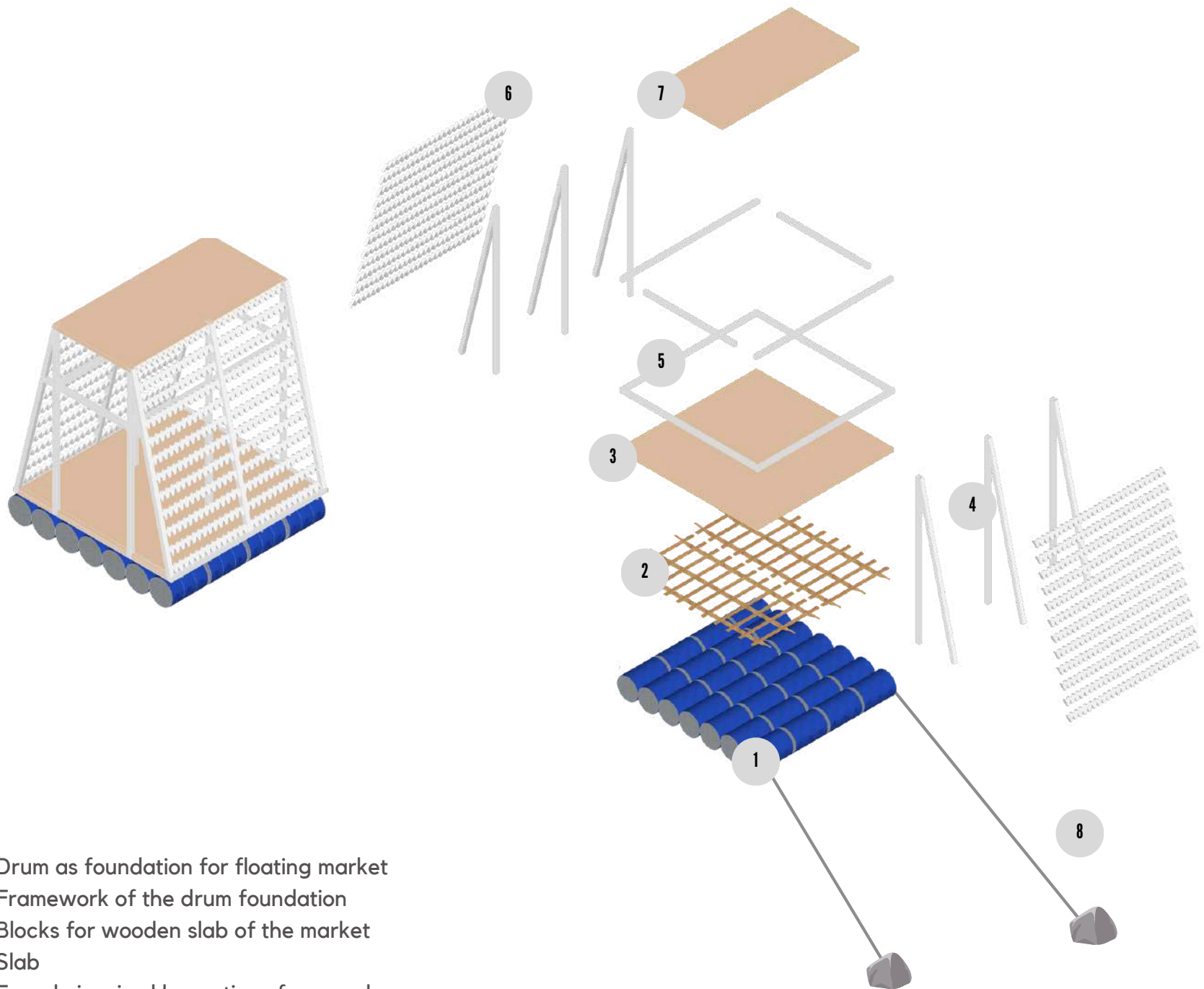


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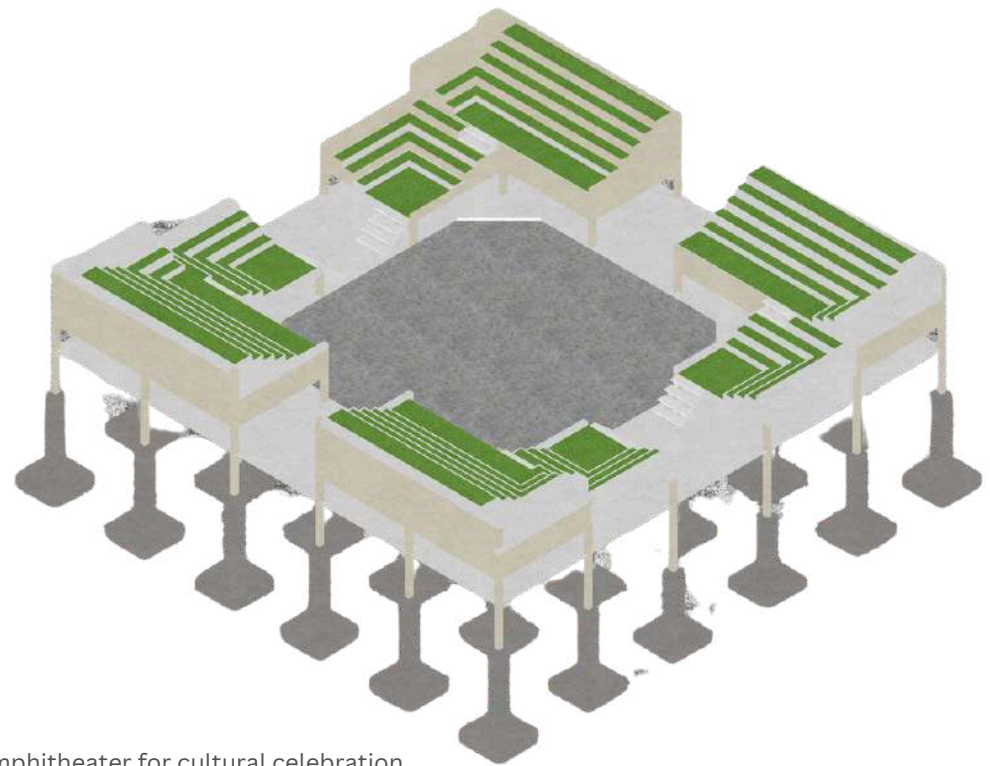
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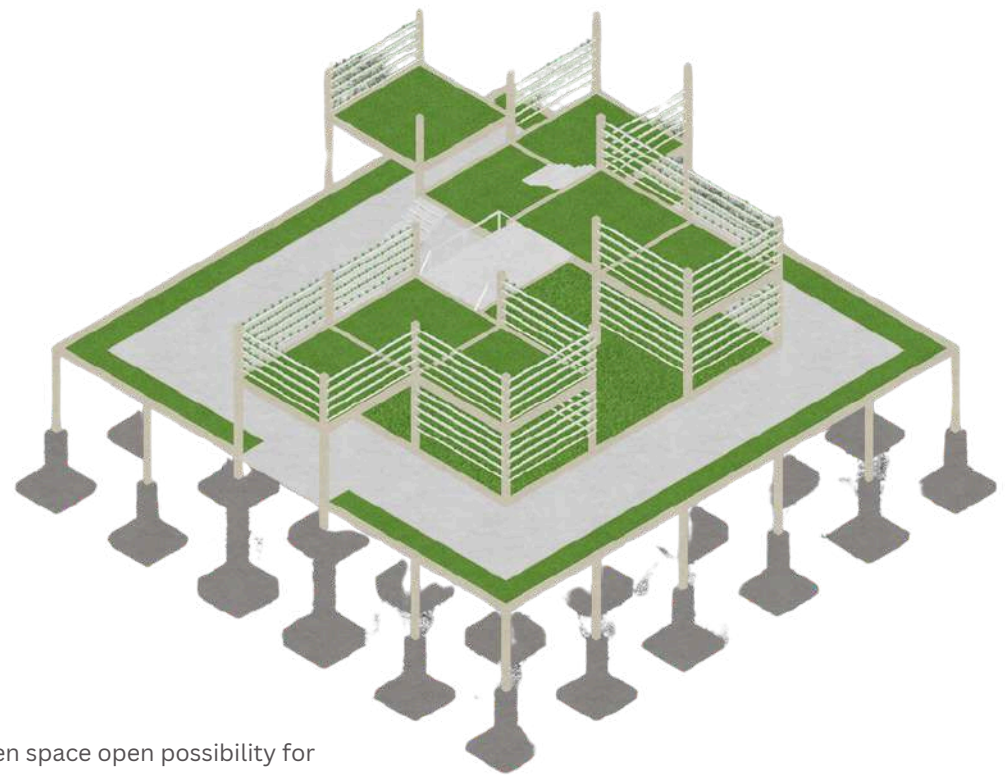
THIRD SPACE BETWEEN THE BLOCKS



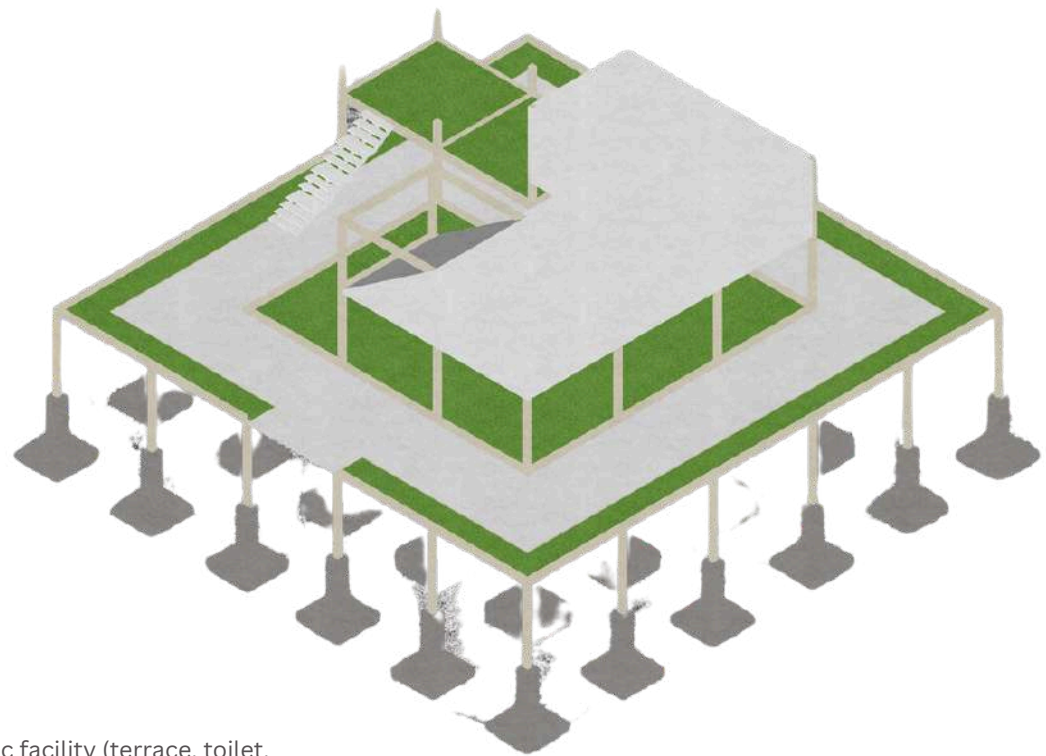
Amphitheater for cultural celebration



Playground

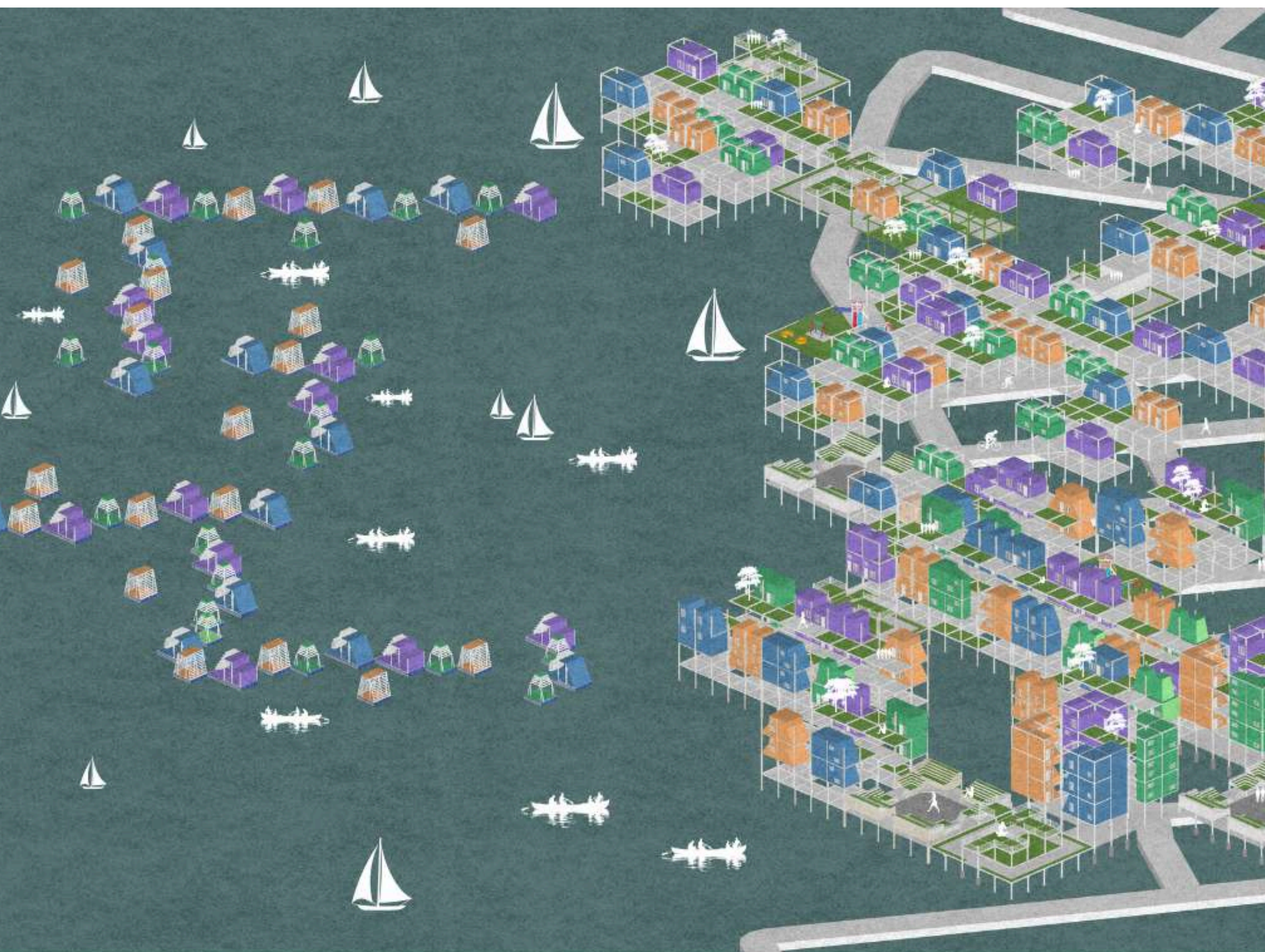


Green open space open possibility for interaction



Open public facility (terrace, toilet, mushola)

VISUALIZATION



VISUALIZATION



VISUALIZATION



VISUALIZATION

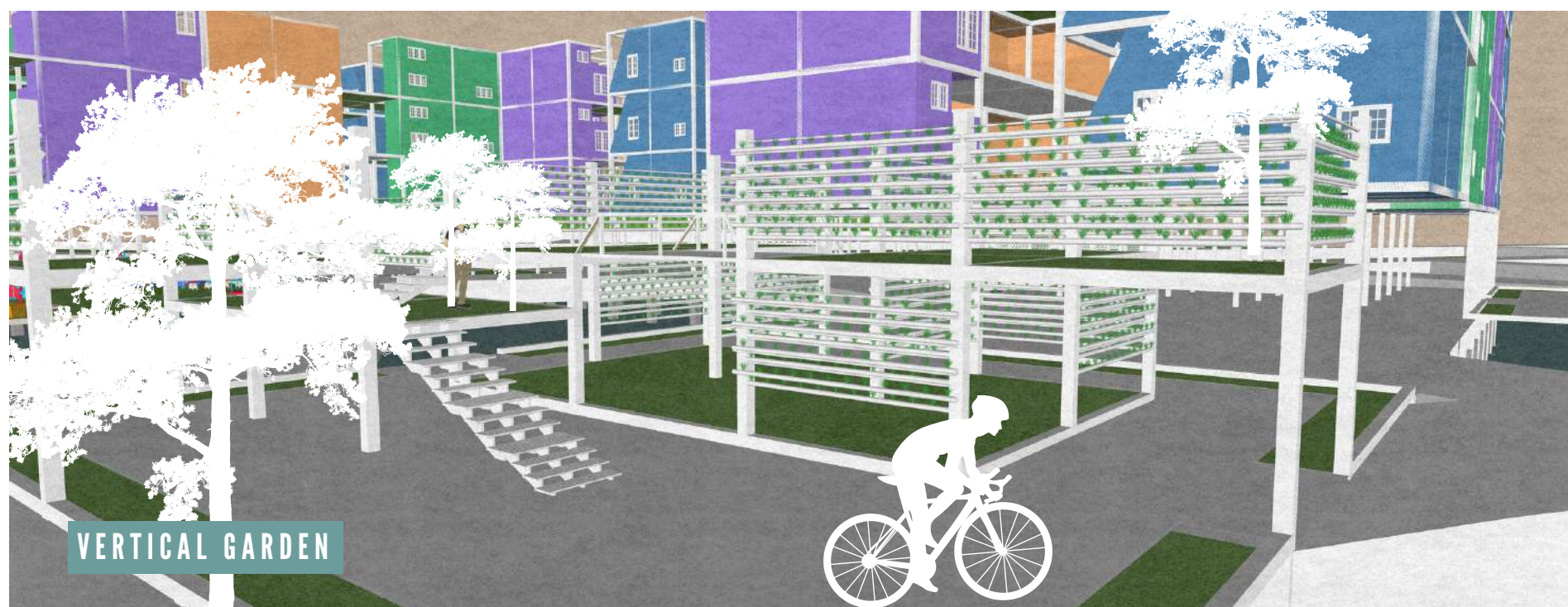


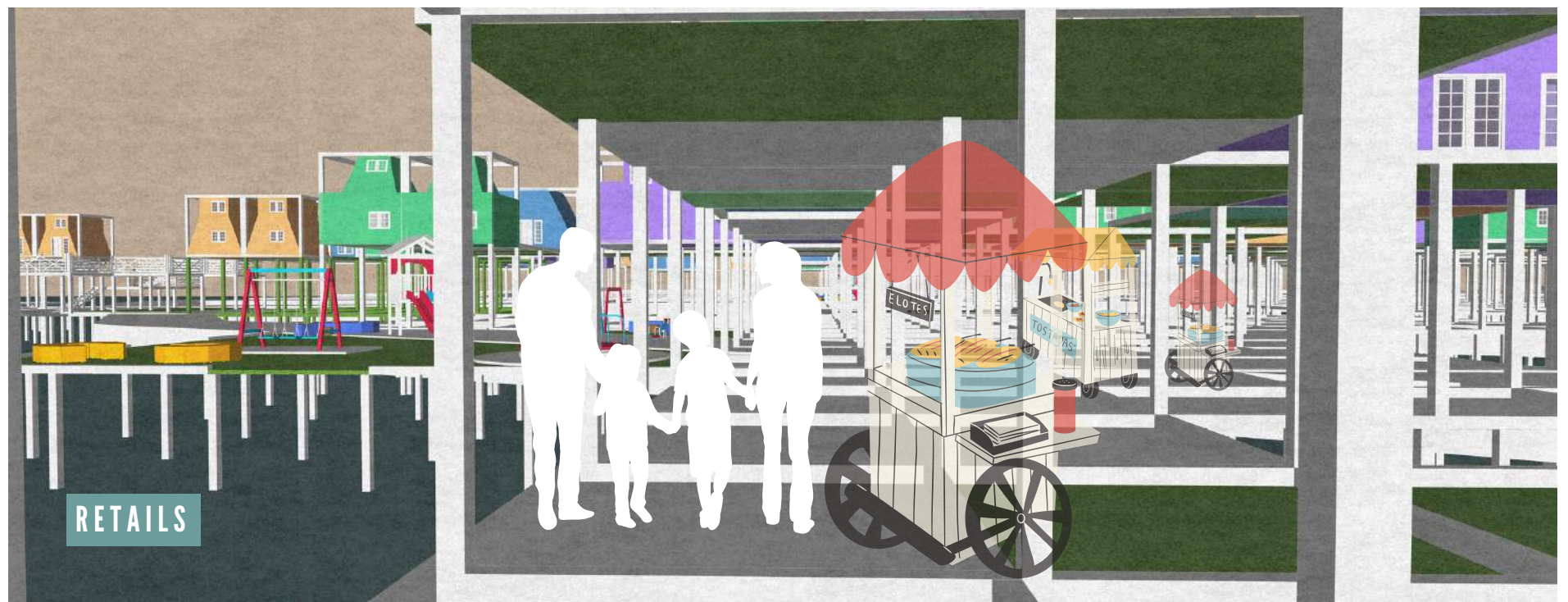
VISUALIZATION



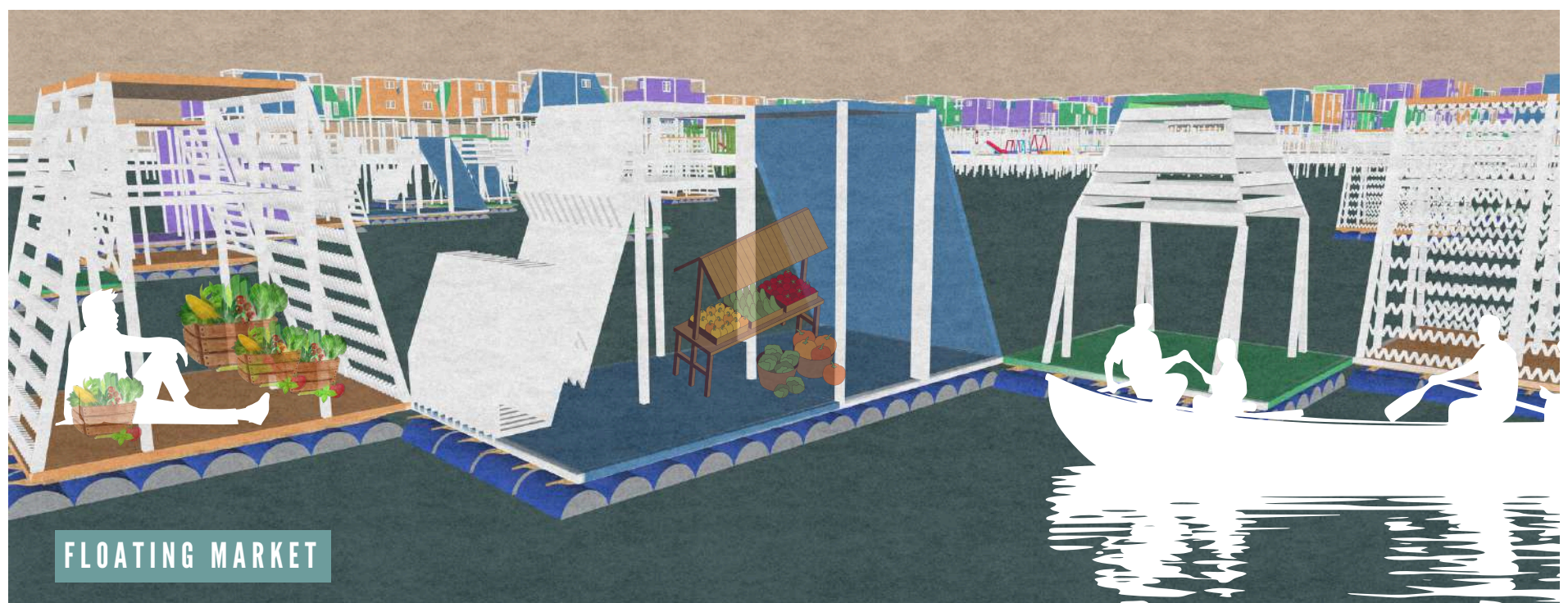
VISUALIZATION



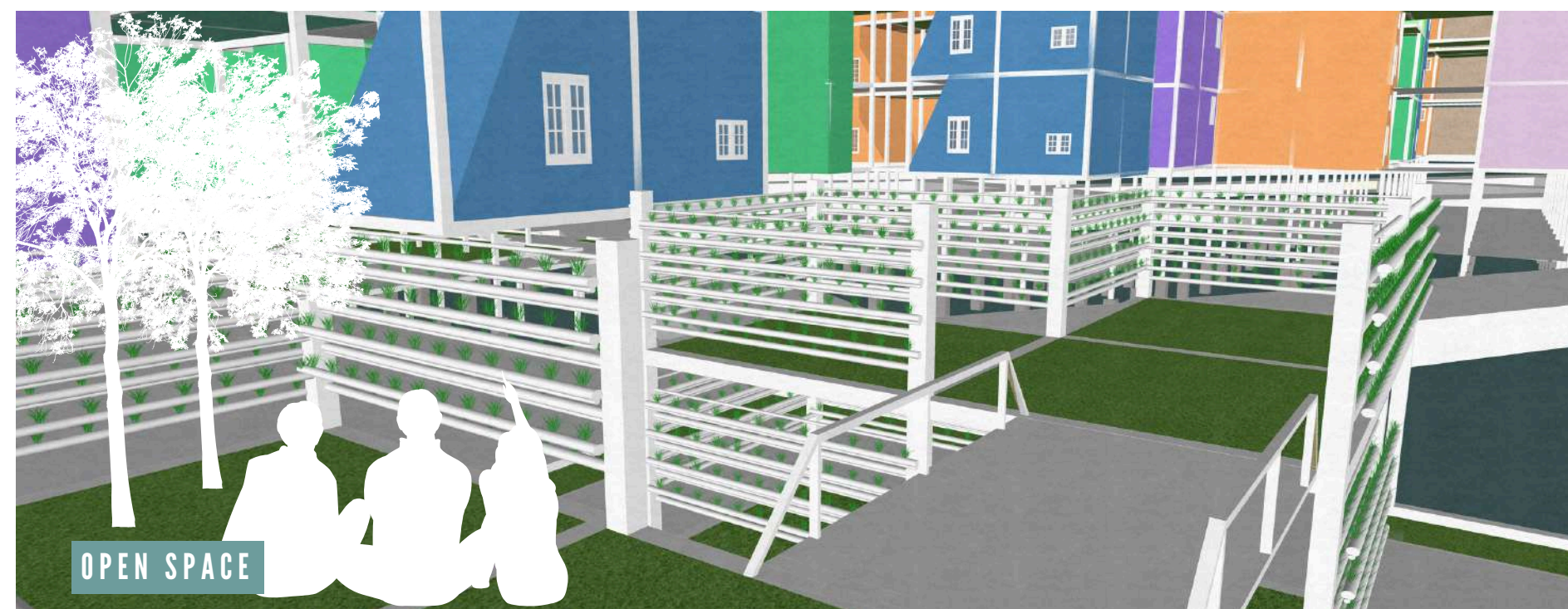




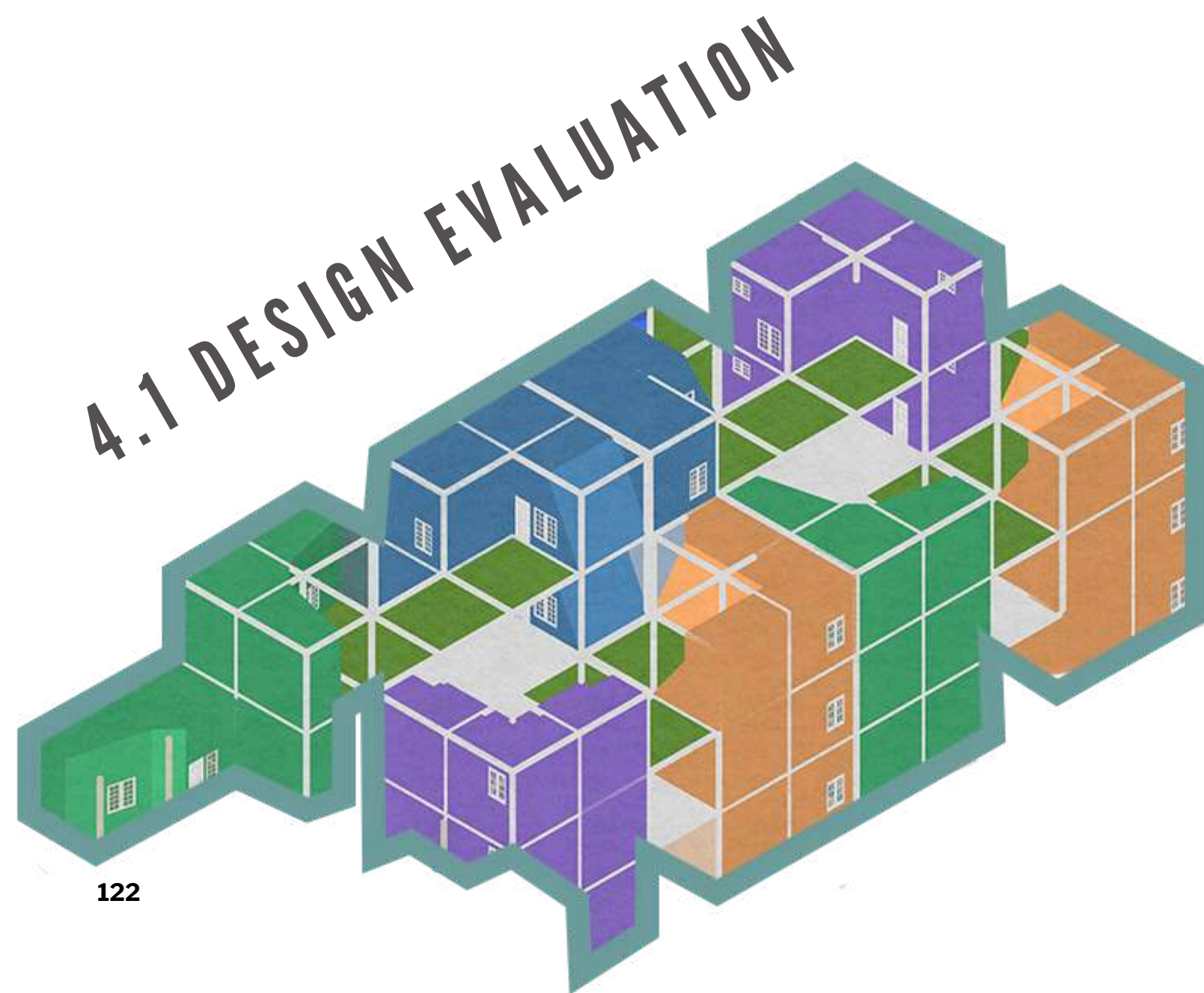
RETAILS



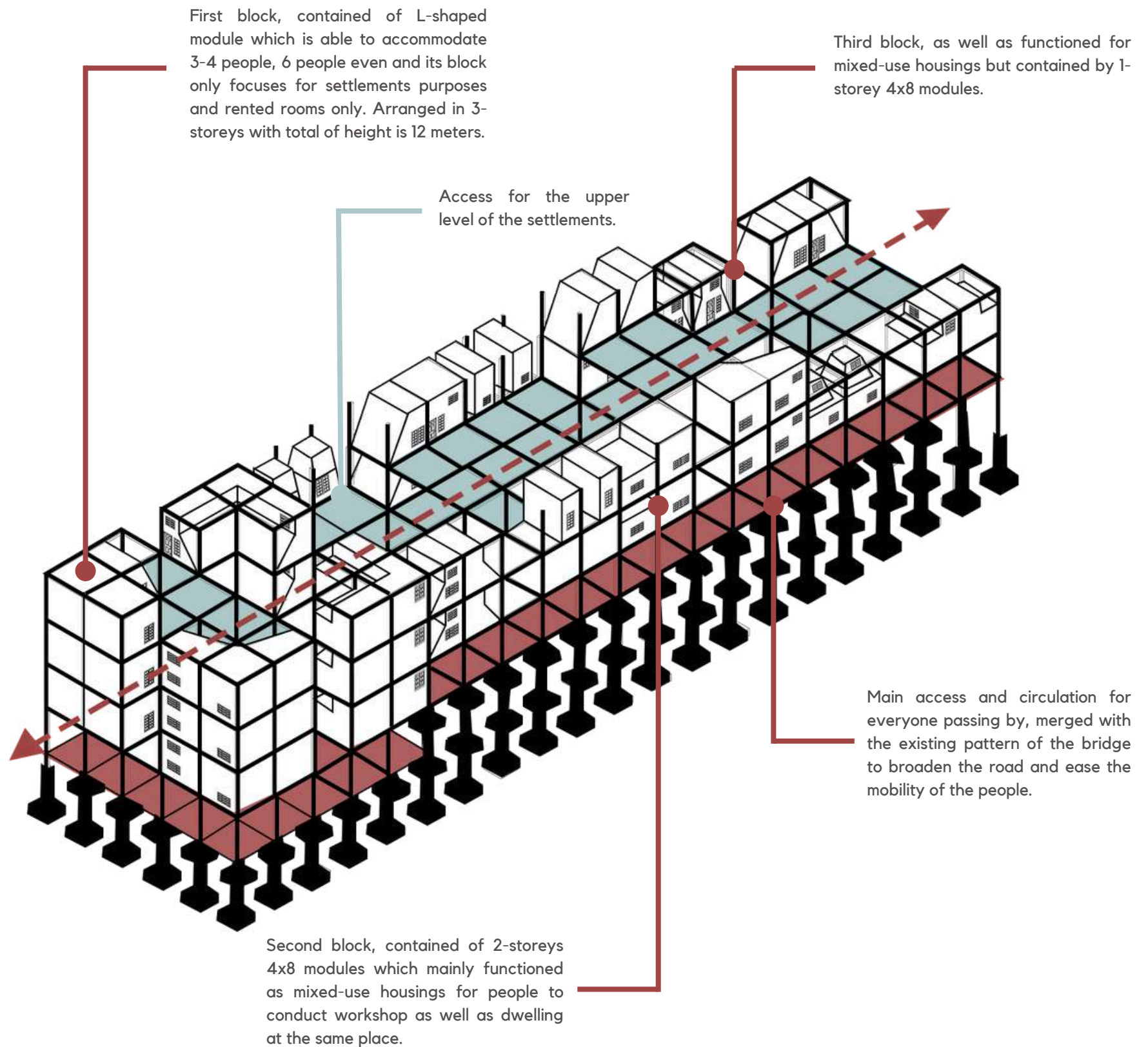
FLOATING MARKET

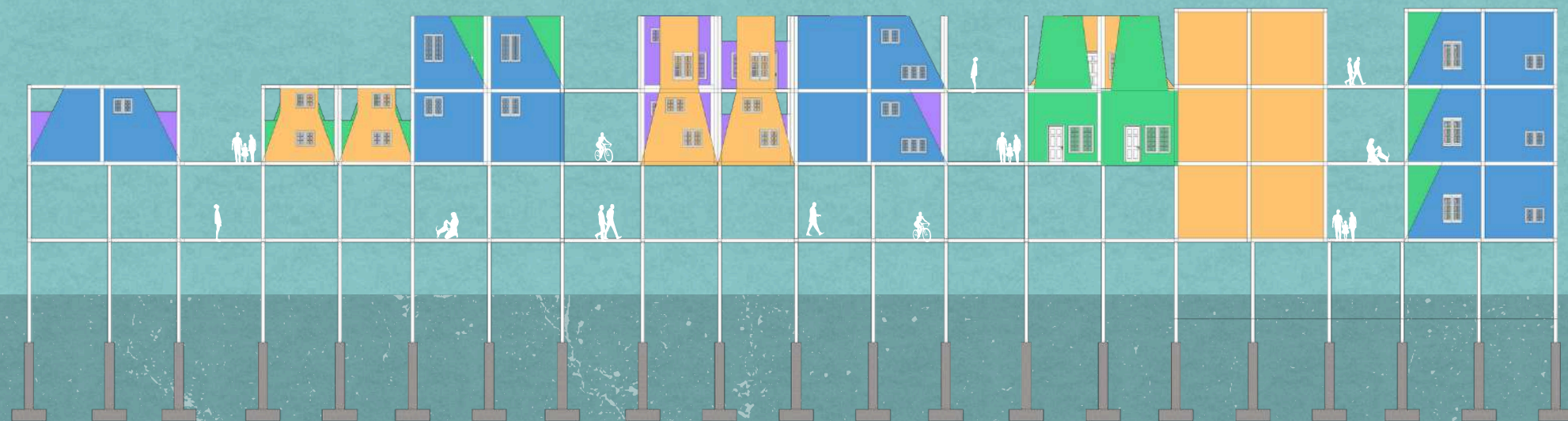






AXONOMETRY OF EACH BLOCK'S SAMPLE





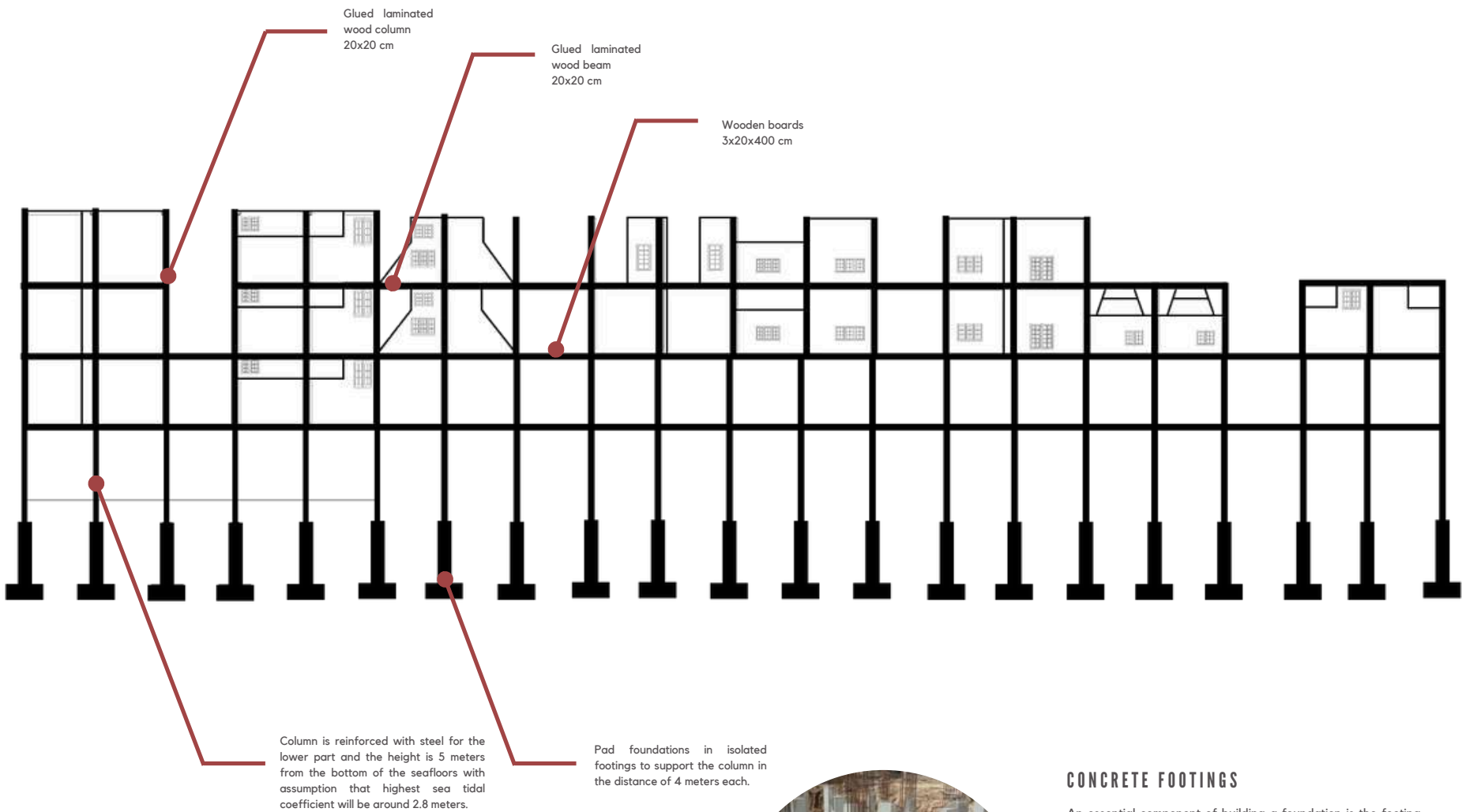


MATERIALITY AND DETAIL



GLUED LAMINATED WOOD

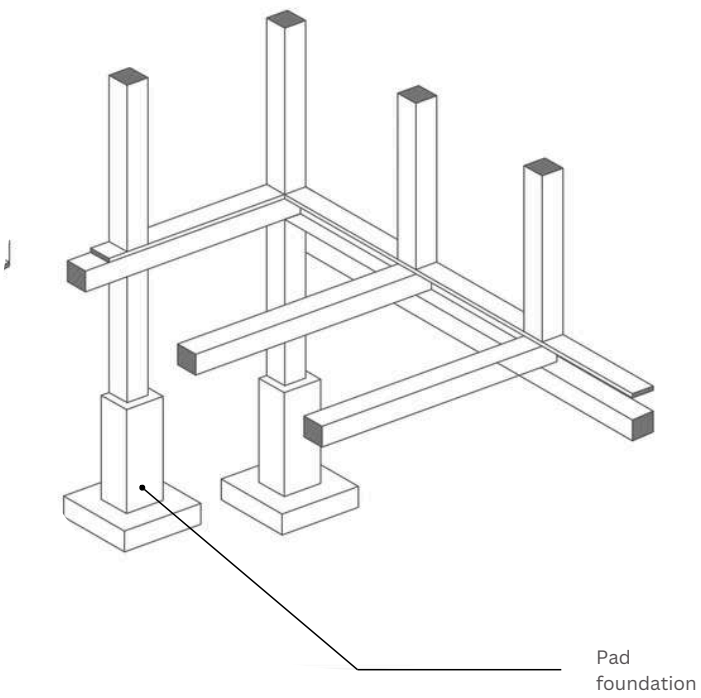
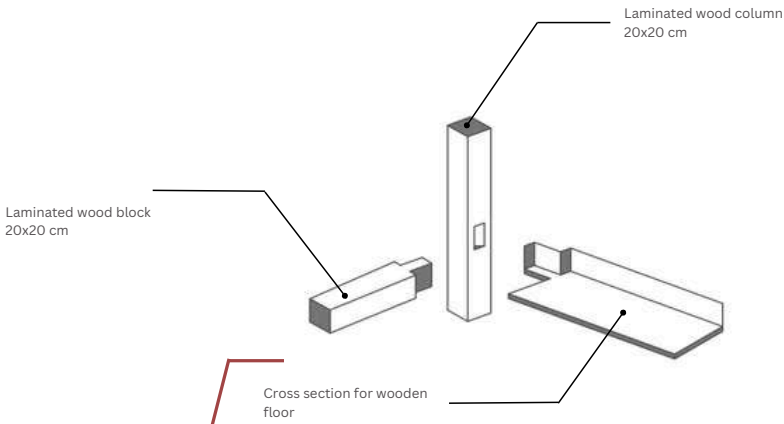
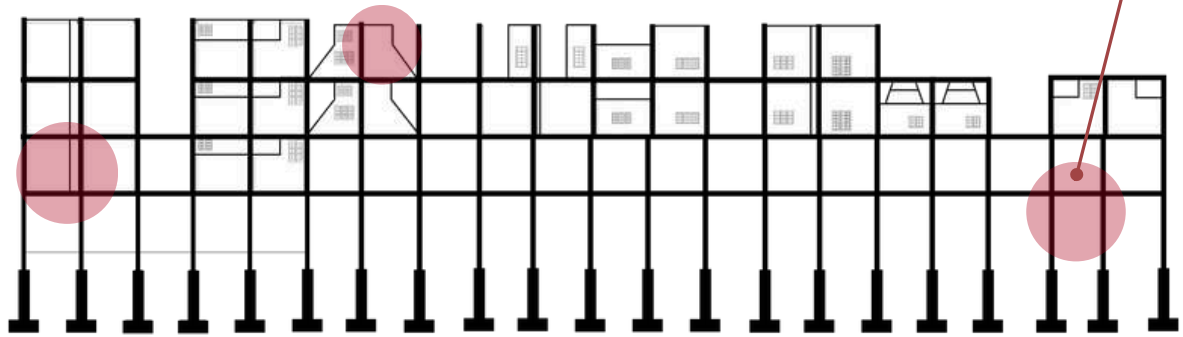
Depending on the intended application, timber boards of various sizes and shapes are often adhered in parallel to create laminated wood. The primary items are members that support loads, like beams and arches. Occasionally, specialised products are made with veneers that are parallel-glued. Large members that are impossible to construct from solid wood can be fabricated with it. Due to their relative thinness, the individual boards used in laminated wood allow for adequate drying without checking or cracking, allowing for the removal of flaws like knots. Laminated wood can be used to create structures based on the necessary strength, and low-grade wood can be positioned appropriately. Furthermore, waste can be decreased since small-sized wood can be used when laminated wood is glued.



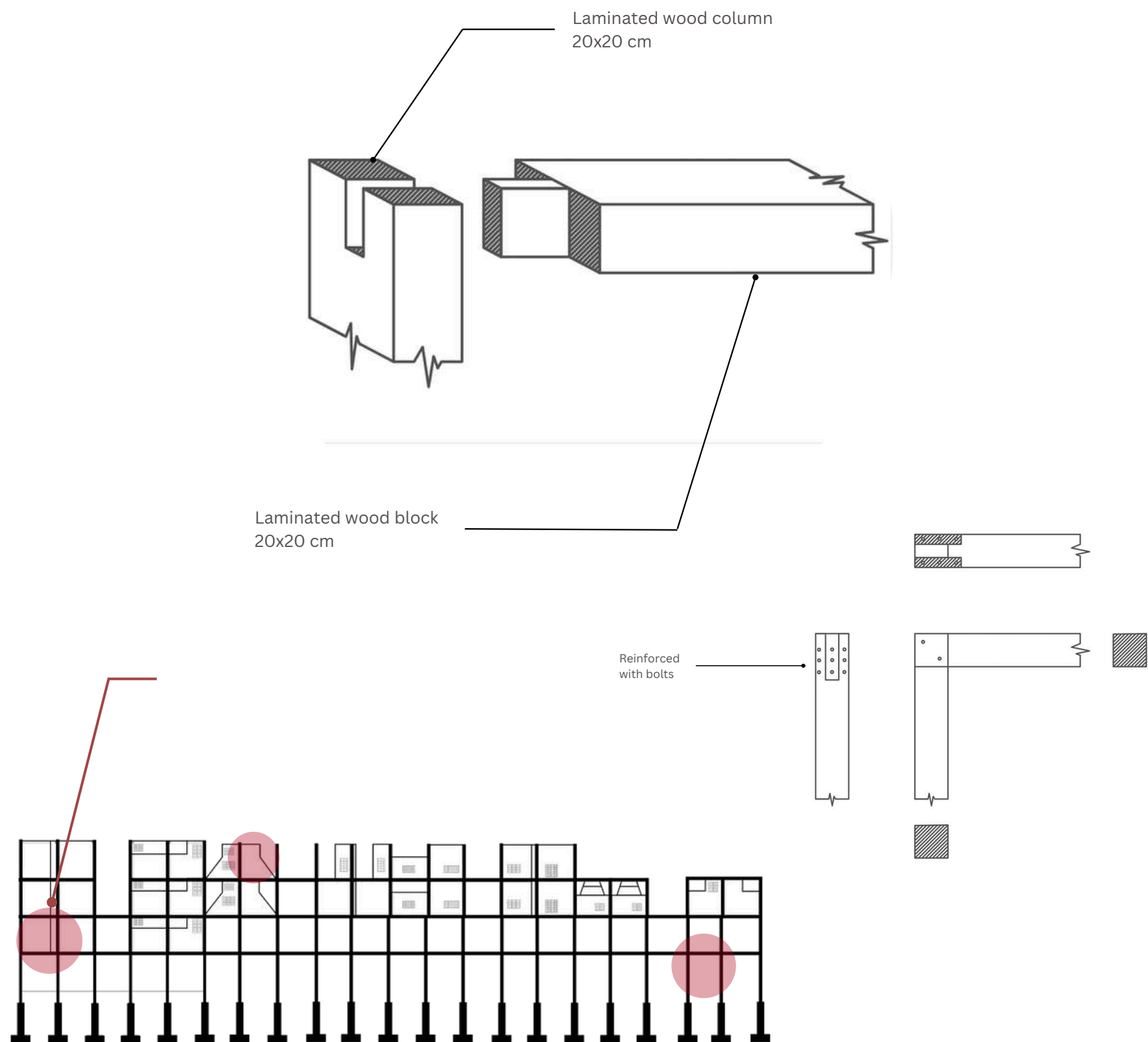
CONCRETE FOOTINGS

An essential component of building a foundation is the footing. Usually, an excavated trench is filled with concrete that has been reinforced with rebar. Footings are used to support the foundation and keep it from settling. Footings are particularly crucial in regions with problematic soils. It is better to leave the construction of footings to the experts, who can evaluate the soil conditions and determine the ideal footing placement, depth, and width. The size and kind of the structure that will be built will also affect the footings' proportions. For the foundation and eventually the structure to have the right support, the footings must be placed precisely. Because of its many qualities, concrete is essential to foundation design. Because of its compressive strength, it is perfect for supporting large weights, which is a crucial need for foundations. Because the foundation is constantly exposed to dirt and moisture, the material's durability guarantees the structure's lifespan.

DETAIL 1

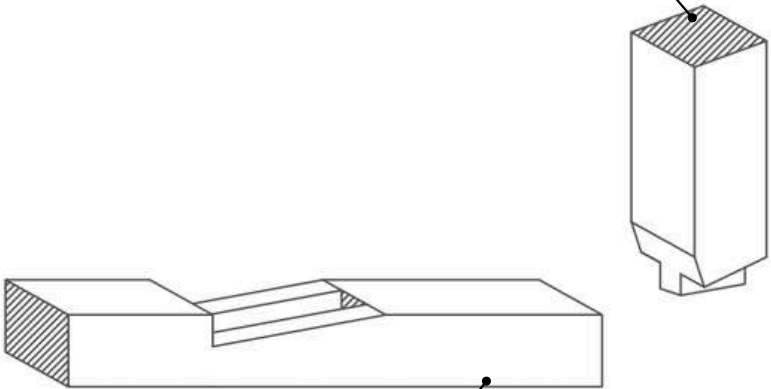


DETAIL 2

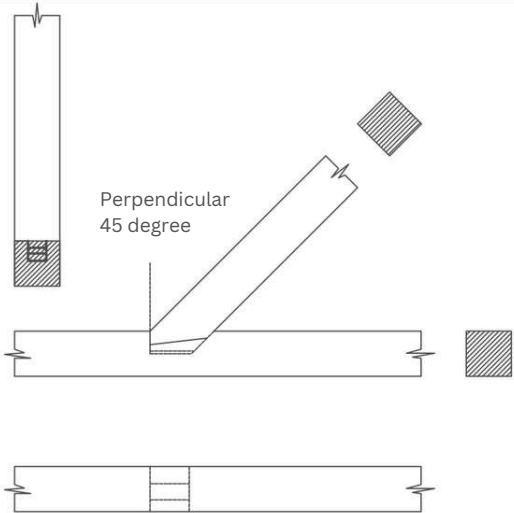
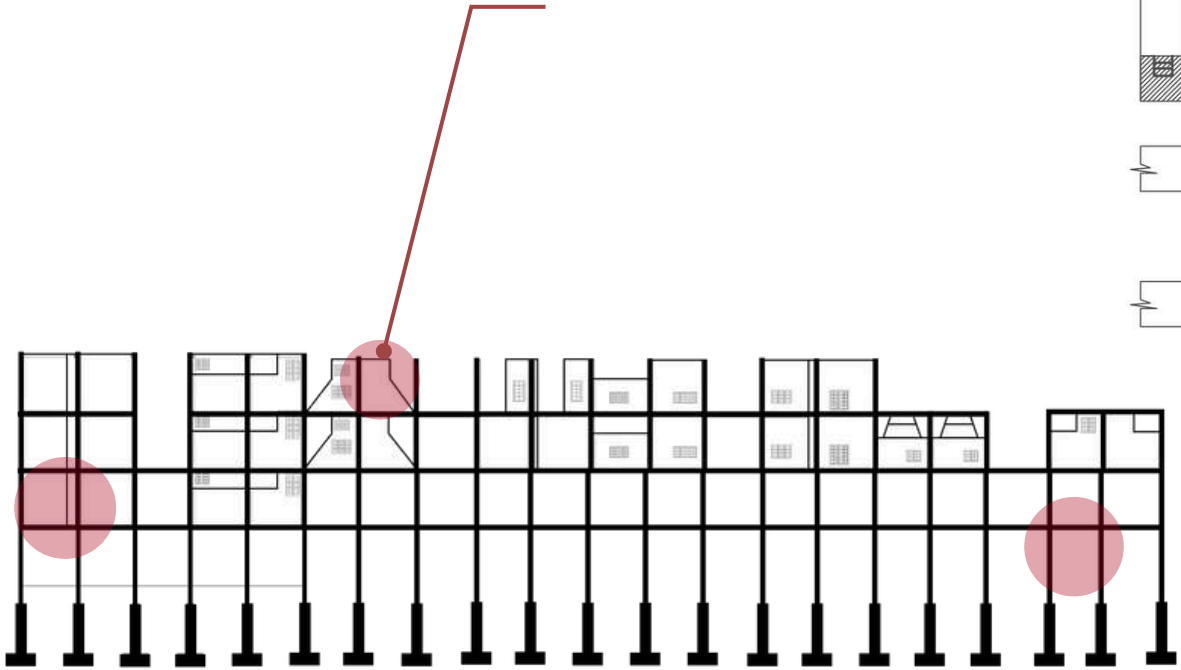


DETAIL 3

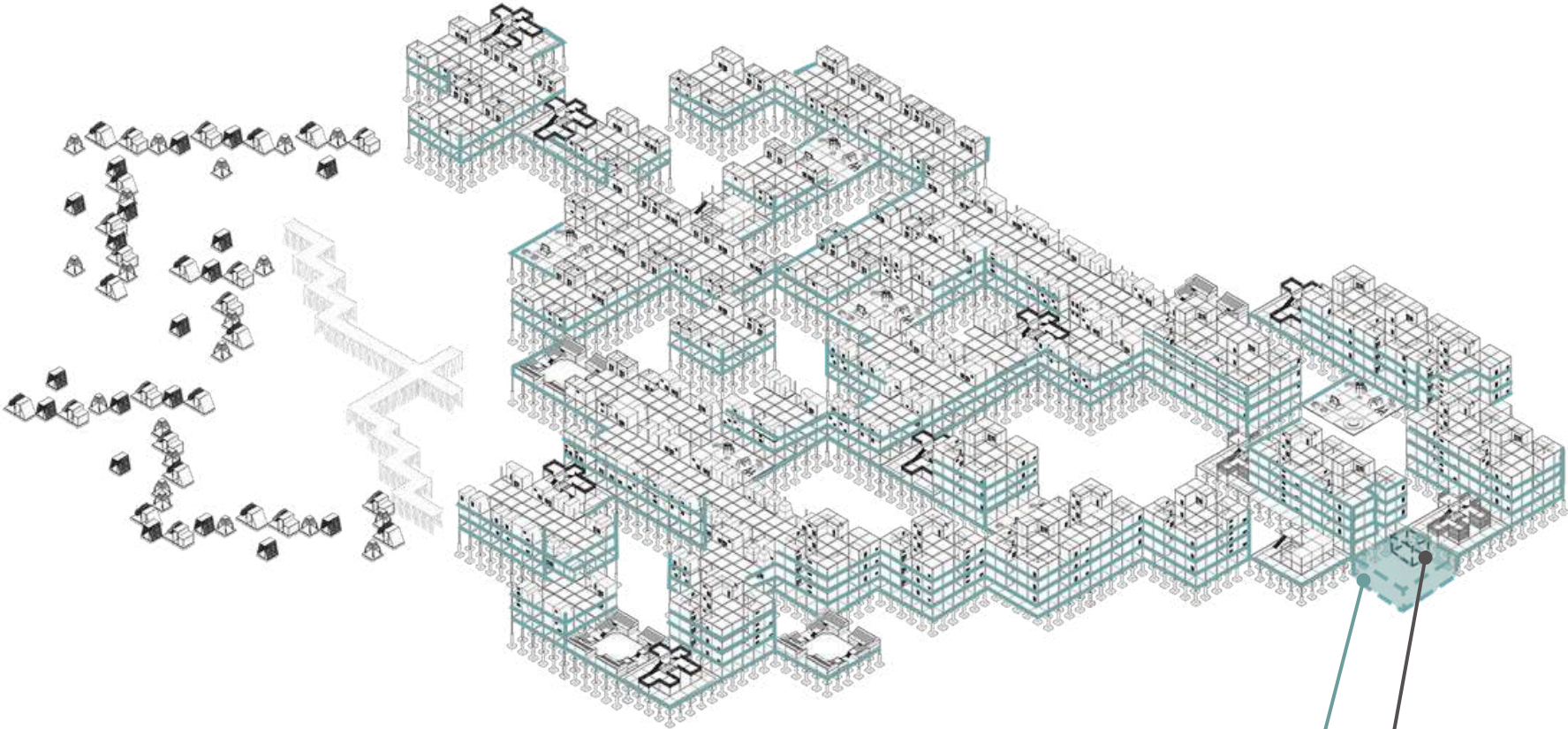
Laminated wood block
20x20 cm



Laminated wood
15x15 cm



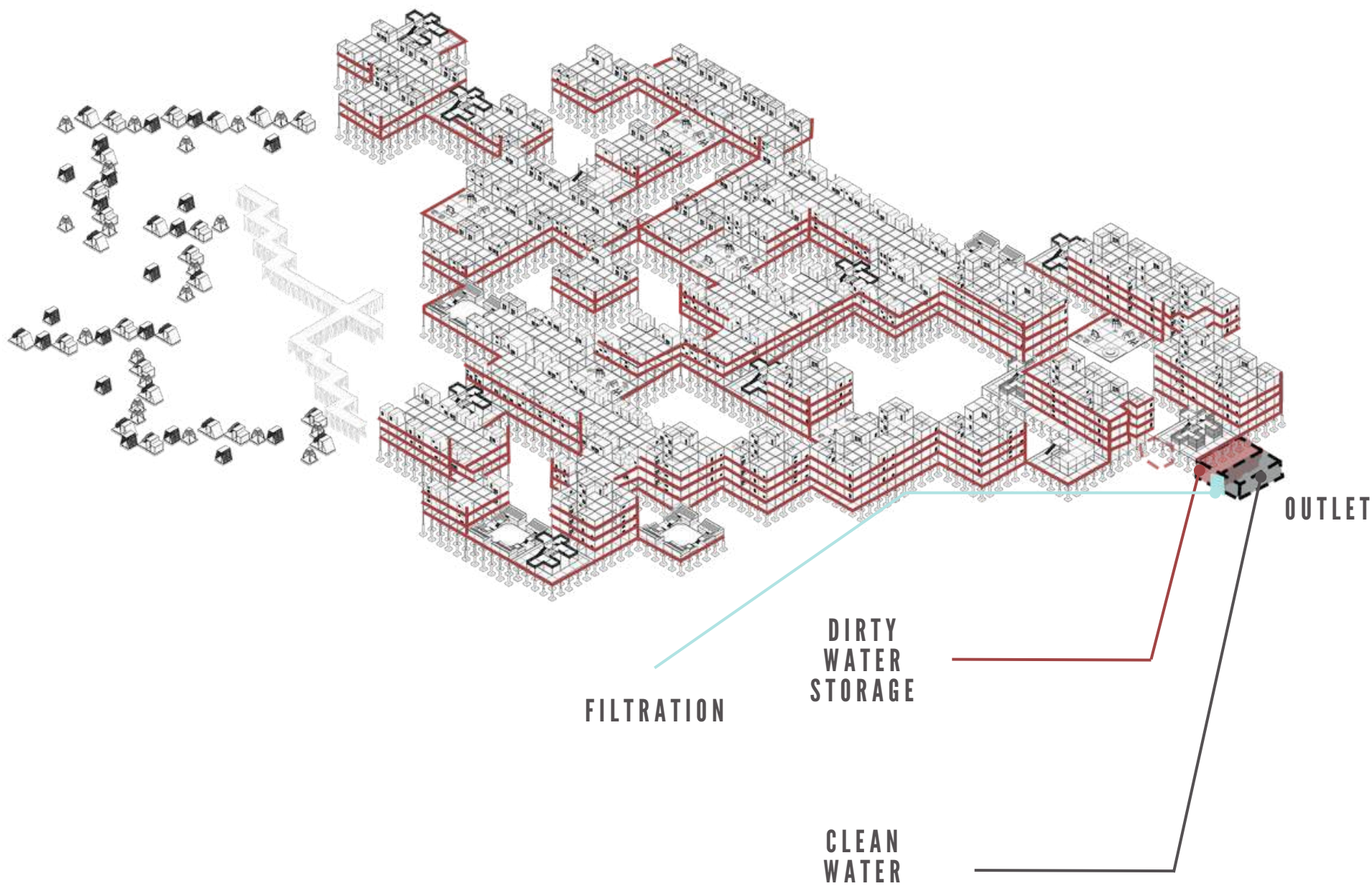
CLEAN WATER SCHEME



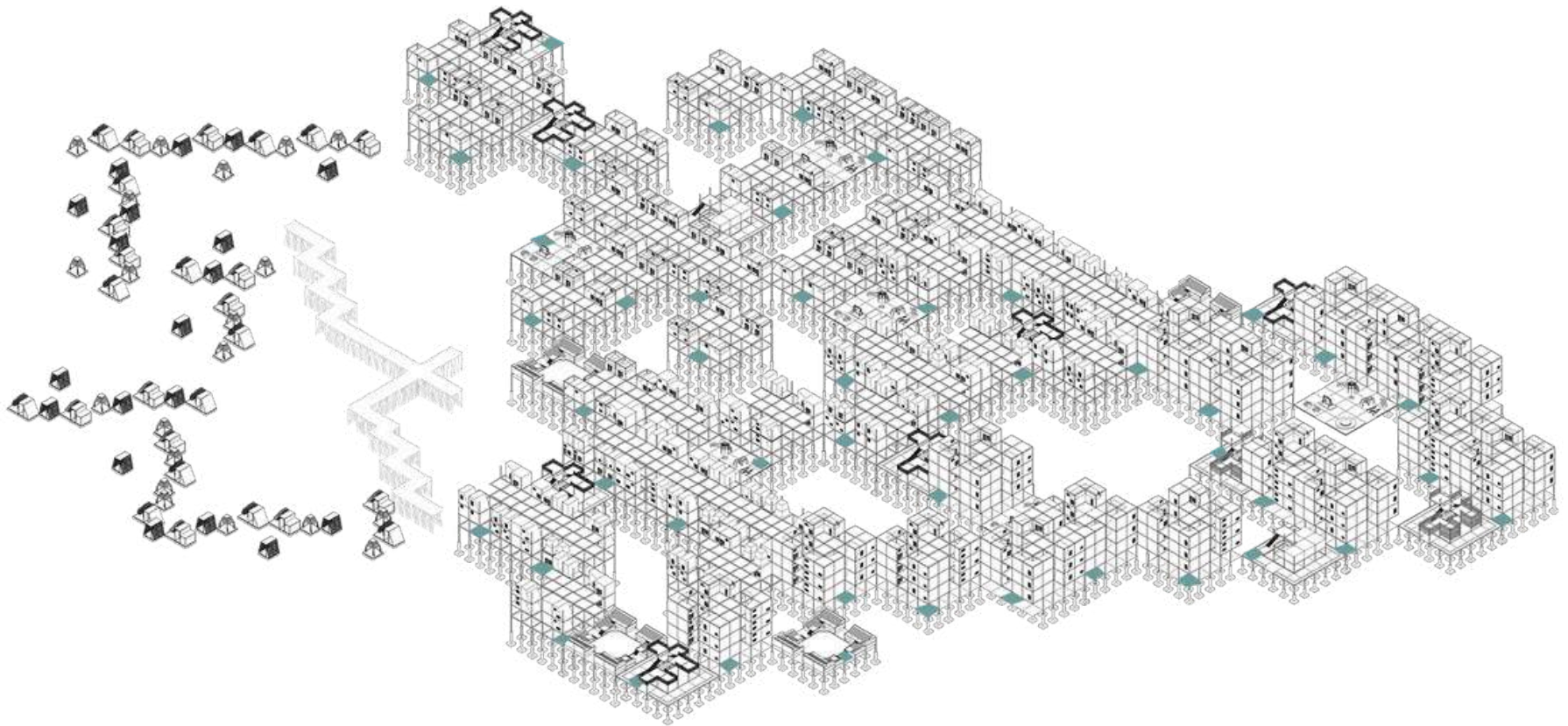
WATER
TANK

WATER
PUMP

WASTE MANAGEMENT SCHEME

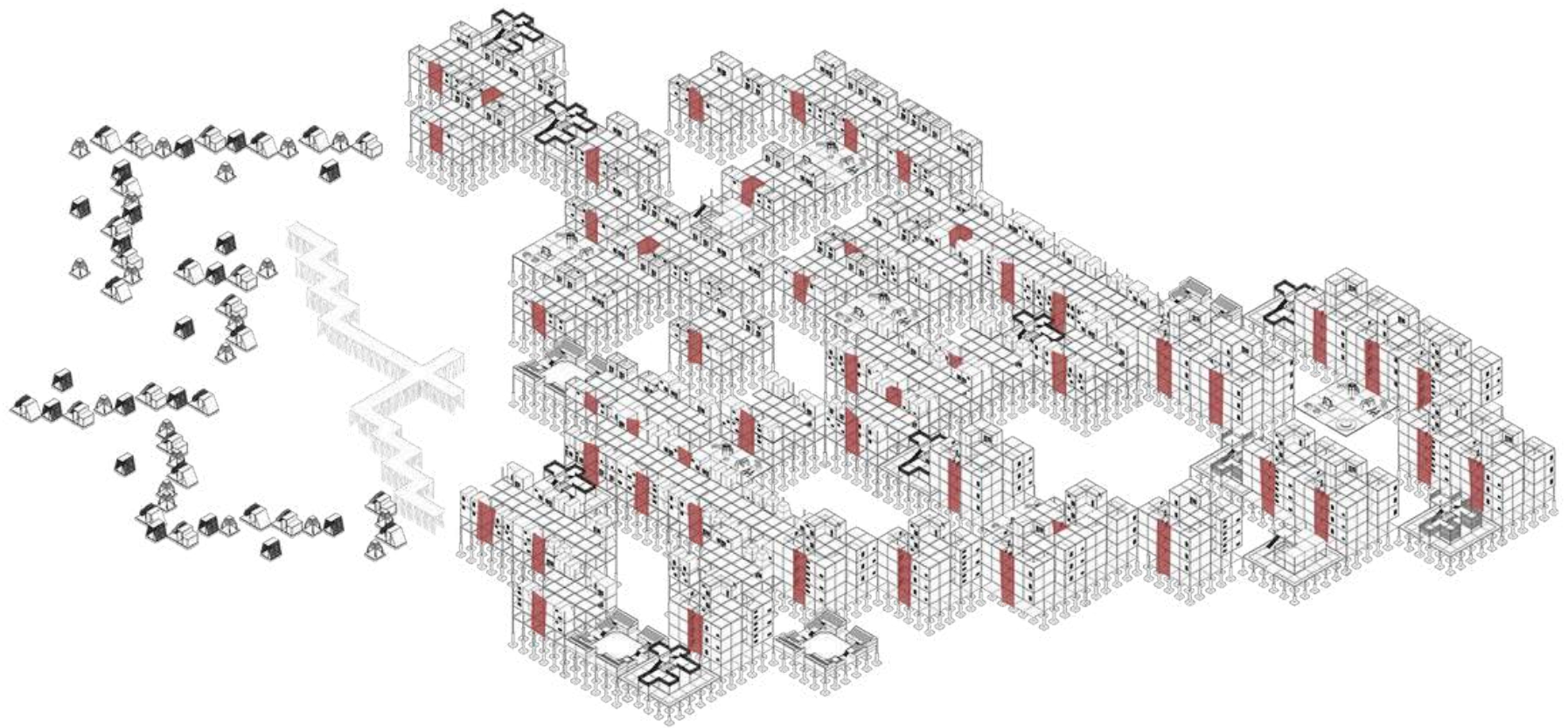


FIRE HYDRANT PLACEMENT SCHEME



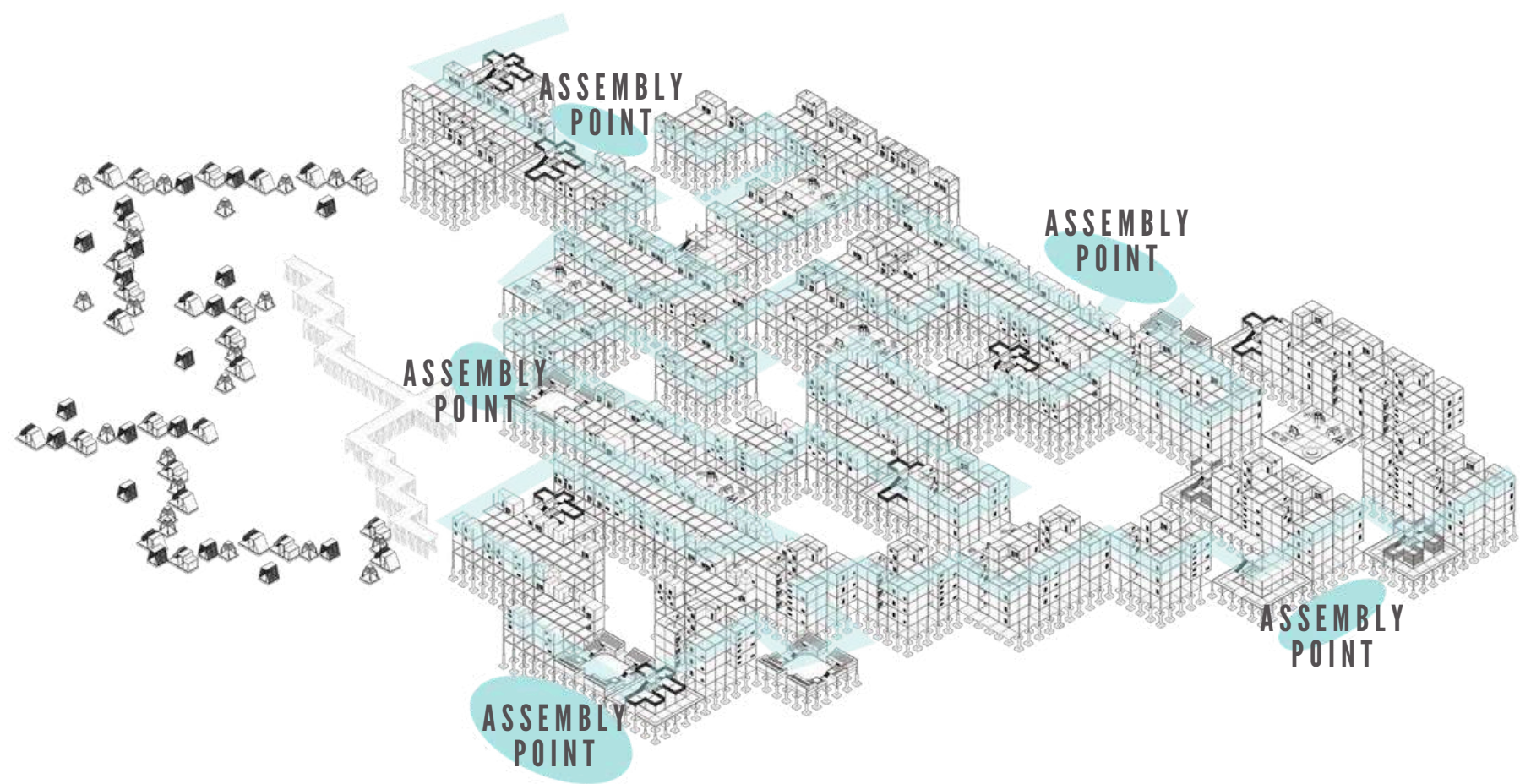
Fire hydrant is located in each blocks within the distance between 25-30 meters.

VERTICAL TRANSPORTATION SCHEME



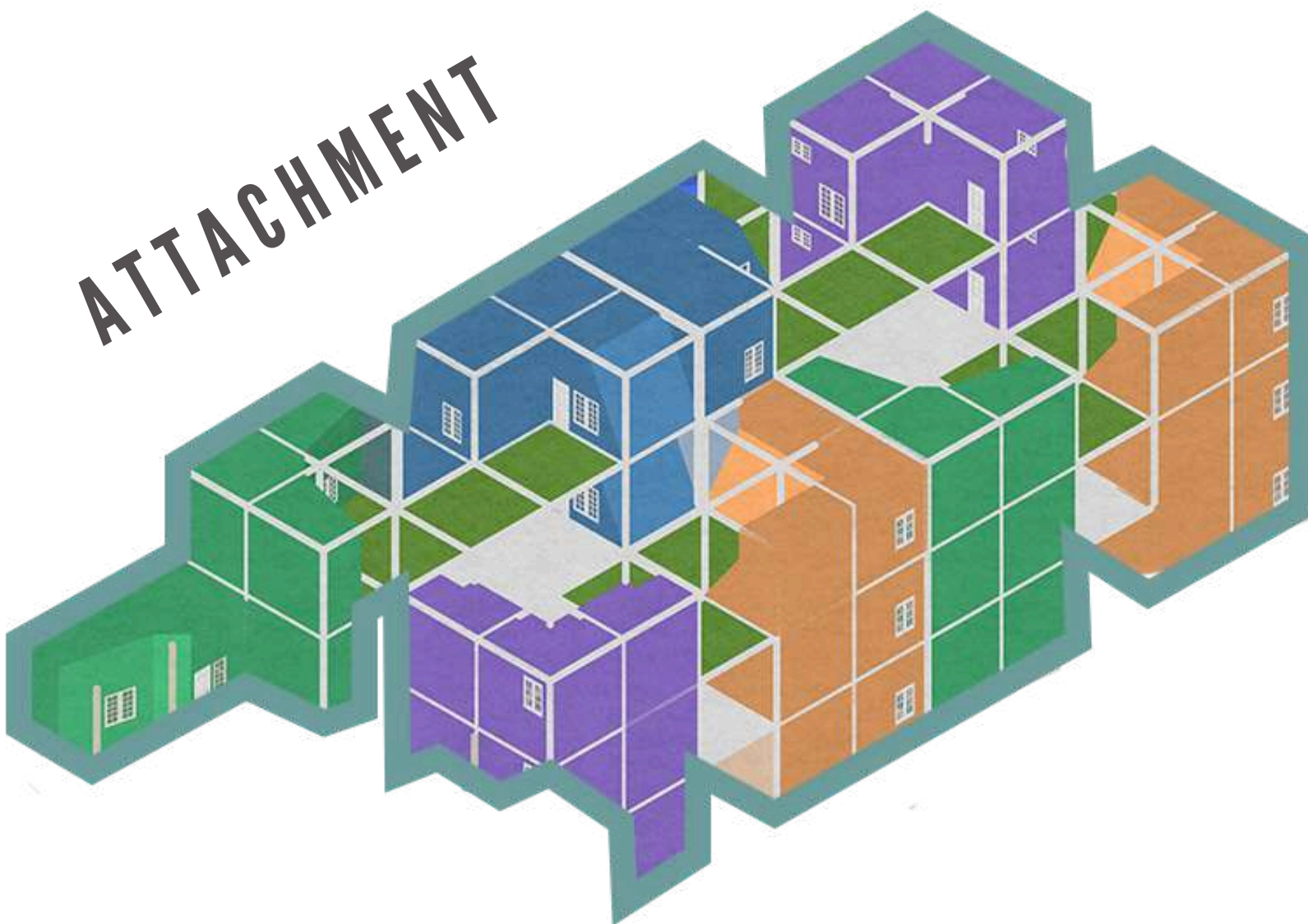
Emergency stairs for settlement 1-storey up to 3-storeys are located in the edge of the blocks in order to ease the mobility if emergency case happens; placed within the distance of 20 meters.

ASSEMBLY POINT SCHEME



Assembly points are the circulation for the people to go to safer area in case fire or earthquake happens.

ATTACHMENT



THE NEW
KAMPUNG BARU

The cultural diversity of Balikpapan has been enhanced by the inflow of immigrants from other locations, resulting in a city with a diverse population comprising several ethnic groups and traditions. The majority of people living there are immigrants from different ethnic backgrounds. Due to the diversity this city has, the New Kampung Baru offers an entirely different settlement for the inhabitants which are rich with cultural background and tradition behind. Here, the new Kampung with the modification of vernacular architecture Nusantara as a form of celebration of the richness this city has into a settlement where everyone belong.



Located in the west side of Balikpapan city which is known for its waterfront villages, the site has the potential to grow tourism from a social and cultural standpoint because it is a strategically important location for the development of future tourist and cultural endeavors. The diverse cultures and customs of Balikpapan are attributed to the vast immigrant population residing in the city. The reason why the city of Balikpapan is known as the gateway for traders is due to its ideal geographic location: it lies on a bay, right next to the Makassar Strait, making sea transit simpler. A settlement with historical significance to Balikpapan's growth is Kampung Baru. Thus, to protect the region and to resurrect activities that can further develop it to make it even better in the social, cultural, and economic spheres, conservation and revitalization measures are required (Hologoryntha, 2022). In addition to raising the standard of living for Kampung Baru residents, this preservation seeks to establish the city's identity and make it easier for outsiders to recognize it.

The local people in Kampung Baru mainly working as boat drivers, sellers/traders, fishermen, and farmers. Another intention of choosing this site as a revitalization is to improve the quality of life of the people there. Long before, this area was a slum, so before the government noticed its potential to become the tourist attraction. But even though the area has developed a lot more now, the local people there still find it is difficult to live because most of them are not originally from Balikpapan and the place they are staying right now it is not under the priority of government to be taken care of, moreover in terms of adequate dwelling place. Hence, this project is an experimental project for the people in Kampung Baru to improve their quality of life.

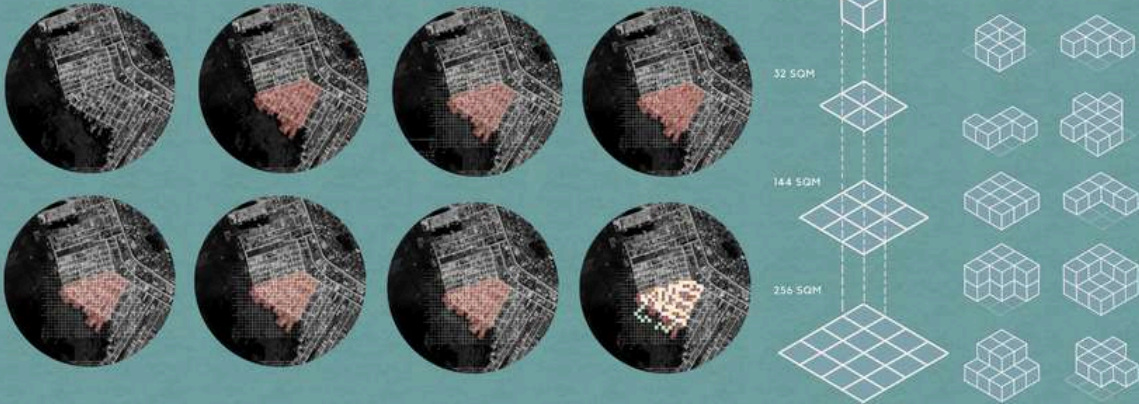
DESIGN CONCEPT

Started from the idea of uniting the diversity around Balikpapan, the concept of making the Kampung Baru as a melting point for everyone to come there is the initial idea. The local people strongly rely on their ability of making handicrafts, making delicious local food, and selling souvenirs for the tourist, moreover with the existence of floating market as the identity of the place, the design comes up to combine them into one new urban layer in Kampung Baru, Balikpapan.

The idea becomes a total contrary between the existing bridge pattern and upcoming idea because the main intention of revitalizing the area is to connecting more strongly each tribe that is settled in Balikpapan and make everyone from every tribe feel belong to the site. Hence, the idea is to making people to meet in intersection where the site area will be a "choke" member among the existing area since the direction of the settlements is rotated to make the intersection between the existing bridge becomes the starting point of the new design. After analyzing the pattern and making new pattern in different direction, then the idea of making the settlements modular is efficient due to the effectivity and applicable if looking at situation of the site which is very narrow and no more space to build a new settlements.

The existing site has already its main characteristic which is the pattern of the wooden bridge that looks as if it is "growing" and keep going longer to the sea due to rapid growth and the necessity of dwelling place inside the city. This unique characteristic of the existing pattern of the bridge becomes the main idea of designing the new residential area above the water.

EXPLORATION OF MODULARITY



BASIC SHAPE

Lamin's house elongated and gable roof



Jagat's house repetitive roofs



Bubungan Tingar's elongated and high-ceiling roof



Triangles in Bela Saba's house



This mass is taken inspiration from Rumah Lamin's roof that has the shape of rectangle and trapezoid and modified with several variations with different type and capacity.



This mass is taking inspiration from the roof of Jagat House which is repetitive and getting smaller to the top. The mass is simplified by having the shape rectangular but more efficient and gave more space for the occupants.

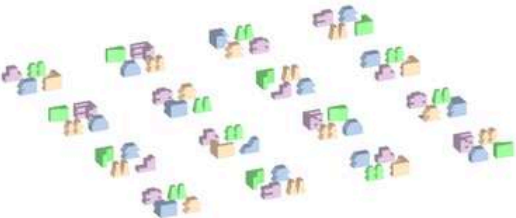


Bubungan Tingar's house is well-known by its high-shaped roof, hence the mass is following the elongated as well as triangle shape of the roof with different kind of triangle.



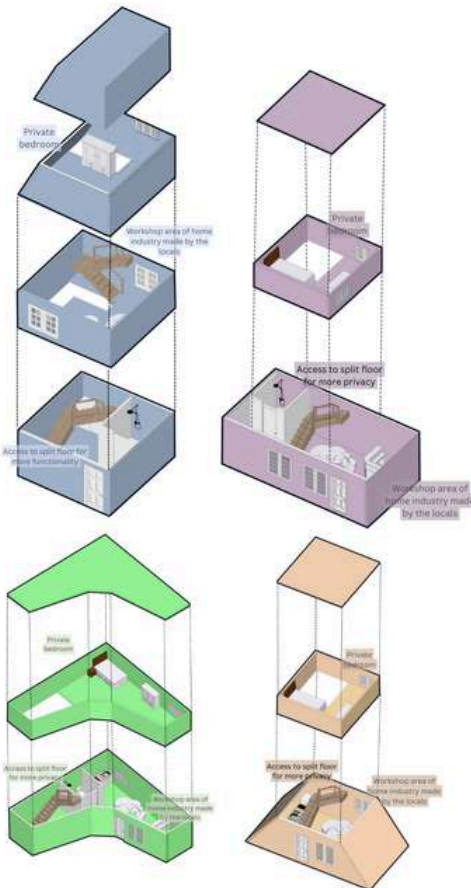
Bela Saba's roof is identical with triangles which is symbolized as sacred place. The mass is taking the triangle shape and being modified in various ways.

VARIETY OF MASS

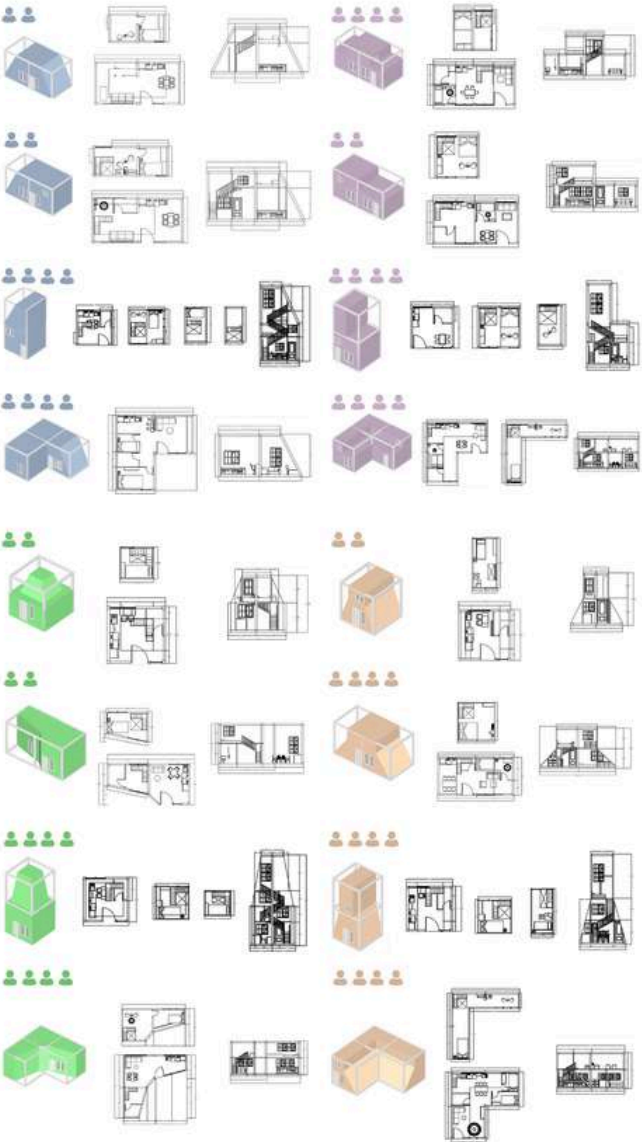


Purposely mixing the masses into various arrangement in terms to providing different ambience in every block of the modules.

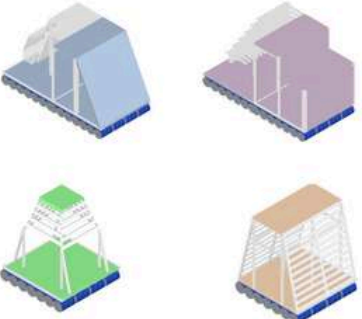
VARIETY OF MIXED-USE HOUSING

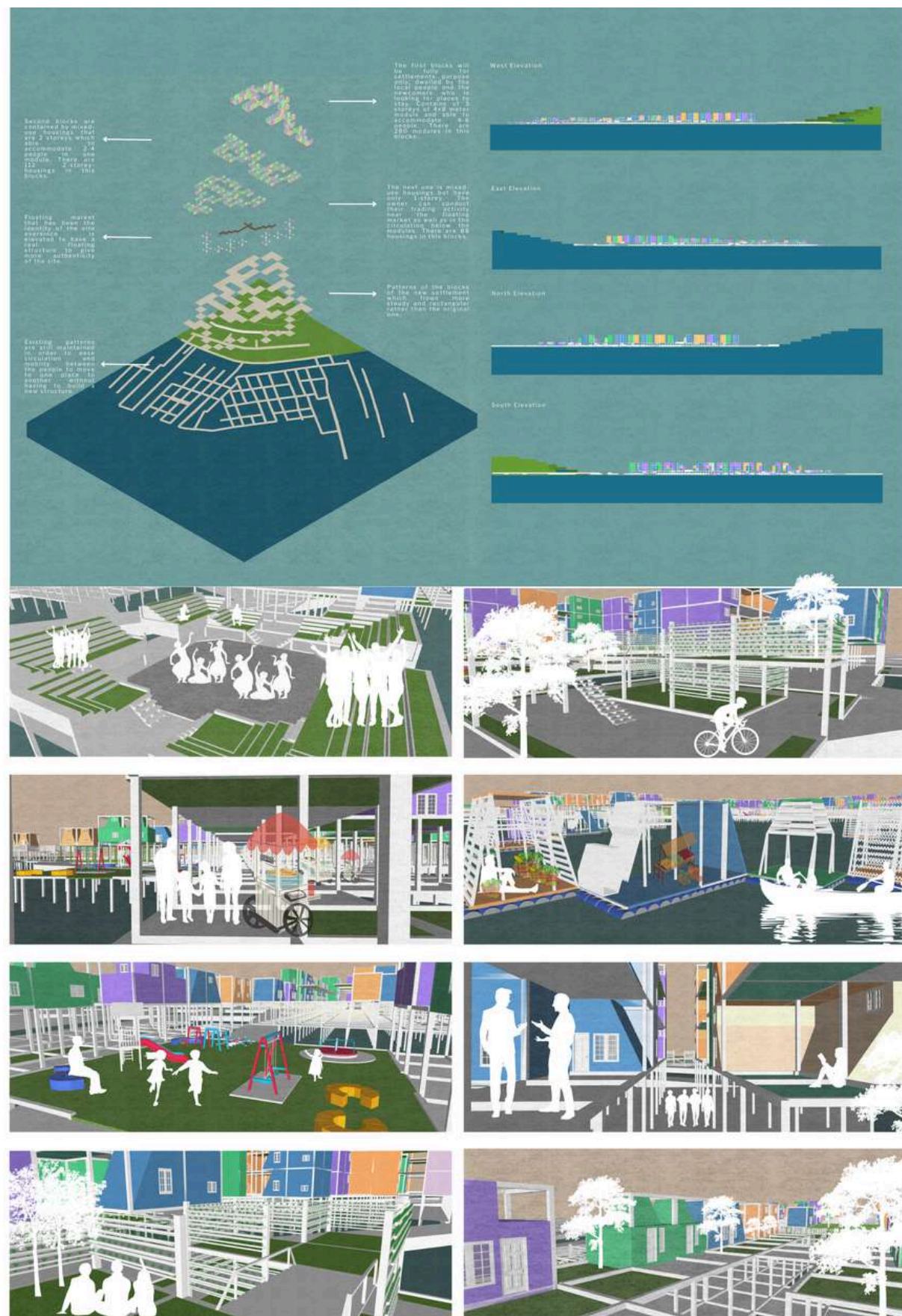


VARIETY OF FURNITURE LAYOUT

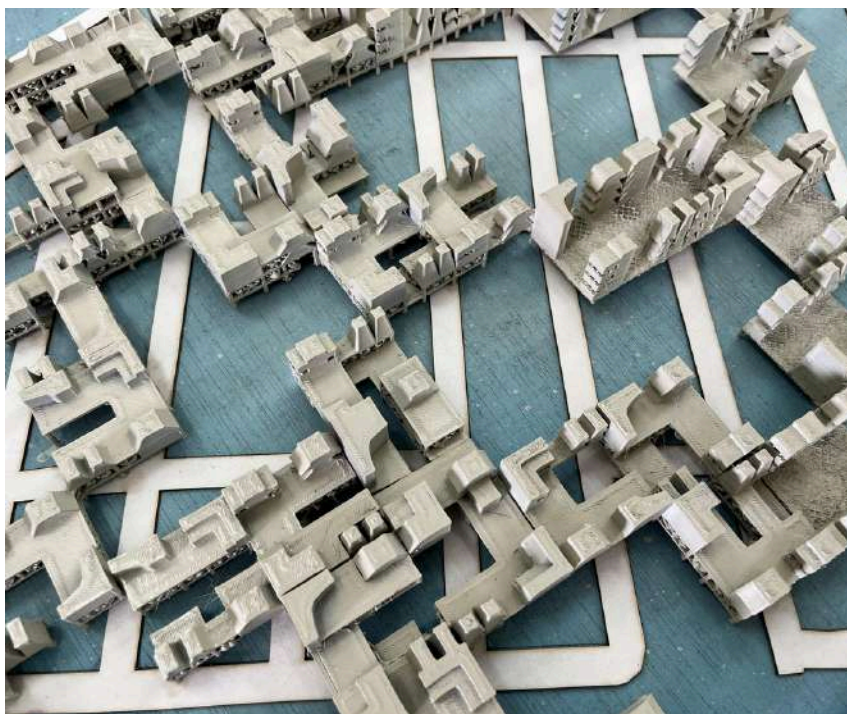
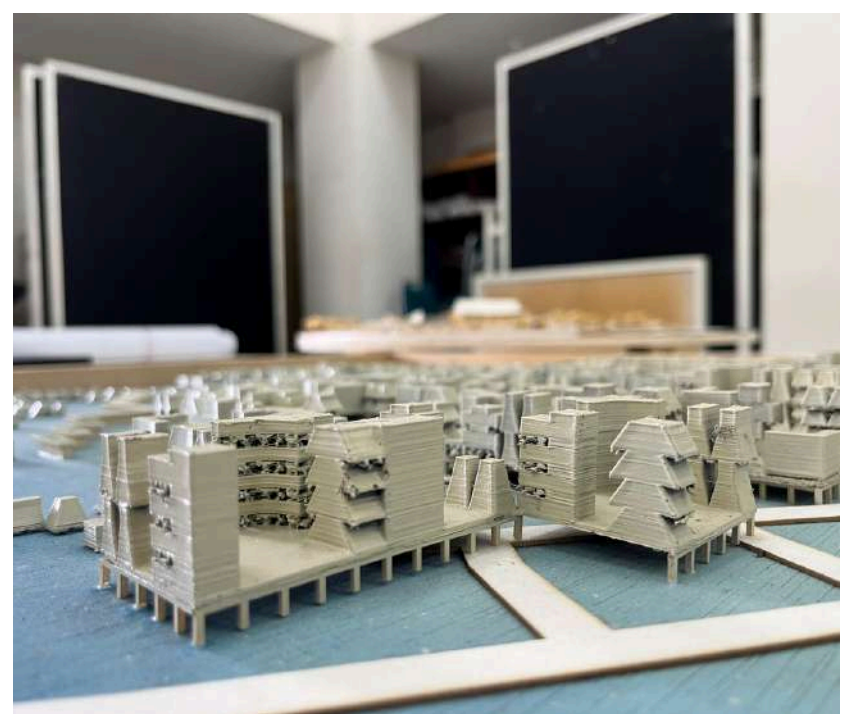


VARIETY OF FLOATING MARKET

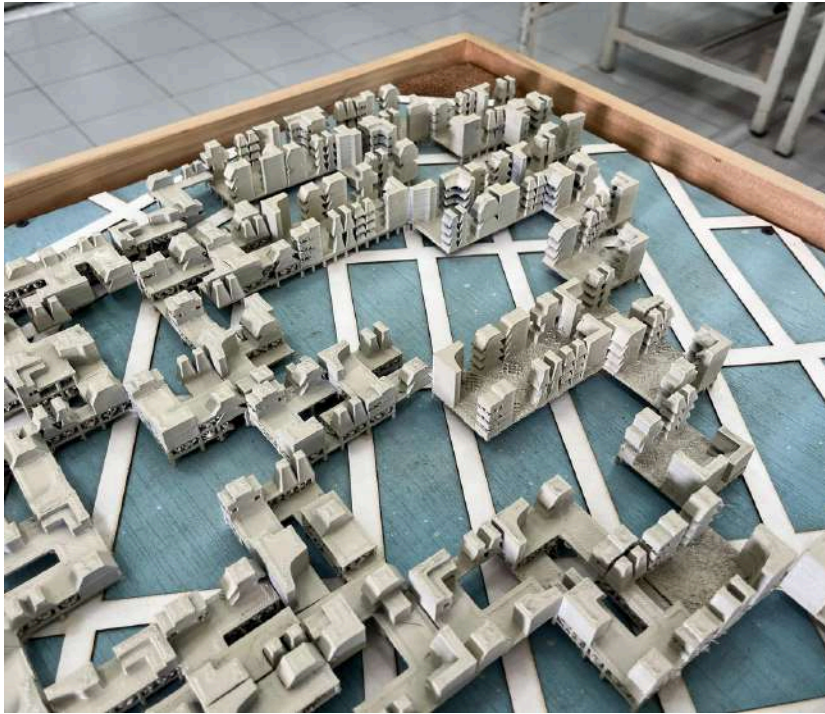




3D MOCKUP
1:500



3D MOCKUP
1:500





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Bismillaahirrahmaanirrahiim

Assalamualaikum Wr. Wb.

Dengan ini, menerangkan Bahwa:

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Nomor Mahasiswa : 20512146
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Fakultas / Prodi : Teknik Sipil dan Perencanaan/ Arsitektur
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Abstraction of Nusantara Architecture

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Wassalamualaikum Wr. Wb.

Yogyakarta, 8/26/2024

Direktur



Muhammad Jamil, SIP.

REFERENCES

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