



## DESIGN OF CO-WORKING SPACE & CAFE WITH THE APPLICATION OF TROPICAL ARCHITECTURE IN BINJAI CITY

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### ABSTRACT

The common activities of working and learning, usually carried out in office spaces and classrooms, sometimes create boredom for employees and students. To alleviate this monotony and pressure in work, co-working spaces & cafés are built with the aim of supporting work and learning activities in a flexible and dynamic environment. These spaces cater to various needs such as writing, teamwork, exchanging ideas, and interacting, providing a solution to both office and learning requirements. The design method applied involves a cyclical process that begins with the problem of how to utilize space to support work and learning activities in a more relaxed atmosphere. The proposed design concept for the co-working space & café is intended to address these initial challenges. The tropical architecture concept used in this design draws inspiration from the transformation of the Rumah Manka in two stages: the needs of working and learning activities, and the requirements for relaxation and commercial activities

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## 1. INTRODUCTION

Co-working space has the meaning of using office or work areas simultaneously with individuals from the same or different companies with the aim of sharing ideas and knowledge (Djuwanda et al., 2019). The activities carried out in co-working spaces are similar to those in traditional offices but with a more flexible and dynamic scope, such as writing, teamwork, exchanging ideas, and interacting with others. Nowadays, work is not confined to the office; the growth of remote work or work from home options and freelance opportunities is rapidly expanding, making co-working spaces a suitable choice for remote workers and freelancers.

Cafés serve not only as places to eat but also as simple recreational, work, and study spaces. According to Marsum (2005), a café is a place for quick-service meals that offers a relaxed or informal atmosphere. Additionally, it is a type of restaurant that usually provides seating both inside and outside. Most cafés focus on light meals such as cakes, bread, soup, and beverages. Combining a workspace with a relaxing environment aligns with the design function of co-working spaces and cafés.

The use of flexible offices, including co-working spaces and cafés or multipurpose workspaces, has become a popular phenomenon in various countries worldwide. There are several well-known flexible offices globally, with unique names to signify their functions. For instance, Spain has Betahaus, which focuses on a productive atmosphere. Meanwhile, Cape Town, South Africa, has Workshop 17, aiming to provide an environment for individual collaboration towards success. The use of flexible offices has grown rapidly in recent years, and this phenomenon is expected to continue to grow along with changes

in work practices, the rise of remote job opportunities, and evolving business demands on a global scale.

The phenomenon of flexible offices in Indonesia has also experienced significant growth in recent years. Providers of flexible offices in Indonesia continue to evolve, including companies like GoWork, EV Hive, Rework, Cre8, UnionSPACE, Distrii, Conclave, Marquee, Workwell, and Coffemob. The stable and developing economic growth in Indonesia has created a continuously increasing demand for flexible offices. Many businesses, especially startups, large corporations, freelancers, and independent entrepreneurs, are seeking more flexible alternatives than leasing private offices. Flexible offices allow companies to adjust the size and facilities of their office according to the stages of their business development. The arrangement of a space for a crucial building function should be considered to provide comfort for its users (Nuraini, 2020; Nuraini et al, 2018; Nuraini, 2019).

Amid the rapid growth of various businesses in major cities, co-working spaces and cafes have become a trend in many cities. Medan, including many companies, is looking for flexible, efficient solutions, and a supportive working environment to meet their office needs. Co-working space is a term derived from English, combining "coworking" and "space." Coworking refers to work done collaboratively, whether among team members of the same company or external to the company. Meanwhile, space means a place, location, or area.

### Problem Formulation

- How can one design a co-working & café by applying tropical architecture?
- How to design an attractive co-working space & café?

### Design Objective

The objective of this design is to implement tropical architecture in a co-working space & café. Co-working space is a new medium that offers a variety of options for individual and group work in a more relaxed and semi-formal atmosphere, supporting work, learning, and other activities.

## 2. METHODE

### 1. Site Location



The design location is on Jl. Soekarno Hatta, Binjai City. The site is situated in the center of Binjai City, in a strategic environment with broad accessibility. The surrounding area is characterized by residential zones, commercial buildings, and the 45th Independence Monument, which serves as an icon for Binjai City.

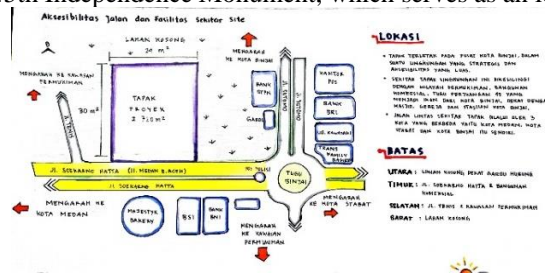


Image 1. Site Location

(Source: compiled by the author based on Google Maps and the author's sketch, 2022)

- Location: Jl. Soekarno Hatta, Binjai
- Province: Sumatera Utara
- Land Area : 720 m<sup>2</sup>
- Road Width: 8 m
- Building Coverage Ratio (KDB) : 70%
- Building Line (GSB) : 10 m

- Land Boundaries
  - North : Vacant Land
  - East : Jl. Soekarno Hatta and commercial buildings
  - South: Residential area
  - west : Vacant Land

## 2. Design Process

To achieve the intended goals and functions, several methods or approaches are employed, including literature review, site location surveys, and discussions on the conceptual design formulation. Various stages or processes of designing a co-working space and café can be seen in image 2.

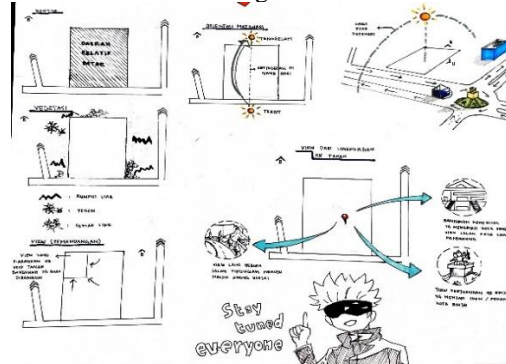
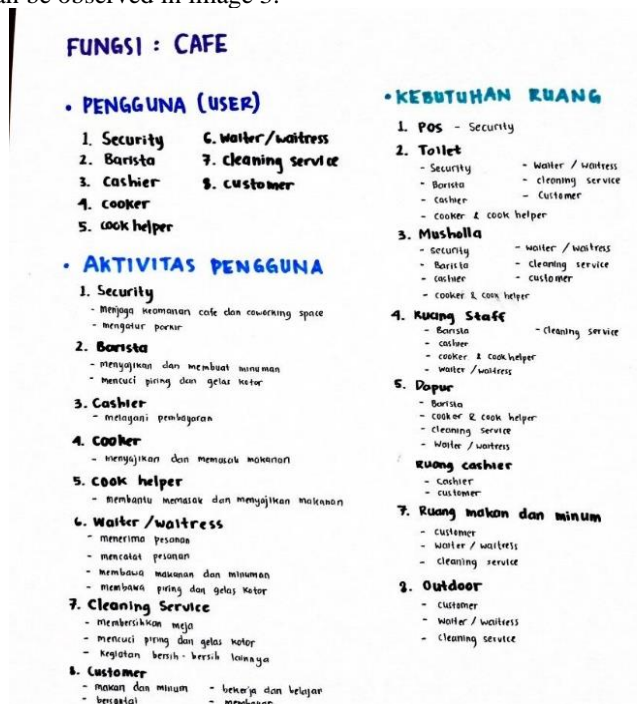


Image 2. Design Process

(Source: Author's analysis sketch, 2023)

The design of the co-working space and café adopts the Tropical Architecture concept that adapts to the tropical climate, incorporating two main functions. The primary function includes working, learning, relaxing, and socializing, while the supporting function involves commercial activities. The subsequent design procedure consists of five consecutive stages: data gathering (both for the building and site), programming phase (for both the building and site), analysis (for both the building and site), conceptualization (for both the building and site), and synthesis (Nuraini 7 Sudrajat, 2010). The scheme for grouping functions, users, user activities, and space requirements for the co-working space and café can be observed in image 3.



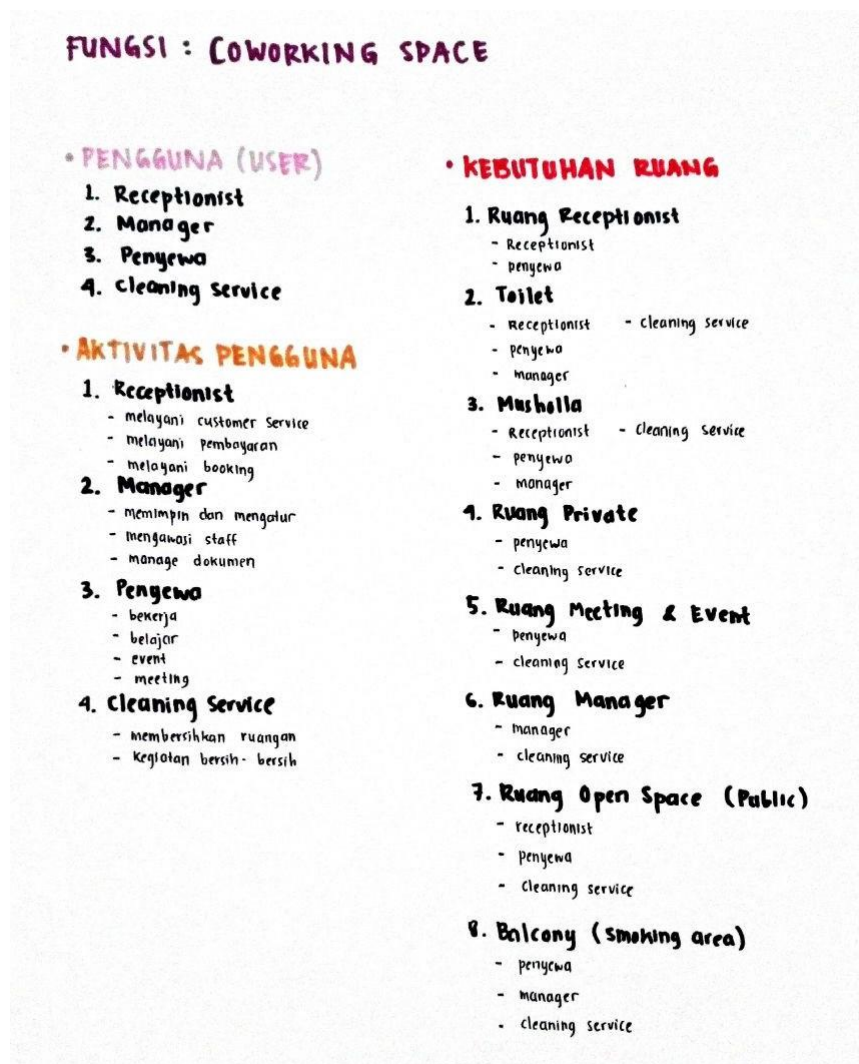


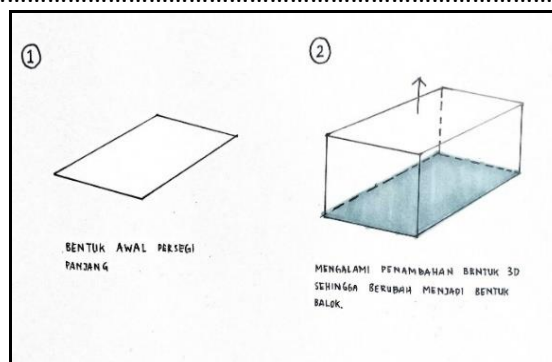
Image 3. Two function of *co-working space* dan *café*  
 (Source : Author's List, 2023)

The site analysis was conducted around Jl. Soekarno Hatta, as the site is located near the Struggle Monument in Binjai. The predominant area of the site is within an urban and office district. For the lighting system, the east side has the highest light levels, serving as the main entrance and utilizing natural lighting. In the afternoon, the west side is exposed to sunlight. Therefore, there are more openings on the eastern side of the building. The noise level is higher due to the location on Jl. Soekarno Hatta, which is a busy traffic area and an active residential community.

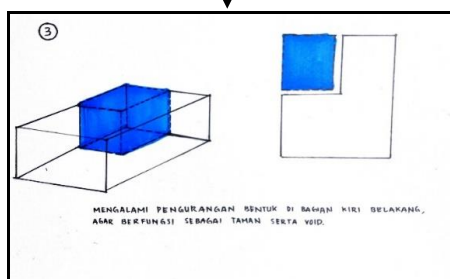
### 3. FINDING AND DISCUSSION

#### 1. Mass Composition

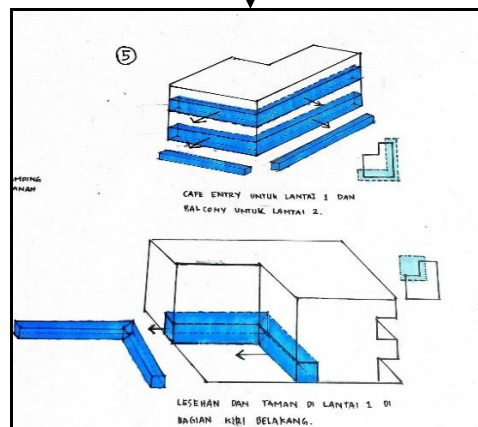
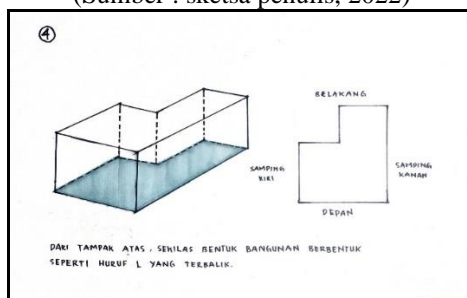
The co-working space & café adopts a transformation of the letter "L" in line with the theme of the co-working space, which is tropical architecture that adjusts to the tropical climate. The process of transforming the form can be seen in sketch 5 of the mass composition. The interior of the Minka house itself has several characteristics, including the use of tatami or straw-made carpets for the house floor, square-shaped rooms, sliding doors, minimalist design, natural lighting, and an open living room with a view of the garden. Similarly, the co-working space & café is designed with an outdoor area facing the garden.



CO



Gambar 6. Site zoning *cafe*  
(Sumber : sketsa penulis, 2022)





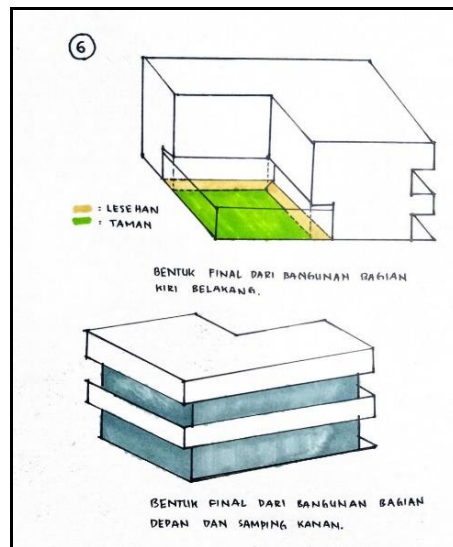
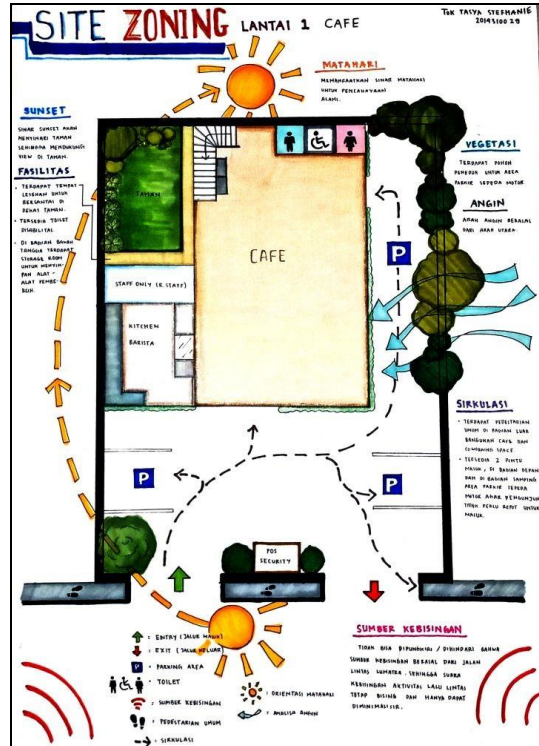


Image 5. Building Shape Transformation  
 (Source: Author's Sketch, 2023)

## 2. Site Zoning and Floor Plan

In the circulation and utility planning for the site location of the co-working space & café, the main pedestrian pathway is situated at the front of the site. Figure 6 depicts a sketch of the site zoning on the first floor, which functions as the café. This includes an analysis of the direction of sunlight, air circulation, vehicle circulation, noise sources, and the facilities available in the café. Image 6 also represents a sketch of the site zoning on the second floor, serving as the co-working space



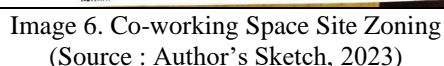
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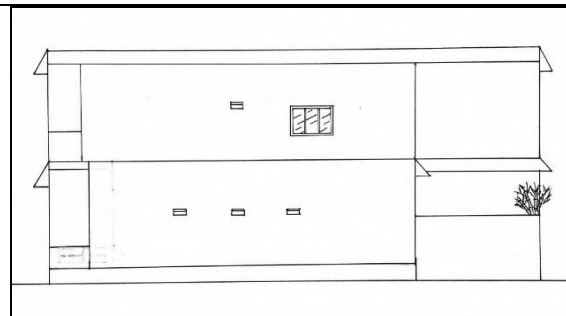
Image 9. Co-working Space & café Exterior  
(Source : Author's Sketch, 2023)

### 3. Building Facade

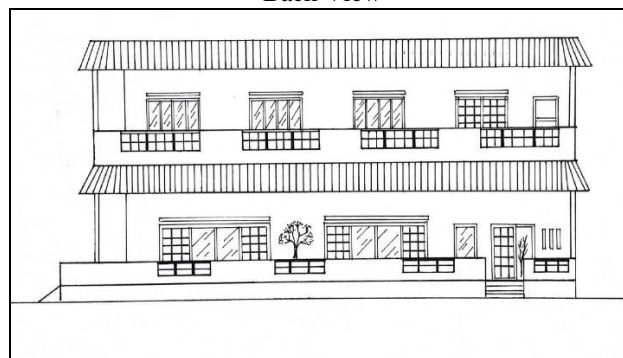
One of the approaches to the tropical architectural theme is the utilization of natural lighting in the building. The use of wooden materials and large glass windows is part of an energy-saving strategy by harnessing sunlight entering the space through the windows. This can be observed in the image of the co-working space & café building facade.



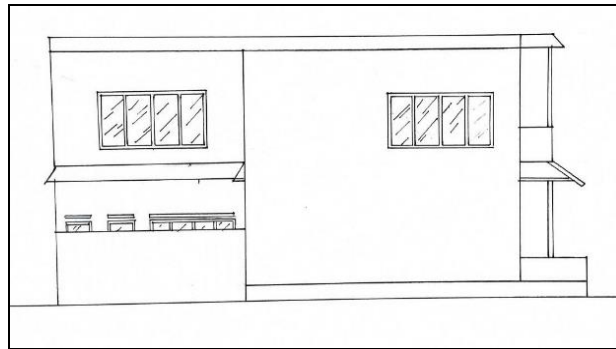
Front View



Back View



Right View



Left View

Image 10. Co-working Space & café Facade  
 (Source : Author's Sketch, 2023)

#### 4. CONCLUSION

The co-working space & café is a place built with the purpose of supporting work and study activities in a relaxed atmosphere. It is designed with a tropical architectural concept, fulfilling office needs such as studying, writing, discussing, interacting, and teamwork. Additionally, the space also provides areas for relaxation and recreation. The co-working space & café offers facilities that support office workers, remote workers, students, freelancers, and others in a calm, comfortable, and relaxed environment. Its design is based on ideas inspired by the Minka house, transformed into a space that caters to the needs of working, learning, and commercial activities.

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