

Coworking Space Planning and Design : Mixed Use Building With A Tropical Architectural Approach

Muhammad Aly Mujahidin

University of Pembangunan Panca Budi Medan

Email: alymujahidd@gmail.com

Cut Nuraini

University of Pembangunan Panca Budi Medan

Email: cutnuraini@dosen.pancabudi.ac.id

Benny Iskandar

University of Pembangunan Panca Budi Medan

Email: bennyiskandar@gmail.com

Corresponding author: alymujahidd@gmail.com

Abstract. *The impact of covid 19 makes the habits of people who work and students often work or study via online. A cozy and adequate space is needed to carry out online activities and freelance work. The right solution is to design a coworking space mix use building that can provide space and facilities to support comfort for consumers. Coworking Space is a workspace concept that can be used together with various backgrounds such as students, freelancers, students, entrepreneurs, or other companies. In Medan City coworking spaces are still relatively few that have multi-functions as the author designs. Most only prioritize one function so that consumers can easily get bored when working. In this design, hopefully it can be a problem solver and become a comfortable working, meeting and relaxing space for consumers.*

Keywords: 3-5 words or phrases that reflect the contents of the article (alphabetically).

INTRODUCTION

Background

In the era of industry 4.0 or the fourth industrial revolution is a term commonly used for the level of development of the technology industry in the world. For this fourth level, the world is focused on digital technologies.as well as the new normal after Covid 19, many company workers feel more at home working from home.Term WFH (work from home) via zoom or google meetings is an alternative, rather than working in the office. Maybe some workers feel bored with the office environment and need a more comfortable space to work. So a building is needed that provides a much more comfortable space for these workers. One solution is to create a Coworking Space mixed use building. (University, 2021)

Coworking spaceis a work space that is rented to the general public. Among other things is workeroffices, freelancers, students and people in general. Not only that, coworking space is not just a work space, but also provides meeting rooms or rental offices for small companies that don't have a permanent office. In various parts of the

Received on January 7th, 2022; Revised on Janury 16nd, 2022; Februari 22nd, 2022

*Corresponding author, alymujahidd@gmail.com

world, such as in Europe, America, Africa, Hong Kong, India and others, coworking spaces have been built which are not only for working but also have many other comfort supporting facilities. Such as gym areas, libraries, game areas, coffee and pastry, 3D printers and scanners. and has a super fast internet network. Many coworking spaces have started to be built in Indonesia, but only a few combine coworking spaces with other supporting facilities. (Devx, 2024). The design of a relatively comfortable relaxing place is needed as a workplace, so that users are more enthusiastic in carrying out tasks or work (Negoro & Nuraini, 2022)

In the city of Medan, there are still relatively few coworking spaces, and only have one function, namely as a work space or meeting room. This causes the need for a mixed-use building concept to create a diversity of spaces while also supporting the comfort of people who work in coworking spaces.

In the author's design, this coworking space adapts to the climate in Indonesia, namely with the concept of a tropical architectural approach and a touch of industrial style which creates a comfortable and relaxed atmosphere when working.

Design Problems

The formulation of this design problem is how to implement a coworking space mixed use building design with a tropical architectural concept approach.

OBJECTIVE

The aim of this design is to meet the needs of formal and non-formal work, meeting and meeting spaces for office workers and freelancers. The work space is also open to the public. The aim is to provide comfortable and relaxed work facilities with adequate benefit facilities that make you feel comfortable working.

METHOD

1. Design location

This Tropical Coworking Space Design is located on Jl. Dr. Mansyur, Padang Bulan Selayang I, Kec. Medan Selayang, Medan City, North Sumatra. Located on the side of the road, close to several universities, offices and hotels. The location is quite strategic, making it a suitable place for students on duty and work space for freelancers.



Figure 1. Location of the site design

2. Design Process

In achieving the design process there are stages that must be carried out. These include determining what will be designed, collecting data and determining the concept (Nuraini & Sudrajat, 2010). The process of selecting a design form is carried out by considering the science of form, or morphology. This is reviewed to adapt the designed function to the existing architectural forms (Nuraini, 2019). Then proceed with creating 3 dimensions and building working drawings can be seen in the diagram below.

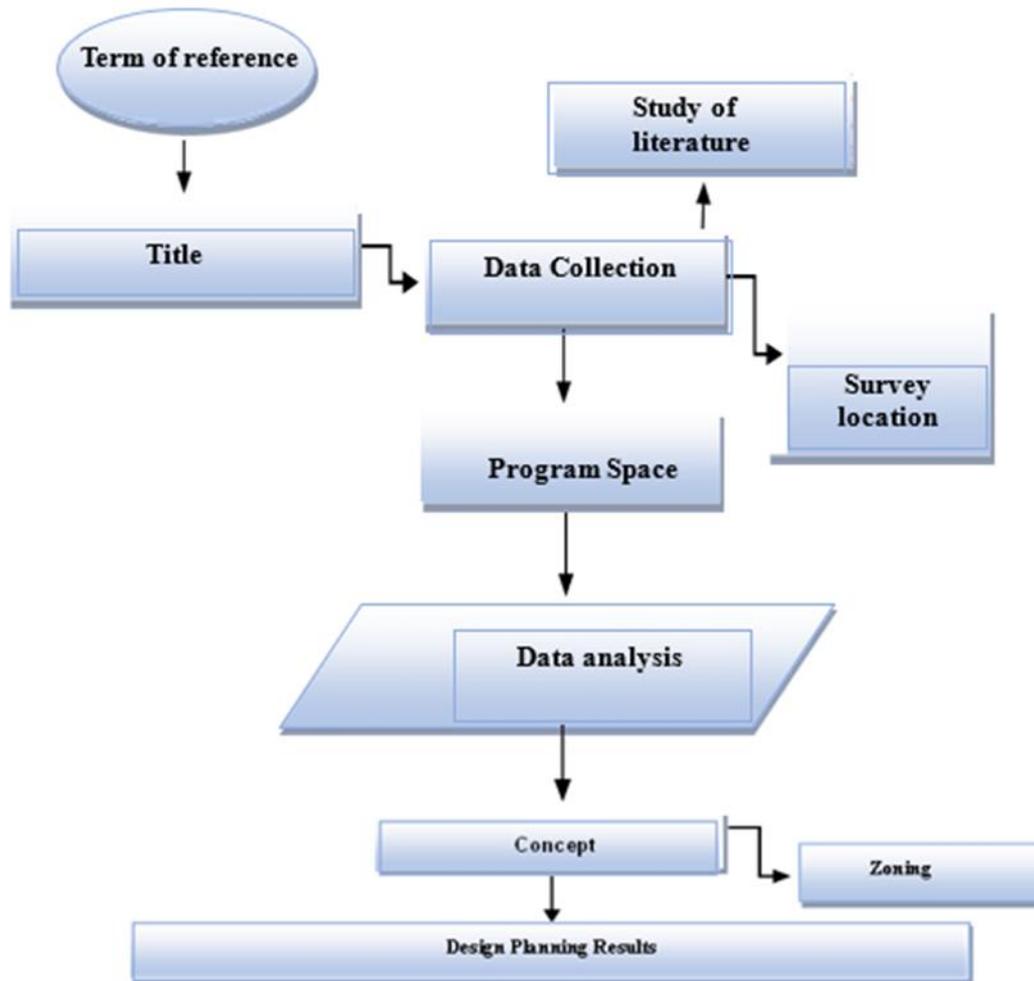


Figure 2. Design Process

DISCUSSION

Tropical Architecture Concept

In the design studio requirements (2) students are free to choose the concept for a mixed use building. In this design, the author chose the theme of tropical architecture. Which is an architectural concept that adapts to tropical climate conditions. Tropical Climate (climate) comes from the Greek, klima which means based on the Oxford dictionary, it means a region with certain conditions of temperature, dryness, wind, light and others. According to science, climate is the integration at a time (integration in time) of the physical conditions of the atmospheric environment, which are characteristic of the geographic conditions of the region. certain". Meanwhile, weather is "the temporary condition of the atmospheric environment in a certain area". Overall, climate is defined as "the integration at a time of weather conditions" Koenigsberger, 1975 in (Yanis, Priandi, & Qadri, 2023). The word tropics comes from ancient Greek, namely the word tropikos which means back line, now this meaning applies to the area between

these two back lines . These turning lines are latitude 23027” north and latitude 23027 south.

Geographically, Indonesia is located on the equator (Yanis, Priandi, & Qadri, 2023) .And it is a country with a wet tropical climate or tropical rainforest which has high rainfall. Meanwhile, tropical architectural design plans a design by adapting the terrain according to the weather in a tropical climate, such as the dry season and the rainy season. Therefore, carrying the theme of tropical architecture is a solution for designing mix use buildings in Indonesia. (Medan, 2017)

Conceptual Foundations

The design of this coworking space includes several stages, using a minimalist form that uses limited and relatively small land. It has 4 floors, floors 1 to 3 are coworking spaces, while the 4th floor is a rooftop cafe. The main function of this building is a work space, study and meetings. The function to support visitors' needs is the cafe eatery which provides food and drinks for visitors to the coworking space.

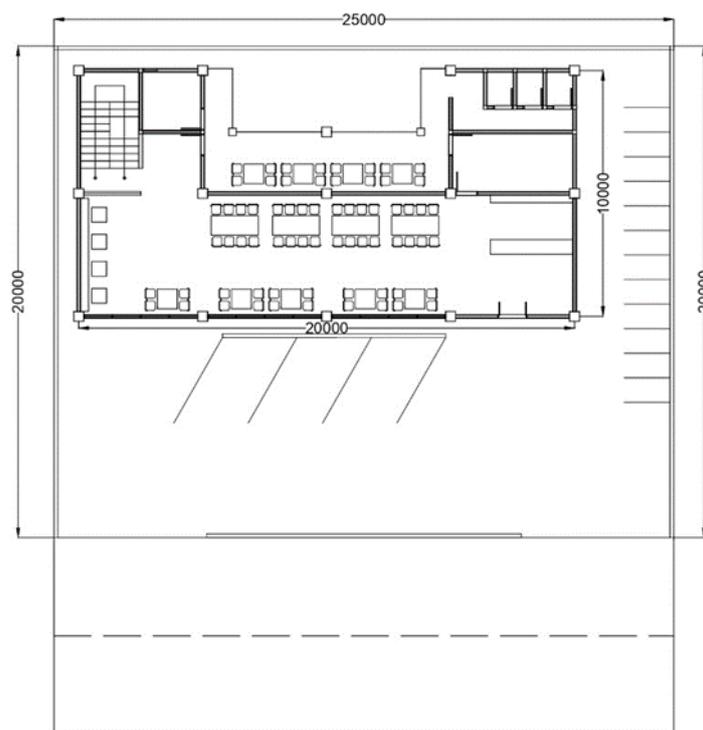


Figure 3. Site Plan

Siteplan Coworking space. The parking area includes cars in the front view and motorbikes in the left side view of the building.

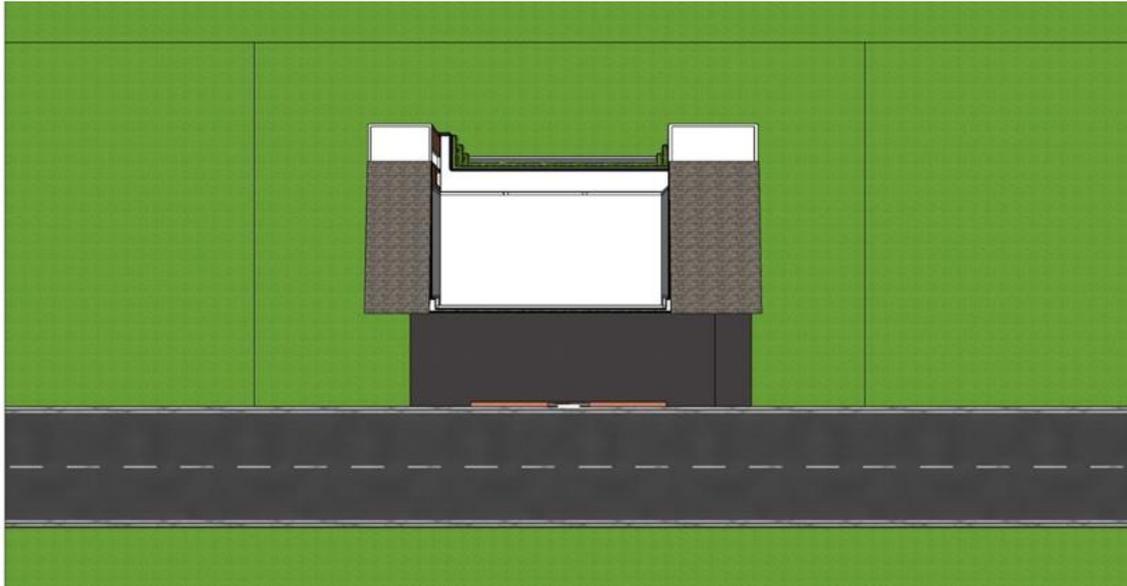


Figure 4. Top View of Building

The coworking space land plan is on Jl. Dr. Manshur Medan. The existing condition of the land is grass. The land contour is relatively flat, not hilly or wavy.



Figure 5. The drip on building fasade

There are eaves above the windows on each floor. This concept is a characteristic of tropical architecture. Which is useful in reducing the flow of rainwater and hot sunlight. The tritisan is also used as a planting medium for Lee Kwan Yew plants to add aesthetics and make the building cooler to the eye.



Figure 6. Roof View

Using a sloping roof taken from the concept of a tropical architectural house/building. If there is rainwater falling, the roof will drain the water to the back of the building. So that the plants on the back tritisan and the back garden are watered by rainwater. and rainwater will be absorbed by the soil.



Figure 7. Point of view from indoor (2nd floor) to outdoor

In this design, there are more windows as openings and lighting, as well as air circulation for the coworking space. This is also characteristic of the concept of tropical architecture. In addition, it serves to reduce electric power during the day, because there is a lot of light coming in so it is more energy efficient.



Figure 8. Point of view facade building with (frog eye perspective)

The facade of the building is dominated by exposed bricks and added ornamental plants so that it beautifies the coworking space building.



Figure 9. The Building Facade



Figure 10. 3D modeling of the front facade of the coworking space design.

The picture above is the facade of the building, it can be seen that the building is located on the edge of the highway. The right and left parts of the building are actually commercial shophouses.

The car parking area is located at the front of the building and covers up to 4 cars. The motorcycle area is located on the left side of the building and covers up to 12 motorcycles. The outdoor space on the first floor has a garden as well as bathroom facilities to support customer comfort.



Figure 11. Parking Area



Figure 12. Outdoor view on 1st floor



Figure 13. 3D Modelling Design

CONCLUSION

The design of the coworking space mix use building (Le Memoire). Which applies the concept of tropical architecture to make visitors more comfortable when working and meeting. By having supporting facilities such as a cafe that provides food and drinks so that visitors are more comfortable and at home. As well as a rooftop cafe above, it makes the combination The function of this coworking space building is to be more comfortable, relaxed and good for work and work.

REFERENCES

- Azhra, N. S., Sjamsu, A. S., & Al Ikhsan, A. (2021). Perencanaan Coworking Space Dengan Konsep Pendekatan Arsitektur Kontemporer Di Era New Normal Di Kota Kendari. *Garis*, 164-173.
- Devx. (2024, January 2). *10 Best Coworking Space In The World In 2024*. Retrieved from Devx.work Blog: <https://devx.work/blog/best-coworking-spaces-in-world/>
- Maamis, L. s., Nahdatunnisa, & Jurumai, L. P. (2021). Pusat Perbelanjaan Di Kabupaten Morowali Penekanan Arsitektur Green Building. *Jurnal Proyeksi*, 9-21.
- Medan, P. (2017, February 8). *Pengertian Dan Konsep Arsitektur Tropis*. Retrieved from perkimtaru.pemkomedan.go.id: <https://perkimtaru.pemkomedan.go.id/artikel-963-pengertian-dan-konsep-arsitektur-tropis-.html#>
- Mulyani, A. T., & Octarino, C. N. (2021). Optimization Of Energy Efficiency Permormance And Space Comfort In Coworking Space Building CAse Study Relationship Of Coworking Space And Cafe. *Lakar*, 159-174.
- Nuraini, C. (2019). Morphology of Residential Environment of Singengu Village in Mandailing JuNorth Sumatra. *Journal Regional and City Planning*, Vol. 30, No. 3, Page : 241-260.
- Nuraini, C., & Sudrajat, I. (2010). Metode Perancangan Arsitektur. *Bandung Karya Putra Darwati*
- Negoro, S.A., dan Nuraini, C., (2022). Konsep Kearifan Lokal pada Desain Lounge & Learning Square
- Rafsanjani, R., & Sari, Y. (2021). Penerapan konsep Arsitektur Tropis Pada Bangunan Pendidikan "Studi Kasus Menara Phinisi UNM". *JAD*, 20-31.
- Sharma, I. (2021). *Top 20+ Best Coworking Space In India (With Photos) Ranked & Reviewed*. Retrieved from coworkingers.com: <https://coworkingers.com/best-coworking-space-in-india/>
- University, B. (2021, March 1). *Teknologi Digital Sebagai Kunci Utama Pada Era Industri 4.0*. Retrieved from graduate.binus.ac.id: <https://graduate.binus.ac.id/2021/03/01/teknologi-digital-sebagai-kunci-utama-pada-era-industri-4-0/>
- Yanis, M., Priandi, R., & Qadri, L. (2021). Evaluasi Penerapan Arsitektur Tropis Pada Gedung-Gedung Kantor Pemerintahan Di Banda Aceh. *Raut*, 50-61.