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Futuristic Architecture Theme Approach to the Design of the Automotive Center Building in the City of Medan

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ARTICLE INFORMATION

Article history:

Received 30 August 2023

Revised 06 November 2023

Received 28 June 2024

Available online 28 June 2024

E-ISSN: 2721-3463

P-ISSN: 2086-910X

How to cite:

Masda'alni, U., and Budiana, T, I. (2024). Futuristic Architecture Theme Approach to the Design of the Automotive Center Building in the City of Medan. *Jurnal Koridor*, 15(1), 34-40

ABSTRACT

Four-wheeled and two-wheeled motorized vehicles are a very important and inherent need for human life, this is very important because it makes it easier for humans to reach where they want to go. This has also contributed to the development of automotive shops in the city of Medan and in its surroundings, because this sector has a clear investment value. This is supported by the statement of the Ministry of Industry in 2021, where the investment value in the automotive industry will reach around IDR 99.16 trillion for four-wheeled vehicles and around IDR 10.05 trillion for two-wheeled vehicles. In 2020, there will be 232,259 two-wheeled motorized vehicles and 42,397 four-wheeled vehicles. This is what underlies the need for an automotive center in the city of Medan with the aim of providing convenience for the people in the city of Medan and even around it in obtaining everything related to the automotive by considering efficiency and comfort. To create a characteristic of this building using a futuristic architectural theme, where this theme gives the impression that it is always up to date or oriented towards the future. The analysis method is carried out in this design process, which will then obtain a solution in the form of a concept that is applied to the design. The output of this design is in the form of 3-dimensional drawings and working drawings. To create a distinctive characteristic, this building uses a futuristic architectural theme, where this theme gives the impression that it always keeps up with the times or is oriented towards the future. The analysis method is carried out in this design process, which will then get a solution in the form of a concept that is applied to the design. The output of this design is in the form of 3D drawings and working drawings. To create a characteristic of this building using a futuristic architectural theme, where this theme gives the impression that it is always up to date or oriented towards the future. The analysis method is carried out in this design process, which will then obtain a solution in the form of a concept that is applied to the design. The output of this design is in the form of 3-dimensional drawings and working drawings.

Keywords: Two and Four Wheeled Vehicles, Automotive Center, Futuristic Architecture

ABSTRACT

Four-wheeled and two-wheeled motorized vehicles are very important and inherent needs for human life, this is very important because it makes it easier for humans to reach the place they want to go to. This is also the cause of the development of automotive shops in Medan City and its surroundings, because this sector has a clear investment value. Supported by the statement of the Ministry of Industry in 2021, where the investment value in the automotive industry reached a figure of around IDR 99.16 trillion for four-wheeled vehicles and for two-wheeled vehicles around IDR 10.05 trillion. In 2020, two-wheeled motorized vehicles were 232,259 units and four-wheeled vehicles were 42,397 units. This underlies the need for an automotive center in Medan City with the aim of providing convenience for people in Medan City and even its surroundings in getting everything related to



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<http://doi.org/10.32734/koridor.v15i1.13494>

automotive by considering efficiency and comfort. To create a characteristic of this building, a futuristic architectural theme is used, where this theme gives an impression that always follows the times or is oriented towards the future. The analysis method is carried out in this design process, which will then get a solution in the form of a concept that is applied to the design. The output of this design is in the form of 3-dimensional drawings and working drawings. where this theme gives an impression that always follows the times or is oriented towards the future. The analysis method is carried out in this design process, which will then get a solution in the form of a concept that is applied to the design. The output of this design is in the form of 3-dimensional drawings and working drawings. where this theme gives an impression that always follows the times or is oriented towards the future. The analysis method is carried out in this design process, which will then get a solution in the form of a concept that is applied to the design. The output of this design is in the form of 3-dimensional drawings and working drawings.

Keyword:Two and Four Wheels Vehicles, Automotive Center, Futuristic Architecture

1. Introduction

The capital city of North Sumatra Province which is the center for driving the provincial economy is Medan City, which has an area of ± 265.10 km² and has a population of ± 2.44 million people, which borders directly with Deli Serdang Regency.(Central Bureau of Statistics for North Sumatra Province, 2021).

This is in line with the high demand for motorized vehicles, in the field of land transportation in the form of four-wheeled and two-wheeled motorized vehicles. Currently, motorized vehicles are very important and very integral to human life and are used to make it easier to reach destinations. The investment value in the automotive industry reaches around IDR 99.16 trillion for 4-wheeled vehicles and around IDR 10.05 trillion for two-wheeled vehicles, where production capacity reaches around 2.35 million units per year for 4-wheeled vehicles and around 9.35 million units per year for 2-wheeled vehicles(Indonesian Ministry of Industry, 2021). In 2020 the number of two-wheeled vehicles, especially in the city of Medan, will reach 232,529 units and four-wheeled vehicles 42,397 units(Central Bureau of Statistics, 2020).

Of course, motorized vehicles cannot be separated from the need for spare parts as routine maintenance and accessories as aesthetic enhancements or support for the vehicle. Therefore, this is very closely related to automotive sales, where automotive shops are very important for the community in providing their automotive needs, and this makes automotive shops develop in the city of Medan.

Previously, at the unit handover ceremony to the tenants of the PIK 2 Automotive District on February 17 2023, Rudy Salim as CEO of Prestige Corp and Shareholder of the Automotive District said "Starting with PIK 2, this Automotive District concept is also planned to be opened in various big cities in Indonesia ". To make things easier for the public, we need a platform that is equipped with various supporting facilities to meet the needs of the general public and automotive shop business owners for automotive goods in Medan City to make it more efficient and effective in the form of the Automotive Center Building on Jalan Putri Hijau, Kesawan Village, Medan District West, Medan City.

The design of the automotive center building not only considers the functional aspect, but also the aesthetic aspect so that this building can have distinctive characteristics so that it is easily recognized by the public, therefore this building applies a Futuristic Architecture design theme. Futuristic has the image that a building means it has an impressive image that the building is oriented towards the future, or an image that the building always keeps up with the times which can be seen through several architectural expressions(Rahayu & Hidayat, 2021). The application of the futuristic theme to this building can be seen in the shape of the building and the building facade so it is easy to recognize.

1.1 Theory

Automotive is a general term for everything related to transportation(Yandarmadi & Tjandra, 2023).In addition, there is another understanding of automotive, which is a field of expertise regarding land transportation with the operation of using machines, especially cars and motorbikes(Revelation Dwi Yudono et al., 2022). So, more clearly, automotive is a vehicle that uses an engine as a driving force which aims to

make it easier for people to move places, in this case the vehicles in question are two-wheeled and four-wheeled vehicles, even more so.(Bagus Cahyono et al., 2018).Therefore,The automotive industry is predicted to be able to influence business and the economy which has great potential in Indonesia(Setiawan & Satwikasari, 2021).

The center is a place that is located at the center, midpoint, starting point or as a set, leader(Gunawan, 2023). Apart from that, the center is the basic principle that makes it a point of view and reference that has properties that are able to attract attention in everything, even those around it.(Fairuz Endriana et al., 2021). The automotive center is a place or place for buying and selling that has other functions to present or promote specific products for the automotive industry as well as other supporting goods that have facilities to support the activities in it.(Ardi et al., 2020).The automotive center is a place for land transportation exhibitions that use machines, especially cars and motorbikes, to be traded and exhibited to the public for economic needs, pleasure, entertainment and education.(Revelation Dwi Yudono et al., 2022).

1.2 Theme

Futuristic architecture emerged in Italy at the beginning of the 20th century. Architect Filippo Tommaso Marinetti, who was a poet, initiated futuristic architecture in 1909, which was a component of the artistic movement or futurism art. His poetry contains the idea of breaking down barriers to ancient art and architecture. So many architects are attracted to this idea, therefore futuristic architecture has a tendency to completely reject classical ideas and show dream-like designs(Sumalyo and Yulianto, 2005). Futuristic is a thought to show freedom to express or state ideas in an unconventional, creative and innovative way, resulting in designs with dynamic properties that can change according to desires and time.(Maulana & Parliana, 2021). Futuristic has the perception that a building has an impressive image that the building is directed towards the future, or an impressive image that the building always follows developments which can be observed in many architectural expressions(Rahayu & Hidayat, 2021). Futuristic architecture adheres to the principles of calculation, courage and simplicity to achieve maximum light flexibility, the use of architectural materials in the form of reinforced concrete, glass, iron, textiles, fiber, replacements for stone and wood have been developed(Cahya Nugraha, 2021).

The book "Futurism An Anthology"(Lawrence Rainey, 2009)has a futuristic theory used in design which defines futuristic architecture as follows, first. To get optimal flexibility, careful and mature thinking is needed, as well as courage. Second, pay attention to the artistic expression in the appearance. Third, create a dynamic aspect by not using geometric shapes but using elliptical or slanted lines. Fourth, do not express the desired shape of the building through decoration or what is called ornamentation. Fifth, it is the key to change to find new inspiration, especially in the use of technology. Sixth, the application of futuristic architecture that dares to be different is carried out to balance humans with their environment.

2. Method

Study Category This study is a qualitative study with a narrative descriptive approach which aims to describe the actual situation with data derived from architecturally related theories, starting with data collection, data processing to determine applications of futuristic architectural concepts.

2.2 Design Location

The location chosen is land owned by the Deli Tobacco Hospital under the auspices of PTPN II (Persero) which has no longer operated permanently since January 1 2012. The total land area owned by the Deli Tobacco Hospital is ±3.8 Ha. Precisely on Jalan Putri Hijau, Kesawan District, Medan City, North Sumatra.

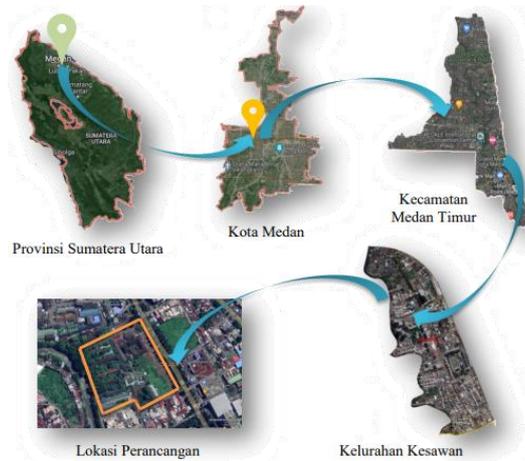


Figure 1. Design Location
Source: Google Maps

3. Findings and Discussion

3.1 View of the Building

The orientation of the building is facing northeast, this view is chosen as the main view of the building so that people can see the front view of this building via Jalan Putri Hijau.

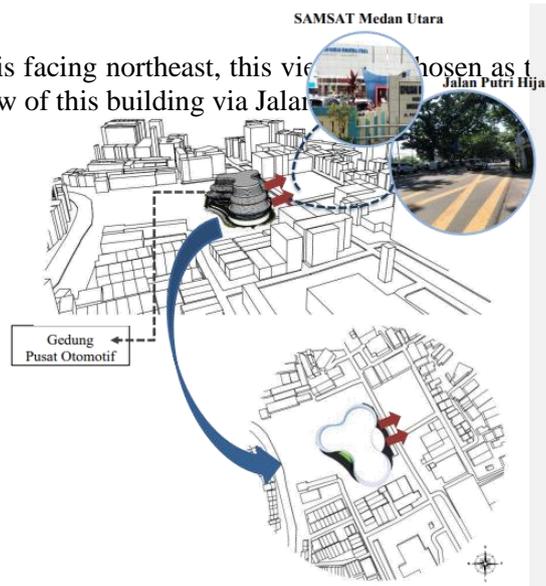


Figure 2. Design Location
Source: Google Maps

3.2 Site Boundary

The north side of the site is directly adjacent to the Putri Hijau Hospital which is currently still operating, on the east side or precisely in front of the site it is bordered by Jalan Putri Hijau and SAMSAT Medan Utara, on the south side the site is bordered by a housing complex and on the west side of the site The site borders a river.



Figure 3. Site Boundary
Source: Personal Documents

3.3 Site Achievements

The location of the site is on the edge of a secondary arterial road, namely Jalan Putri Hijau, where this road is a one-way street. The site location can be reached directly via the secondary arterial road, namely Jalan Putri Hijau, using private vehicles, public transportation or the Trans Metro Deli bus. The site can also be accessed via an alternative road, namely the Orange Merak road which will then pass through Putri Hijau I/II road.

For access to the building, the site entry and exit areas are at the front of the building. Precisely on the side of Jalan Putri Hijau, this alternative was chosen because it makes it easier for visitors and vehicle circulation becomes more effective, so that the development area in that area has its own vehicle circulation.

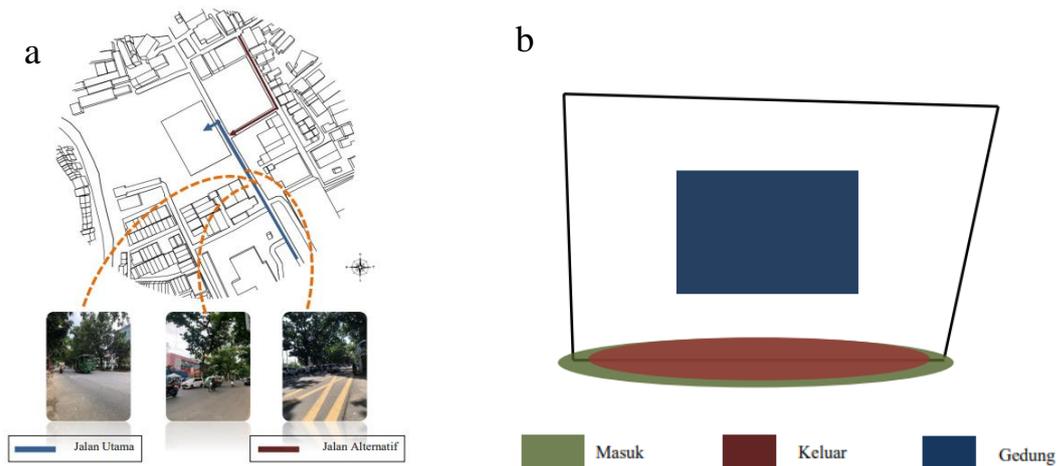


Figure 4. (a) accessibility image; (b) image of the reach to the building
Source: Personal Documents

3.3 Form Study

The mass shape of the building was designed taking into account the characteristics of futuristic architecture, namely by using a circular shape which is a dynamic shape, where this shape uses curved lines and ellipses.



Figure 5. Building Form
Source: Personal Documents

3.4 Facilities

Facilities available at the automotive center building include vehicle exhibitions and two-wheeled and four-wheeled spare parts, doorsmeeting, coating, tenant food and beverage, marketing of two-wheeled and four-wheeled vehicle accessories and other supporting facilities.



Figure 5. Facilities on the LG Floor
Source: Personal Documents

4. Conclusion

The automotive center building is located in the central area of Medan City, namely on Jalan Putri Hijau, Kesawan Village, West Medan District, this building was designed with the aim of providing a more efficient platform for automotive consumers in Medan City and its surroundings.

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