



Digital Art Gallery With Infill Development Design Approach in Medan City (EX Werenhuis Site)

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Abstract. Medan is home to a number of historical buildings from the colonial era and the Islamic Malay Kingdom of Deli, many of which are now heritage sites. However, some buildings remain abandoned, such as the Warenhuis building on Jalan Hindu. Built in 1918 and protected by Law No. 11/2010 and Medan Mayor Decree No. 433/28.K/X/2021, Warenhuis needs to be revitalized to maintain its cultural significance. The COVID-19 pandemic has increased interest in digital connectivity and art. Advances in virtual reality and augmented reality have created new immersive art experiences. The 2000s saw significant growth in the field of new media art, with more and more art collectives utilizing technology. The Cultural Promotion Law No. 5/2017 focuses on the protection, development, and utilization of the arts. Medan, the third largest city in Indonesia, has great potential as a digital art gallery that helps promote culture through conservation, development and community participation. The regeneration of Warenhuis as a digital art gallery uses an infill development design that blends contemporary digital art with the classic architecture of the building, creating a dynamic and inclusive art space while maintaining its historical value.

Keywords: Cultural Heritage, Gallery, Digital Art, Infill Development Design

1. INTRODUCTION

Medan is a city rich in historical buildings, ranging from colonial relics to those of the Malay Islamic Kingdom of Deli, all of which bear witness to its colonial past. Many of these colonial structures are now designated as cultural heritage sites that need preservation. Some have been repurposed as offices, museums, or hotels, while others, like the Warenhuis building on Hindu Street, have been neglected. Built in 1918 by N. V Medan Warenhuis and designed by Gerard Bos, the Warenhuis building is protected under Law Number 11/2010 and Medan Mayor Decree Number 433/28.K/X/2021. Its current dilapidated state necessitates revitalization to maintain its historical value and function.

The Covid-19 pandemic has shifted societal behaviors and heightened interest in art across all age groups, particularly through digital platforms. This has opened new avenues for artistic expression via virtual and augmented reality, leading to the emergence of interactive and immersive art forms. The early 2000s saw a rise in new media art, with a 58% increase in art collectives from 2011-2020. These collectives often integrate technology into their artistic practices.

According to Law No. 5/2017 on the Advancement of Culture, one of the key areas of focus is art. This law promotes the development, protection, utilization, and fostering of

art, with the Ministry of Education, Culture, and Research playing a pivotal role in supporting new media art through various initiatives .

As a dynamic and multicultural city, Medan, Indonesia's third-largest city, holds great potential for digital art galleries. Such galleries can cater to the diverse population of Medan and extend their reach regionally. Establishing a digital art gallery in Medan will support cultural advancement strategies by providing venues for exhibitions, entertainment, recreation, and media appreciation, blending modern digital art with classic architecture.

The chosen approach for revitalizing the Werenhuis Building as a Digital Art Gallery is the Infill Development Design. This concept ensures a seamless integration of new and old structures, preserving the building's historical integrity while making it a vibrant hub for contemporary art. This approach will help preserve the building as a significant cultural landmark, blending the old with the new to create a dynamic space for artistic engagement.

2. LITERATURE REVIEW

Art Gallery

A gallery is a hallway or place; can also be interpreted as a place that exhibits three-dimensional works of art by a person or a group of artists or can also be defined as a room or building where three-dimensional works of art are displayed. or a group of artists or it can also be defined as a room or building in which to exhibit objects or works of art .

A gallery is a place that functions as a means of exhibiting works of art, and in addition it also functions as a place of promotion and buying and selling art. Besides that gallery can also be used as a place to gather between the party that organizes the exhibition of art exhibitions with visitors, so that from these gathering activities, the organizers of the organizers of art exhibitions can showcase, promote and trade their works of art to visitors.

Function of Art Gallery

The gallery has a main function as a communication tool between consumers and producers. The producers in question are artists while consumers are collectors and the public. The functions of the gallery according to include:

1. As a place for the promotion of art goods.
2. As a place to develop a market for artists.
3. As a place to preserve and introduce works of art and culture from all over Indonesia.
4. As a place for business development and business organization between artists and managers.

Digital Art

Digital art is artistic work that uses computers, technology, and digital information content as a tool and medium for artistic creativity. digital information as a tool and medium for artistic creativity. Digital art can be known as computer art (in 1970), multimedia art, interactive art, electronic art, and new media art (as it is called today). Digital art involves computers in the creation process, but the end result is not visible. using computers or digital elements.

Elements of Digital Artwork

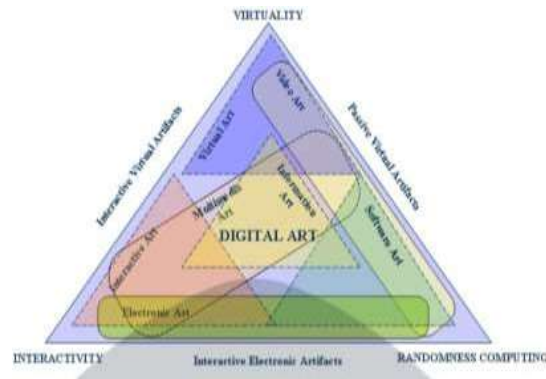


Figure 1. Classification of Digital Methods

Digital art is based on three main concepts: controlled randomness access, virtuality presentation, and interactivity. controlled random access, presentation virtuality, and interactivity. These elements have always been present in digital artworks from the 1960s to current installation works today.

- Randomness Access

Algorithm-based instructions open up many possibilities instantly to the media elements. media elements. The result seems to give an infinite number of combinations.

- Presentation Virtuality

The physical object of art is transferred to a virtual or conceptual object. The concept of art itself is virtualized.

- Interactivity

Art viewers are seen to be able to actively engage with and change the artwork itself.

Infill Development Design

Infill Development Design is a concept that represents the successful collaboration and compatibility (height and material) between new elements (facades) in the old construction of natural or cultural heritage buildings to gain harmony with existing buildings

and determine the strategy of infilling conservation building areas . The application of the infill development planning method to an area or historic building is seen as an effort to improve the quality of the historic building or surrounding area so that the building/area is not considered old or obsolete.

Principles of Infill Development Design

There are several guidelines that can be applied to new construction with the Building infill method in historic areas .

a. General.

The planned new building should match the existing buildings around it in terms of size, scale, color, material and character. Even if the new building later adopts a different architectural style, the new architectural style is still acceptable as long as the new building can reflect the atmosphere or style of the surrounding architecture (sense of place).

b. Height.

The height of the planned building should match the height of the surrounding buildings, in which case the new building does not have to be the same height, but the resulting height difference is not significant.

c. Massing.

If apartment buildings of medium or high height are to be constructed, they should stand in relation to the neighborhood in terms of height regulation and building properties. The construction platform should be in relation to the scale of other buildings and the design of the tower should have characteristic elements of the surrounding buildings.

d. Street Wall.

New buildings should be able to maintain the relationship with the street that is usually formed by other buildings in the area, such as the distance between the building surface and the street frame, whether parking is aligned in front of the building street, etc.

e. Facade Composition. Facade composition should include several elements viz:

- a. The arrangement of the building facade is divided into three parts, namely the bottom, middle and top of the building.
- b. The top edge of the building is determined by the arrangement or similar to the surrounding buildings.
- c. The pattern of openings and the percentage of openings on the facade are in accordance with neighboring buildings.

- d. Reasonable percentage of openings and entrances, especially on the first floor of the building. The ground floor of the building should have a high proportion of open space to create a pedestrian impression.
- e. In residential buildings, avoid placing garage doors on the first floor that fill the building facade and face the sidewalk.
- f. Pedestrian Experience
New buildings should have architectural elements on the ground floor of the building, such as many openings to be pedestrian-friendly.
- g. Materials and Details.

New construction should use building materials that are similar to the surrounding area. In the case of new buildings, building details should be adopted as far as possible, such as textures or elements that characterize the surrounding buildings.

Bagian ini menguraikan teori-teori relevan yang mendasari topik penelitian dan memberikan ulasan tentang beberapa penelitian sebelumnya yang relevan dan memberikan acuan serta landasan bagi penelitian ini dilakukan. Jika ada hipotesis, bisa dinyatakan tidak tersurat dan tidak harus dalam kalimat tanya.

3. METHOD

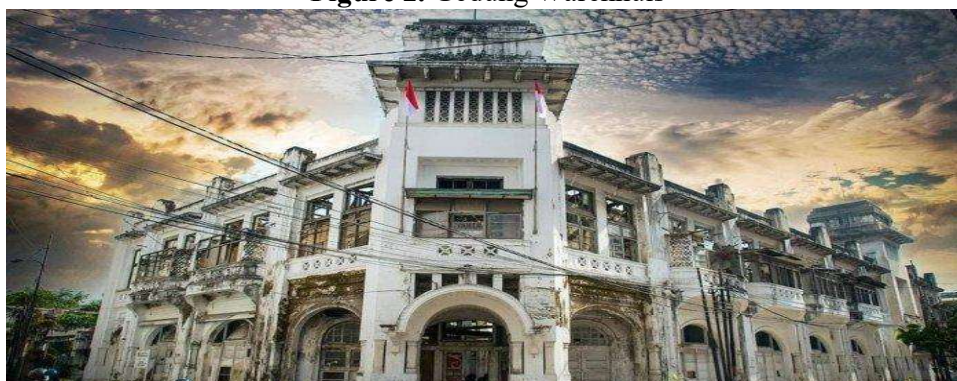
The data collection methodology used in the Revitalization of the ex-Warenhuis building with the Adaptive Reuse approach this time uses qualitative methods. Qualitative research method is a research method based on the philosophy of postpositivism which is used to examine objects with natural conditions (real conditions, not set or in experimental conditions) where the researcher is the key instrument [9]. This method is considered appropriate because researchers conduct analysis related to literature studies and field observations.

Research data obtained through literature studies that support the building design process. These data can be in the form of comparative studies, theories and expert opinions. The theories of the literature study were obtained based on journals, architecture books and architecture magazines. The sources taken to conduct the study refer to the function of the building to be designed, namely the Digital Art Gallery and the theme to be applied, namely the Infill Development Design approach.

4. RESULTS AND DISCUSSION

Warenhuis Building

Figure 2. Gedung Warenhuis



Warenhuis is a department store in downtown Medan built by the trading company N.V Medan Warenhuis. Gerard Bos designed Warenhuis in 1918. The Warenhuis building has two floors and a total footprint of 8000 m², with a ground floor of 1400 m² and a second floor of 1000 m². In the past, Warenhuis was a shopping place for the elite. Only people with high status and a lot of money could shop here. The depiction of this shop is the same as a mall today [10].

The Warenhuis building is located at the intersection of Jalan Ahmad Yani and Jalan Hindu. The main entrance to the building is curved according to the shape of the street and the building tower emphasizes the main entrance. The plan of the front of the building is L-shaped, there are stairs on the north side of the second floor, and the building glass is stained glass. The interior of the building is like a mall that sells a variety of goods, and there is a chandelier in the middle of the building that symbolizes the luxury of the building.

Location of Design

The project with the title Digital Art Gallery With Infill Development Design In Medan City (Ex Werenhuis Site), which accommodates supporting digital art activities with facilities that support existing activities. The aim is to provide a place for digital-based art activities for the people of Medan city and tourists. The location of this project is located on Jalan Hindu, Kel. Kesawan, Kec. Medan Baru, Medan City.



Figure 3. Location of Design

For this location, it has an area of approximately 1.5 ha, and has boundaries, namely on the north side there is Jl. Jend Ahmad Yani VII, shops, and the intersection of Jl. HAR Syihab, on the south side there is the former Jacobson Office facing Jl.Perdana, on the west side with the Deli River and PT.Deli Megah Valutindo, and on the east side there is Jl. Hindu and shops.

Land Condition

In the Detailed Spatial Plan (RDTR) of Medan City, the design site is located in Medan Baru Sub-district, which is an area designated as a trading area close to the city center. The site is located in a cultural heritage area, where around the site location there are also many colonial buildings.

- Site area: \pm 1.5 hectares
- Road building line: 6 meters
- River building line: 12 meters

Zoning Concept

The zoning division on the site is divided into 3 zones. The public zone is intended as a park, waterfront, and public plaza where everyone can access. Then there is a service zone in the form of a service parking lot connected by a service area on building handling. A semi-private zone in the building where only people who buy tickets can access the facilities in the building.

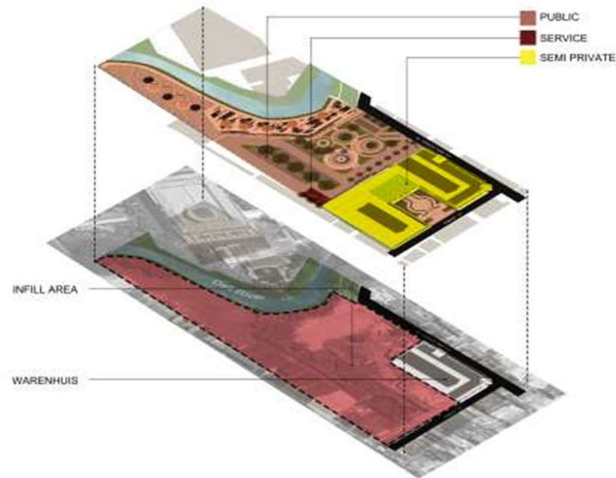


Figure 4. Zone on the Site

Sirkulasi Concept

Access to the building can be by Jl. Ahmad Yani VII which leads to the parking lot and drop off, then on Jl. Hindu there is a drop off, and also access for pedestrians because there are sidewalks on each edge of Jl. Hindu and Jl. Ahmad Yani VII.



Figure 5. Vehicular and pedestrian circulation

Infill Development Design Concept

There are several guidelines that can be applied to new construction with the Building infill method in historic areas .

a. General

The design of the new building adapts the existing buildings around it in terms of size, scale, color, height and character.



Figure 6. Front view of the design

b. Height

There is no contrasting height difference between the new building and the existing building

Figure 7. height in the design result



c. Massing

The shape of the mass is adjusted to and there is no change in the orientation of the building mass and the orientation duplicates other buildings.



Figure 8. Mass form in the design result

d. Street Wall building divider with the street.

The same sidewalk as the existing building along the building.

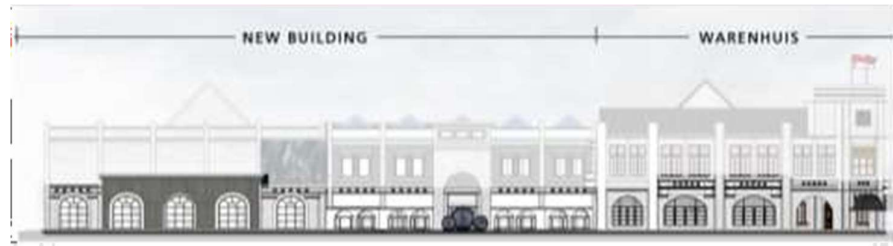


Figure 9. Sidewalk in the design result

e. Lower Facade Composition

The 1st floor applies the same composition, the 1st floor is made higher than the other floors and there are openings with a large size.

Figure 10. Lower facade composition



f. Pedestrian Experience

The first floor of the building has wide openings that create a broad impression for pedestrians.

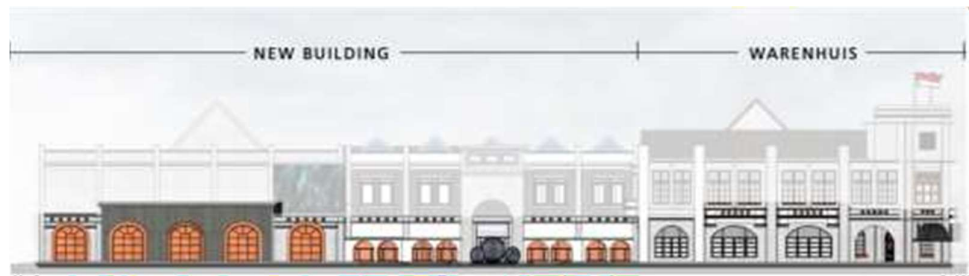


Figure 11. Pedestrian Experience

g. Materials

The building applies some details from Werenhuis and the same materials and colors. But in the new building there are several parts that use new materials, namely ACP with different colors on the façade



Figure 12. Material usage

Design Concept

The concept of revitalizing Warenahuis digital art gallery with Infill Development Design approach aims to preserve heritage buildings as well as the potential to establish digital art galleries that can support cultural promotion strategies through art presentation, entertainment, and appreciation.

So the basic concept of design needs to support facilities according to the needs. The program consists of two main parts: educational facilities in the form of workshops and seminar rooms and gallery facilities, as well as supporting facilities such as play spaces, cafes, and public open spaces such as parks, waterfronts, and public plazas. In the selection of digital artworks, there needs to be a limitation. This limitation is based on the grouping of artworks that have been exhibited by the artists.



Figure 13. design concept

5. CONCLUSIONS AND SUGGESTIONS

The Infill Development Design concept was chosen for the revitalization of the Warenahuis Building into the Medan City Digital Art Gallery. This concept ensures continuity between the new and old buildings without damaging its historical value. This revitalization can preserve the historic building and integrate digital art with classical architecture, creating an interesting contrast between the past and the present. and Support from the application of official rules and building revitalization standards is essential for the success of this design.

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