

## The influence of the existence of new landmark on urban spatial Case study: Semarang Old City Museum, Indonesia

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ARTICLE INFO	ABSTRACT
<p><i>Article history:</i> Received July 30, 2023 Received in revised form Nov. 07, 2023 Accepted Nov. 25, 2023 Available online December 01, 2023</p> <p><i>Keywords:</i> Landmark Old city museum Urban design elements Urban spatial</p> <p><b>*Corresponding author:</b> Suzanna R. Sari Department of Architecture, Faculty of Engineering, Universitas Diponegoro, Indonesia Email: <a href="mailto:ratihsari@yahoo.com">ratihsari@yahoo.com</a> ORCID: <a href="https://orcid.org/0000-0002-9574-9254">https://orcid.org/0000-0002-9574-9254</a></p>	<p><i>The Old City Museum, located in the middle of the Bubakan Roundabout, is one of the new landmarks in Semarang City due to its magnificent existence and attractive architectural design. However, the existence of this museum has changed the urban spatial in the area, such as flow of vehicles around the museum, making it difficult for people to access detours because the area is no longer in the form of a roundabout, and also the unavailability of special parking spaces for this museum makes visitors forced to park on the shoulder of the road or in the shophouses around the roundabout. Therefore, in accordance with this phenomenon, this study aims to determine the significant existence of this museum to the spatial layout in the Bubakan area, Semarang, seen from the eight of urban design elements. The qualitative method was used to find answers to phenomena and problems in the field. Observation and interview with tourists and local people were conducted to get the information related the effectiveness of urban spatial in Bubakan Area, Semarang. The result showed the importance of the existence of this museum and provided suggestions to make it more conducive.</i></p>

### Introduction

Bubakan Roundabout was designed to facilitate traffic circulation around the shopping area, which increased as time progressed due to the innumerable number of vehicles while the land became narrower. The Bubakan area is fairly connected to the Old City because the Old City is only approximately 100 meters from the roundabout. From Bubakan toward Jurnatan is a busy shopping area at the heart of the city connected to many access roads with numerous motorists, which makes the region congested. The roundabout is designed to contain a green open space and also a polder pond, as shown in [figure 1](#). People usually relax at the park to enjoy its serenity and the atmosphere. However, the park is overlooked by the public because of its existence in dense traffic with limited parking space. The issue of flooding also triggered the community's

disinterest, and as a result, it became abandoned and unkept.

Semarang City initiated a revitalization program at several locations such as the Old City Area, Tugu Muda, Johar Market and the Bubakan Roundabout. This program led to the re-branding of Bubakan Roundabout, which was initially a green open space that was not visited by the masses. However, it is presently transformed into a tourist attraction spot entitled The Old City Museum. Although the roundabout was quite far from the Old City area, it was named in the same way as it to expand Old City and revive Bubakan. The roads were also revitalized to support this museum which later became an interesting destination. To realize this, the head of the Public Work Service of Semarang City dismantled the channel plates, preventing puddles during the rainy season. The construction procedure started in late 2020 and was completed by the end of

2021. The design of this museum area was not in the form of a roundabout, rather it extends to one side of the road, between Jalan MT Haryono and Jalan Pattimura, thereby making it impossible for the vehicles to make a detour (Jokrit 2020; Pemerintah Kota Semarang 2021), as shown in figure 2. The people of Semarang City were not accustomed to such a circulation flow and needed to pass a detour when they wanted to reach a certain section of road.

The impact of this development is that the circulation flow of vehicles became denser. This should have been smoother because there are no detours, which makes the roundabout congested with immovable vehicles. Furthermore, the building used by tourists needs access to the museum, which is still unavailable. Tourists were also forced to park their vehicles in the Old City area, approximately 1 km away. Only a few tourists were willing to walk towards the museum after parking their vehicles on the shoulder of the road or in front of shops. This is detrimental to shop owners and road users who usually use the roundabout. From this problem, researchers assume that the presence of a new landmark at the Bubakan roundabout will change the urban spatial order, as can be seen from the spaces around the Bubakan area having to change function into new spaces, resulting in degradation between one space and another. Besides, the roundabout became even hotter due to a lack of greenery, unlike in the past when it was filled with trees, as shown in figures 1 and 2.

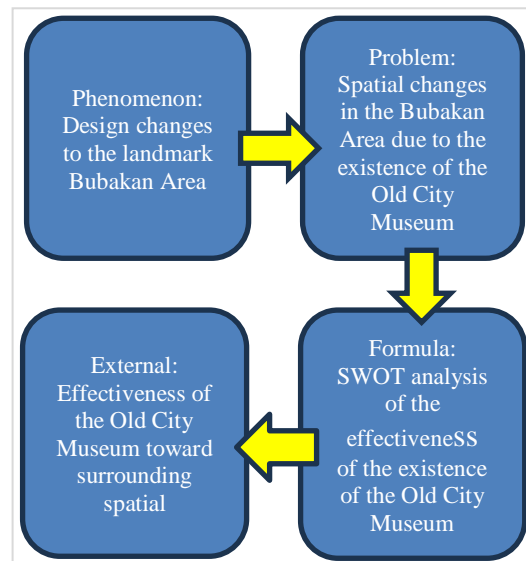


**Figure 1.** Bubakan Roundabout condition before the 2018 revitalization  
Source: Rajendra (2018)



**Figure 2.** Condition of the Old City Museum in 2022  
Source: Setyawan (2022)

Based on these phenomena, this study aimed to analyze the influence of the Old City Museum as a landmark in Bubakan City towards the urban spatial surrounding and also people's behavior who cross over the roundabout. It is important to evaluate its advantages and disadvantages, as well as external opportunities and threats. This aids in analyzing the necessary steps that can be adopted to optimize the surrounding environment related to urban designs, such as visuals, integration between elements, and the support of related parties. Thus, we will understand that the existence of new landmarks will raise new challenges in urban spatial planning, in terms of visuals, integration between elements, as well as support/obstacles from related parties. A diagrammatic representation of the flowchart is shown below (figure 3).



**Figure 3.** Study thought flow scheme

## Literatur review

### City landmark

Lynch disclosed that landmarks are one of the elements that shape a city's image and help people know the surrounding areas. It is also interpreted as specific visual symbols used for identification. Therefore, landmarks play an important role in shaping the image of a city. This image or impression of passion captures an individual's personality. For example, one easily captures a city landmark with a particular depiction, making their visit memorable. In the 60s, an object was declared to be a city landmark when it met the following criteria (Ndolu, Sasongko, and Reza 2018; Hanif and Qomarun 2021; Mangunwijaya 1988; Lynch 1964).

1. Having unique elements and other physical characters that are easy to remember (unique, memorable)
2. Easily identifiable. This relates to the demand that landmarks need to be easily recognized by observers.
3. It has a distinctive shape in a relatively large area or span. This is realized by discerning a contrast between the landmark object and its background.
4. It is perceived as being valuable in the area or place. This could be in the form of a historical or aesthetic field.

### Elements of urban design

space for a healthy community lifestyle. Based on this reason, the architectural elements need to be directed according to the outlined development scenario. Every urban design need to pay attention to these elements, to develop a distinctive city with clear characteristics. These are classified into eight categories, including land use, building shape and mass, circulation and parking, open space, pedestrian, marking, activity support, and conservation (Ristanti 2022; Shirvani 1985).

## Method

This study adopted a qualitative method to analyze the phenomena and emergent problems related to urban spatial planning changes caused by city landmarks' alterations. The Old City Museum was selected as a case study because it is a new building that has not been used for a long time since it was completed at the end of 2021. In addition, this museum has a different landscape design from what was initially in the form of a

roundabout to the closure of a road section to alter the flow of traffic circulation in the Bubakan area. The museum is quite attractive and is perceived as a new landmark. Incidentally, this altered the function and shape of other spaces.

Data was acquired through the following techniques observation and interviews. These were carried out based on the theory of urban design elements consisting of land use, the shape and mass of buildings, circulation and parking, open spaces, pedestrian paths, supporting activities, markers, and preservation. Interviews were conducted using stratified random sampling techniques to determine reliability. The sample levels were residents of the Bubakan area, natives of Semarang City in general, and those residing in neighbouring regions. The selection process was aimed at discerning the similarities and differences in the perceptions of several informants (Shirvani 1985). Some of the questions that will be asked are about changes in space felt by informants, changes in behavior by informants due to spatial changes that occur, to opinions regarding the existence of the old city museum which was only established in recent years. Some of the opinions collected will be classified in the findings chapter and analyzed regarding spatial changes and changes in people's behavior in the area.

The acquired data were descriptively analyzed to measure the effectiveness of the Old City Museum design based on public perceptions and changes in the shape and functions in the Bubakan area. Dialogues regarding relevant theories led to the realization of output in the form of recommending an effective strategy that needs to be adopted. It was evaluated by using SWOT analysis to obtain optimal spatial planning even though there has been a change in space, from an internal aspect (local community and spaces that have already been formed) as well as an external aspect (general public to local government).

## Findings

Bubakan Roundabout is located in Purwodinatan Village, Central Semarang District, Semarang City. It is located in a busy area, and to the north is a tourist destination, namely Old City, while to the east, south, and west are marked with shopping complexes. Johar Market, one of the historical marketplaces in Semarang City, is quite close to the roundabout, which is relatively 600 meters apart (see figure 4). This led to its extension to the conservation area. In addition,

historical artifacts were also discovered in the area. This is behind the restoration and utilization of Bubakan park as a museum. According to the Deputy Mayor of Semarang, it is intended to be used to display artifacts found in the roundabout.



**Figure 4.** Location map of Bubakan Roundabout near to Semarang Old City  
Source: Google Maps (2023)

Presently, Taman Bubakan has been restored and revitalized into the Old City Museum. Although, the lack of green open space makes it look contrasting. Previously Bubakan Garden contained plant elements and water, and as a green open space, the park is quite effective in terms of neutralizing the polluted air circulation. Residents of the city need green open space because of its beneficiary functions, such as a protection area, means of observing a clean, healthy, harmonious and beautiful environment, to improve the microclimate as well as the regulation of water and urban systems. It was eventually restored for the museum to be built. Although the initial plan was to create a polder (flood control system) and park for the community, because it was discovered to be a historical site, the government decided to erect a museum (Widjajanti 2013; Fatubun 2018).



**Figure 5.** Activities at the Old City Museum  
Source: Rositajalanjalan (2022)

Presently, the Old City Museum is a new landmark in Bubakan Roundabout. This structure has a dominating formula singularity in the surrounding environment. Its contrasting and unique shape gives it a prominent appearance, contextual or background representation of the building, strategic place, meaningful sequences, and specific details that make it more exclusive. Figure 5 shows that this museum is magnificent and boosts the image of the park that was once abandoned, now it is more useful because it is visited by innumerable visitors (Lynch 1964). Despite this, the environment is still similar to when the museum was still a park.



**Figure 6.** Location map of Bubakan Roundabout (Now Old City Museum)  
Source: Google Maps (2023)

The museum's construction completely overhauled the design and the Bubakan Roundabout, which is now no longer a circle but a semicircle, as shown in figure 6. Initially, the roundabout was a circular road, although lately, it was converted into a semicircle as indicated on the updated Google Maps. This is because both the erection of the museum and the park extended to some parts of the road, therefore, the traffic situation is no longer detour but one way. The existence of this museum significantly affected the spatial arrangement of the roundabout and also people's behavior who cross over it. When viewed from the eight elements of urban design, the space changes were due to the existence of the Old City Museum.

#### 1. Land use

Land use is the grouping of lands based on their status and utilization, for example, its employment for food cultivation, forestry, nature reserves, etc (Firmansyah 2013). In the Bubakan Roundabout, its use was dominated by shops and services, such as those that sell

electrical equipment and building materials, including restaurants, hotels, banks, and gas stations. Presently, there have been no significant changes in its layout, rather the once passive park was converted into a museum. This is due to two factors firstly, the relevance to meet the needs of the increasing population, and secondly, the increasing demand for quality life (Yusoff 2020). Likewise, people's behavior does not change or feel uncomfortable because the physical buildings around them have not changed much either.



**Figure 7.** Land use in Bubakan Roundabout, Semarang  
Sources: Irwance (2022); researchers' observation (2023)

## 2. Building form and massing

Buildings with at least two floors dominated the structures around the Bubakan Roundabout. On average, the shops had two or more floors. However, only the gas stations had one floor, while others, such as banks, hotels, and restaurants, had more than two floors. The form of the building itself before it was converted to a museum and the facade of the shops does not reflect any characteristics. Although, after the establishment of the Old City Museum, its facade was gradually rebranded in accordance with colonial characteristics. For example, the facade of the BRI bank building was shaped similarly as the colonial building in the Old City area, even though it was not an ancient structure. The

shape and building mass concern aspects of the physical form. The goal is to achieve a balanced, proportional, harmonious, humane-scale mass state by taking into account the contextualization of the surrounding building (Rahmawati, Laksono, and Laksmiyanti 2021). Likewise, the forms of these buildings also do not significantly affect people's behavior because there are no buildings that are significantly different from the others that can distract the views of people passing through the roundabout. People's views have been confiscated because the shape of the museum building is visually different from other buildings in the vicinity.



**Figure 8.** The shape and mass of buildings in Bubakan Roundabout, Semarang  
Sources: Irwance (2022); researchers' observation (2023)

## 3. Circulation and parking

Traffic circulation at the Bubakan Roundabout has undergone a change, one of the access routes was closed, thereby making it impossible for vehicles to detour. The traffic flow from MT Haryono extends towards Jalan Agus Salim or Letjen Suprpto, while the vehicles coming from Ronggowarsito Street and Jalan Agus Salim are unable to turn to the roundabout (Mughis 2022). This impact can be viewed from two perspectives, firstly, the circulation is smoother because there is no accumulation of vehicles on one section of the road. Secondly, the driver becomes uncomfortable due to having to detour far away to arrive at the section of road that

should be passable in one lap. The circulation system is supposed to consider the functional, economic, flexible and convenient aspects of connecting different activities in an area. In addition, there is a parking space where vehicles can park for a long period or just for transit. Sandal parking is divided into on and off streets. The process whereby a large number of vehicles are parked in the shopping and office areas around the roundabout is known as on-street parking. This greatly affects the people circulation, especially with vehicles because those parked on the side of the road tend to obstruct traffic flow at the roundabout (Utami 2018; Ginting and Sejahtera 2019) People get confused and have to adjust to the new circulation flow, so this indeed affects people's behavior passing by on the roundabout.



**Figure 9.** Circulation and parking in Bubakan Roundabout, Semarang  
Sources: Irwance (2022); researchers' observation (2023)

#### 4. Pedestrian paths

Pedestrian paths are special alleys used by those on foot. It is in the form of sidewalks, pavements, pathways, plazas and malls. The pedestrian path around the Bubakan Roundabout is slightly similar to the previous ones. The only difference is that it is connected to the alley linking Jl. MT Haryono and Jl. Patimura to the Old City Museum area because of its landscape. Initially, there was no pedestrian access to the park at the roundabout, leading to its abandonment.

However, due to the revitalization program held in Semarang Old City, tourists from Old City can conveniently work at the museum (Mamuaja, Rompis, and Timboeleng 2018). This is a good influence on people's behavior because not many people walked around the roundabout before it was revitalized but now people are interested in walking in this area, of course to take a walk in the Semarang Old City Museum area.



**Figure 10.** Pedestrian paths in Bubakan Roundabout, Semarang  
Sources: Irwance (2022); researchers' observation (2023)

#### 5. Open space

Public Open Space is a land system that includes roads, parks, and spaces for the erection of buildings arranged in a city network (Hassan et al. 2020). Initially, Bubakan park was an open space which had been abandoned because there was no pedestrian pathway or parking lot. Presently, the open space exists in the form of a landscape. The roundabout, which was initially a park, has been converted to a museum, and there is an access for pedestrians. Apart from these landscapes, there is no other open space around the Old City Museum because it is already crowded with buildings. The neatly arranged garden design makes it attractive for people to visit. The existence of access from pedestrians makes people comfortable to enjoy green open areas in this area. Unlike before the revitalization which was no access to the park.



**Figure 11.** Open space in Bubakan Roundabout, Semarang  
Sources: [Irwance \(2022\)](#); researchers' observation (2023)

#### 6. Supporting activities

Supporting activities is the process of connecting two or more functions to create a more lively, continuous, and crowded area. These are centred on food and accommodation businesses such as restaurants, hotels, offices and trade. The supporting activities at the Old

City Museum continue to grow because it has become a tourist destination ([Putra 2020](#)). Not many people are interested in supporting activities such as food stalls around the roundabout because the stall conditions are not suitable for tourists, but for the local community, this has become a common sight.



**Figure 12.** Supporting activities in Bubakan Roundabout, Semarang  
Sources: [Irwance \(2022\)](#); researchers' observation (2023)

## 7. Signage

The existence of signage is not only an addition, rather it is an aspect that serves to clarify the spatial arrangement of a building. Since its inception, this area has had no markers, indicating that it is called the Bubakan roundabout or park. However, after the gallery was built, there was a marker in the form of an inscription, indicating that in the

middle of the roundabout was an Old City Museum, filled with signs showing the names of the innumerable stores and offices. This makes the visuals around this area more crowded and varied (Wijayanti 2019). There is no significant people's behavior in response to signage elements in this area, as this is a common sight in urban environments.



**Figure 13.** Signage in Bubakan Roundabout, Semarang  
Sources: Irwance (2022); researchers' observation (2023)

## 8. Preservation

Preservation is an activity that is indirectly related to the physical maintenance of artifacts (cultural relics) as received from the curator (Miladiyanto, Ambarsari, and Bidasari 2018). The discovery of these artifacts in the form of an Old City fortress led to the gallery's construction. These were salvaged for display inside the Old City Museum. Preservation efforts are carried out in offices such as Bank BRI of which the façade is shaped similarly to colonial buildings and occasionally undergo maintenance (Senjaya 2020). Some tourists are interested enough to see the artifacts stored in the museum, while others are not. This makes the preservation of historic sites in the area of no consequence to people.

## Results and discussion

In the previous section mentions that the Old City Museum's existence substantially impacts the surrounding layout and people's behavior. There were significant changes in each element due to the construction of this museum. Although some are still in the same conditions as before the museum's construction, it needs to be reviewed more deeply to create a synergistic and integrated city space. This is realized by seeking the support of the relevant governments, including that of Central Java and Semarang City because they are responsible for the existence and ownership of this landmark. In addition, related stakeholders such as architects, a team of cultural heritage experts, and multidisciplinary academics were also involved, thereby ensuring that the design of the city space is in accordance with the stipulated standards, theories, and norms. SWOT analysis was carried out to produce a strategy for optimizing city space in Bubakan Roundabout or Old City Museum.

**Table 1.** SWOT analysis of urban space optimization around the Old City Museum Roundabout

Internal	<b>Strengths</b>	<b>Weaknesses</b>
	<ul style="list-style-type: none"> <li>- The visual form of the building is better and more representative</li> <li>- Open spaces become neater and crowded</li> <li>- The region is well maintained because it is a preservation area</li> <li>- Although the historical area, it is used as commercial land (shops), to increase the income and quality of the region</li> </ul>	<ul style="list-style-type: none"> <li>- Still no parking pockets</li> <li>- Pedestrians are forced to use only one side of the road that is connected to the museum</li> <li>- Signage of buildings that have commercial businesses is quite disturbing to the visuals of the area</li> <li>- Supporting activities are also visually disturbing because they consist of temporary or non-permanent spaces, such as tents</li> </ul>
External		

<b>Opportunity</b> <ul style="list-style-type: none"> <li>- The support of the Semarang City government boosted the realization of this Old City Museum.</li> <li>- Support from relevant stakeholders such as archaeologist, architects, and a team of cultural heritage experts in saving artifacts in the Bubakan Area</li> </ul>	<b>Strategy Strength Opportunity</b> <ul style="list-style-type: none"> <li>- The government, together with related stakeholders, can improve the quality of the museum and its environment to be more representative because this area is part of the Old City area, hence, the visuals of the surrounding buildings need to be uniformed or revitalized</li> </ul>	<b>Strategy Weakness- Opportunity</b> <ul style="list-style-type: none"> <li>- The government and related stakeholders are expected to optimally improve the visuals of the area, such as minimizing signs and tents on pedestrians.</li> <li>- Creating adequate parking pockets for visitors but ensures it does not interfere with the parking activities of the shops around the museum</li> <li>- Creating a pedestrian-friendly circulation that includes the presence of zebra crosses and other elements, thereby making it safer</li> </ul>

that do not have parking pockets and clear pedestrian circulation, plus museum enthusiasts, are rare. This makes the museum even less attractive in the future. The good management of tourist space in the future needs to be clarified

The strategy adopted to optimize city space aims to improve the physical quality of this tourism destination. Meanwhile, by integrating elements of urban design, city image, and other fields of science, this area is bound to have a better visual appearance and quality. Stakeholders who have expertise in specific fields, such as architects, teams of cultural heritage experts, and archaeologists, must be involved to ensure no misconceptions and implementation missions. This is because this region is a preservation area to avoid being completely overhauled, deconstruction or demolition. Although, this needs to be done in a special way, such as not being allowed to change the shape of the building and using similar materials. The spaces in Bubakan Roundabout are more synergistic irrespective of the existence of the Old City Museum. In fact, it is expected to improve the quality of space in this area, and not otherwise.

This research contributes to scientific enrichment in the field of urban architectural design. It is essential because many urban design implementations in Indonesia are not based on applicable rules, therefore, this misconception makes users less comfortable in the city space. Lack of cooperation with related parties is also one factor that triggers a city design's inefficiency. It is important for a practitioner, academic, and the parties in direct contact with a particular project to learn the applicable rules or norms. This research has several shortcomings in terms of urban design elements. It needs to be reviewed more deeply for further analyses and with respect to other multidisciplinary aspects, thereby making it more comprehensive.

## Conclusions

In conclusion, the existence of the Old City Museum in Bubakan Roundabout significantly influences the layout of the surrounding space and people's behavior. This is because, despite new landmarks in this area, some of the surrounding buildings must also follow the visuals or branding of this museum. Since this gallery is part of the Old City area, the surrounding environment is also greatly concerned. It is urged to participate in the revitalization program. However, certain spots or buildings have not been properly developed, such as the non-uniform visuals of the surrounding structures, messy signage, lack of parking lots, inadequate pedestrian circulation, etc. All these need to be improved to support the existence of this museum as one of the tourist destinations in Semarang. The strategy of optimizing the open space around the Old City Museum was employed using a SWOT analysis to create a good integration without violating the scientific rules.

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**Author(s) contribution**

**Suzanna R. Sari** contributed to the research concepts preparation, methodologies, investigations, data analysis, visualization, articles drafting and revisions.

**Djoko Indrosaptono** contribute to the research concepts preparation and literature reviews, data analysis, of article drafts preparation and validation.

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