

The Arrangement of Kapasan Commercial Corridor, Surabaya, Indonesia

Amirah Dzatul Himmah¹, Murni Rachmawati² and Endang Titi Sunarti²

¹Postgraduates Student, Department of Architecture, Faculty of Architecture, Design and Planning, Sepuluh Nopember Institute of Technology, Surabaya, East Java, Indonesia.

²Lecturer, Department of Architecture, Faculty of Architecture, Design and Planning, Sepuluh Nopember Institute of Technology, Surabaya, East Java, Indonesia.

ABSTRACT

The trade sectors provide the biggest contribution to the establishment of the economy and the growth of Surabaya City. It makes Surabaya became the second-oldest trading cities in Indonesia. Kapasan commercial corridor known as the potential traditional trading area in Surabaya that can attract a lot of the interest among consumers around of Surabaya City. However, this trading area has begun to undergo a decline in quality both physically and visually. Thereby, this research aims to arrange physical comprehensively to improve physical and visual quality overall. This research uses walkability analysis techniques in order to identify and assess local characteristics. The results of this study indicated that Kapasan commercial corridor are improved by decrease uncontrolled activities at the roadway and sidewalk. Additionally, the arrangement is enhanced by completing the availability of facilities and infrastructure. In consequence, it can be forming the visual such an attractive trading area.

Key Words: *Urban Design, Walkable Street, Surabaya.*

1. INTRODUCTION

The development of Surabaya City influenced by the role of the trade sector since the Dutch government. The trade contribution has become a strong influence on forming the character of the city. The trading area is an inseparable part of the city space and always packed by pedestrians. The physical characteristics of the trade area must be include factors: walkability, visibility, and parking. Therefore, the trading area must utilize local assets and potential as a point of interest [1]. As a public space, the trade area that allows people to meet each other should be easily accessible through various modes besides driving and ensuring users are in a convenient place to walk. It is thereby presenting an attractive and recreative trading area [2].

Kapasan commercial corridor is the potential traditional trading area in Surabaya City and has become the centre wholesale of garment products that attracted a lot of interest among the consumers around Surabaya City. Especially, it offers fairly economical products with a very strategic location in the centre of Surabaya. As it developed, Kapasan began to undergo a physical and visual decline. It is caused by a lack of maintenance and the unavailability of adequate infrastructure, that impact to anomalies space functions and on circulation density along of Kapasan corridor. This condition was justified by Masdawati Saragih as chief police of sub-district that explained, "Kapasas as the commercial corridor has a major problem related to congestion, it is caused very dense traffic flows. The main causes are illegal parking and loading-unloading activities that stopped on the roadside [3]. Relating to this situation, Iswandi as a section-head of department parking management of the transportation office explained that, "The traffic problems of Kapasan have not been resolved, for this situation we need a comprehensive arrangement as a problem-solving innovation related to the circulation and parking" [4]. However, the irregularities condition impact to the unfavourable situation and unattractive visual of Kapasan.

Johan Silas, an urban planning observer from Sepuluh November Institute of Technology (ITS) said that Surabaya is the second-largest city in Indonesia that has a strong potential economic and human resources [5]. According to Silas, the right development city is indicated by the improvement of economic growth in a region [6].

This research is very important that contributes to the development of cities, by improving the physical and visual aspects to increase the vitality of the trading area and presenting an inclusive and productive city life. This research was conducted based on observations related to the potential and phenomena of Kapasan commercial corridor. Thus, this research really helps and can be considered as a reference in arranging the trading area comprehensively. Through the formulation of the problem, the purpose and benefits of this research can help identify aspects that affect this research.

2. LITERATURE REVIEW

The next stage is reviewing the relevant theories of this research. Theories to be explained include the theory of urban design element, the theory of the trade areas as main theories and walkability theory as supporting theories.

2.1 The Trade Area Definition

The trade area is divided into two classifications, known as formal and informal sectors. The formal trade sector is a business sector that is licensed by an authorized official and has been registered with a government office and fulfils certain conditions for conducting trade activities based on the type of business. Whereas the informal trade sector is a trade sector that does not have a special permit as a business entity in the trade sector then the type of business and place name are not registered with the government office. This type of trade has a characteristic as a type of small capital trading and is not subject to tax collection, for example as street vendors, hawkers or food stalls. [7]. In general, a trade area typically represents the geographic area from which a retail development or retail area would normally expect to derive the majority of its sales volume. The physical size of a trade area typically varies due to outside factors such as the local road network, natural physical barriers (e.g., rivers, bridges, etc) and the proximity of competing for shopping destinations [8].

2.2 The Urban Design Process

Urban design is an effort to returns a function the physical quality of space comprehensively for the user needs. There is an internal process that is a part of the planning process that deals with the physical quality of the environment:

- Internal pattern and image, the purpose of space between urban structures at the micro-level that is key physical features of the city's organization as a focal point or viewpoint. The example is the road network.
- External form and image, focus on the city skyline and its overall image and identity.
- Circulation and parking: quality of maintenance, spaciousness, order, monotony, clarity of route, orientation to the destination, safety, and ease of movement.
- Quality of environment, compatibility of uses, presence of natural elements, distance to open space, visual interest of the street facade, quality of view and quality of maintenance.

Relate to the theory, there are eight-element of urban design that serves to improve the physical and visual quality of the urban environment: land use, building form and massing, circulation and parking, open space, pedestrian, activity support, signage and preservation [9]. Land-use policies are influenced by the location and function of place, informing the spatial patterns related to circulation relations and movement activity. In this regard, building form and massing become a character of the place that informs: the identity, type of use of materials, building color, style, scale, and texture. Circulation and parking are influential elements in the development of the environmental structure, directs and controls the pattern of urban activities and development. The circulation system includes connectivity and access [10].

The trading area always dominated by pedestrians, the provision of pedestrian facilities needs special attention. It affected whether people prefer to walk or not. The society needs to walk in friendly environmental as circulation mode that facilitate all the activities. Pedestrians must be safe and comfortable to access the city, it means the provision of pedestrian must be facilitated and supported by adequate facilities and infrastructure [11]. Briefly, the elements of urban design affect the formation of urban space and regional activity in a comprehensive manner.

2.3 Walkability

The general theory of walkability defined as a concept to improving the quality of life and welfare of the population of the city in terms of medical, psychological and economic aspects that bring good impacts to health, socialization and improvement of the economy of the citizens [12]. Walkability explains how, to be favored, a walk has to satisfy four main conditions: it must be useful, safe, comfortable and interesting [13]. The walkability principles are mostly used for evaluating and assessing urban area specifically that are further organized into Seven-C criteria:

- *Connected*, the extent to which the pedestrian network links to key trip origins and destinations, as well as the extent of linkages between different routes on the network.
- *Convivial*, the extent to which walking is a pleasant activity, in terms of interaction with people, the built and natural environment, and other road users.

- *Conspicuous*, the extent to which walking routes and public spaces feel safe and inviting for pedestrians, in terms of clear and legible signing and information.
- *Comfortable*, the extent to which walking is accommodated to competences and abilities of all types of pedestrians.
- *Convenient*, the extent to which walking is possible and able to compete with other modes of transport in terms of efficiency.
- *Coexistence*, the extent to which pedestrians and other modes of transportation can exist at the same time and place as order and peace.
- *Commitment*, the extent to which there are involvement stakeholders for the responsibility of the pedestrian environment [14].

3. METHODS

To answer the aims of this study, this research is referring to the post-positivism paradigm. The knowledge that develops through to the post-positivism paradigm is based on direct observation and researchers as a measuring and testing tools of the objective reality. Post-positivism research involves interactive social involvement for participants and researchers [15]. This research uses the collection of qualitative data and there is two part of data collection processes:

- Site observations are observations that carried out in-depth and allow for mapping the existing conditions. The observation results support to formulate the research aspect. There are three research aspect related: circulation-parking, facilities-infrastructure, and visual quality. The research aspect support for the preparation of interview steps.
- Interview survey uses seven walkability principles for assessment standards: *connected, convivial, conspicuous, comfortable, convenient, coexistence* and *commitment*. The assessment begins with a semi-structural interview technique were conducted to find out opinions and reasons from the participants. The representation of a participant is selected into several groups which are 20 participants: visitors, employee, student, local community, and provider public transportation. The process of collecting data should be directly related and interact actively with the stakeholders. Subsequently, the data uses for developing plans and increasing policy support in a participatory manner.

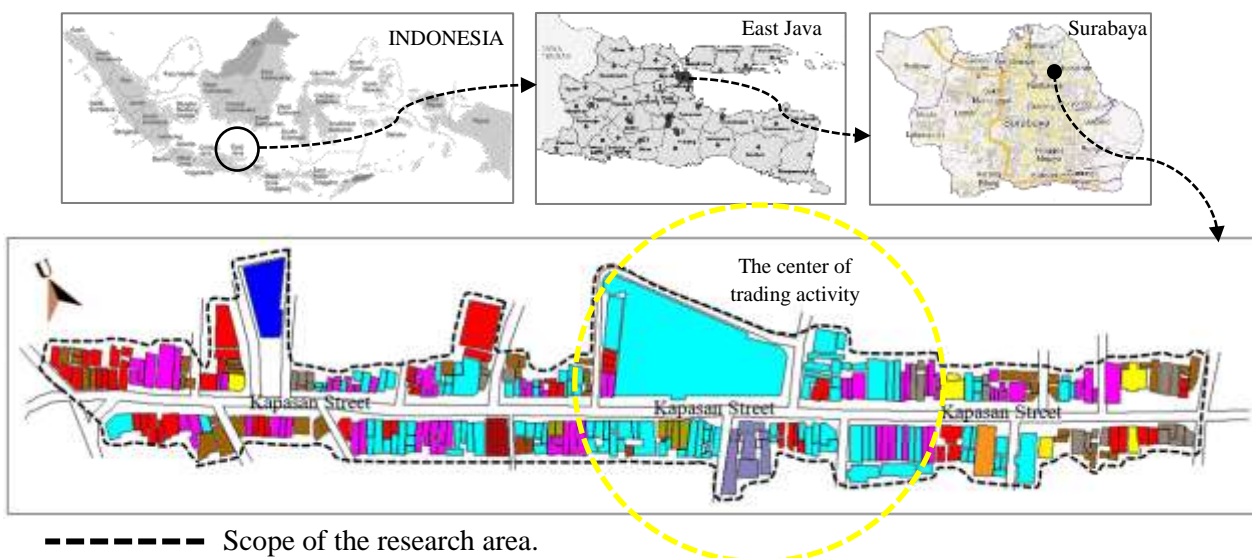
Overall, the observation and interview survey was conducted at the mid-January until mid-June 2019 to asses the physical and visual quality of Kapasan commercial corridor. The findings of research informing the importance of complying the policies and rules, in consequence impact to forming the walkable environment and active city life.

4. RESULTS AND DISCUSSION

The first stage of this research is the explanation of the research area and the next discussion contains the data from the results of the assessment physical quality that has been done.

4.1 Scope of the Research Area

Kapasan commercial corridor is in Simokerto, Surabaya City, Indonesia. It functions as a trading area and the centre of trade activities oriented to the main road. Accordingly, this is the map of the research area:



Legenda:



Figure 4.1: The Map of Research Area and Classification of Building Functions

According to the land-use map, Kapasan commercial corridor has a high building density that impacts utilization of the main road for service area; parking, loading-unloading and other activity. This condition forms the character of Kapasan as an unfriendly trading area for all users. The utilization of the main road as an illegal activity impacts the irregular spatial patterns.

4.2 Circulation and Parking

The discussion and analysis are based on the local condition, this refers to circulation and parking aspect at the research area. The right circulation system is the main criteria for creating a walkable trading area for pedestrian and all road users. Kapasan is functional as a primary collector road that has two circulation paths with an active road width of 16 meters and a length of 892 meters. According to this condition, Kapasan commercial corridor has a high density of vehicle and pedestrian circulation. The bad traffic staged around the main building of area known as Kapasan market. This zone is the centre of trading activity that crowded by pedestrians. Regrettably, this area is used for illegal parking. Consequently, causes traffic density and long-congestion.

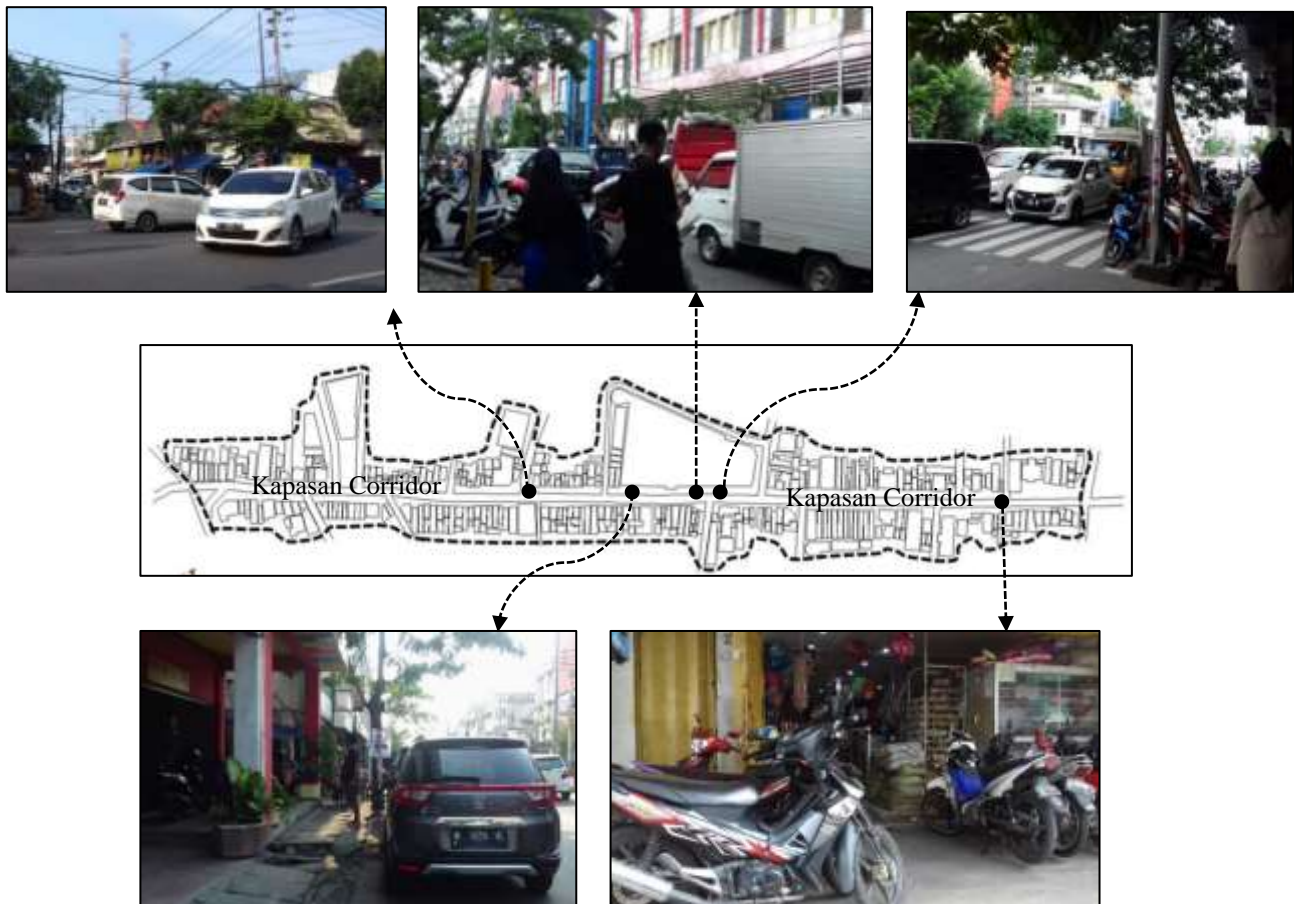


Figure 4.2: The Circulation and Parking Condition of Kapasan

Access to this trade area is quite easy, but the bad circulation exacerbates the impression of visitors, pedestrians and all user. However, it is considered an unfavorable situation. Based on this condition, the assessment of physical quality is carried out related to the circulation aspects and the provision of parking facilities. The interview results can be seen in the graph below:

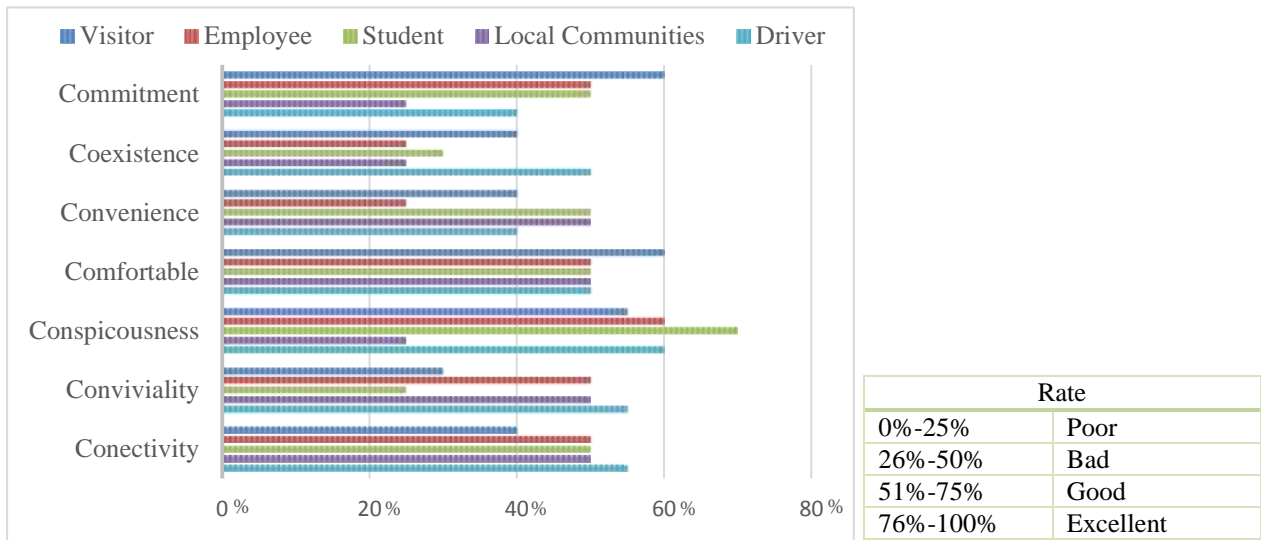
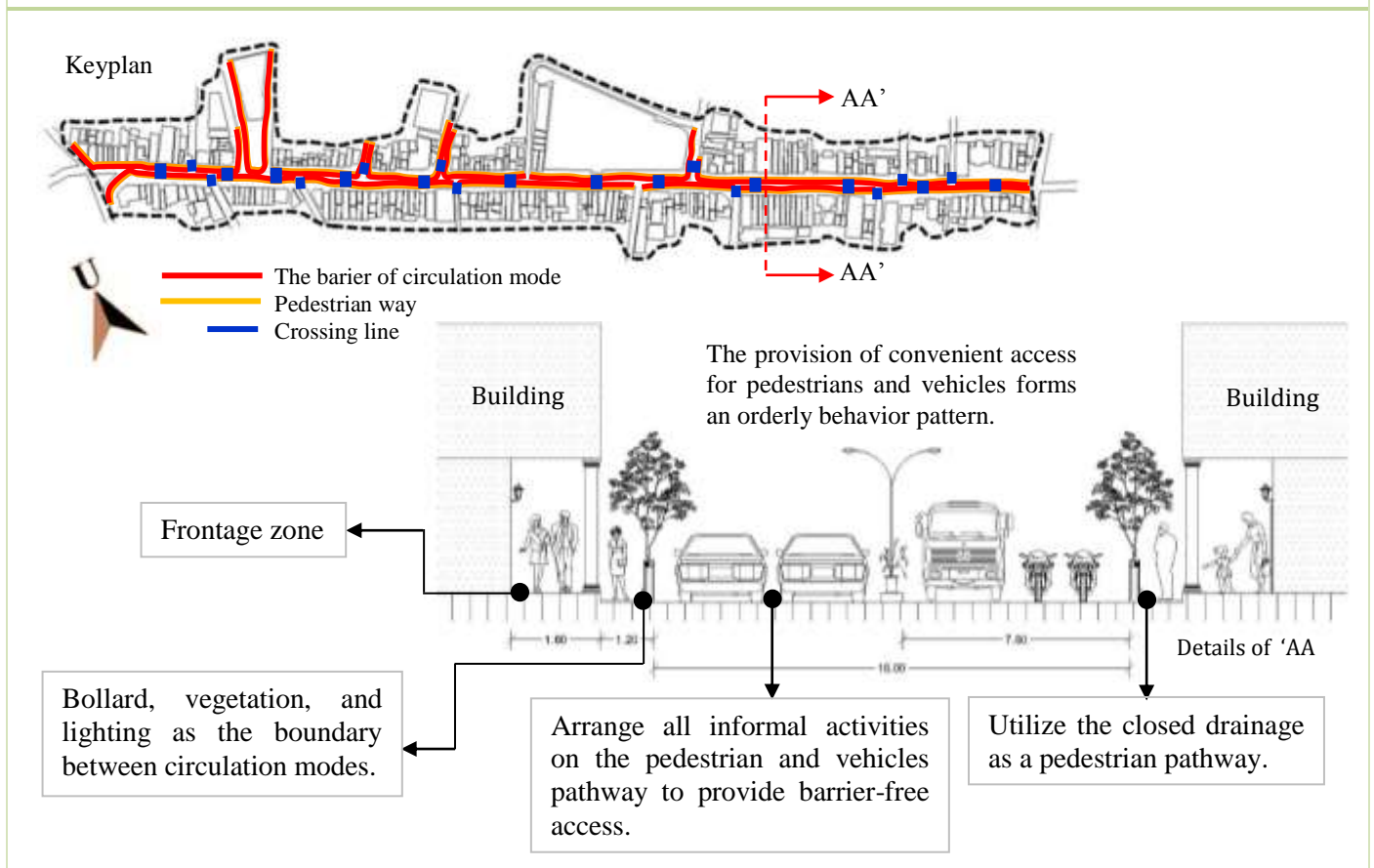


Figure 4.3: Circulation and Parking Aspect Assessment Chart

According to the result, participants assessed the circulation aspect indicate an inefficient condition that to be a major obstacle to the efficiency of visitors activities (<100%). Furthermore, it is necessary to apply the arrangement concept based on walkability principles for Kapasan commercial corridor. The implementation of the macro concept for arranging the circulation pathways are in the table below:

Table 4.1 The Macro Concept for Arranging The Circulation Pathways.

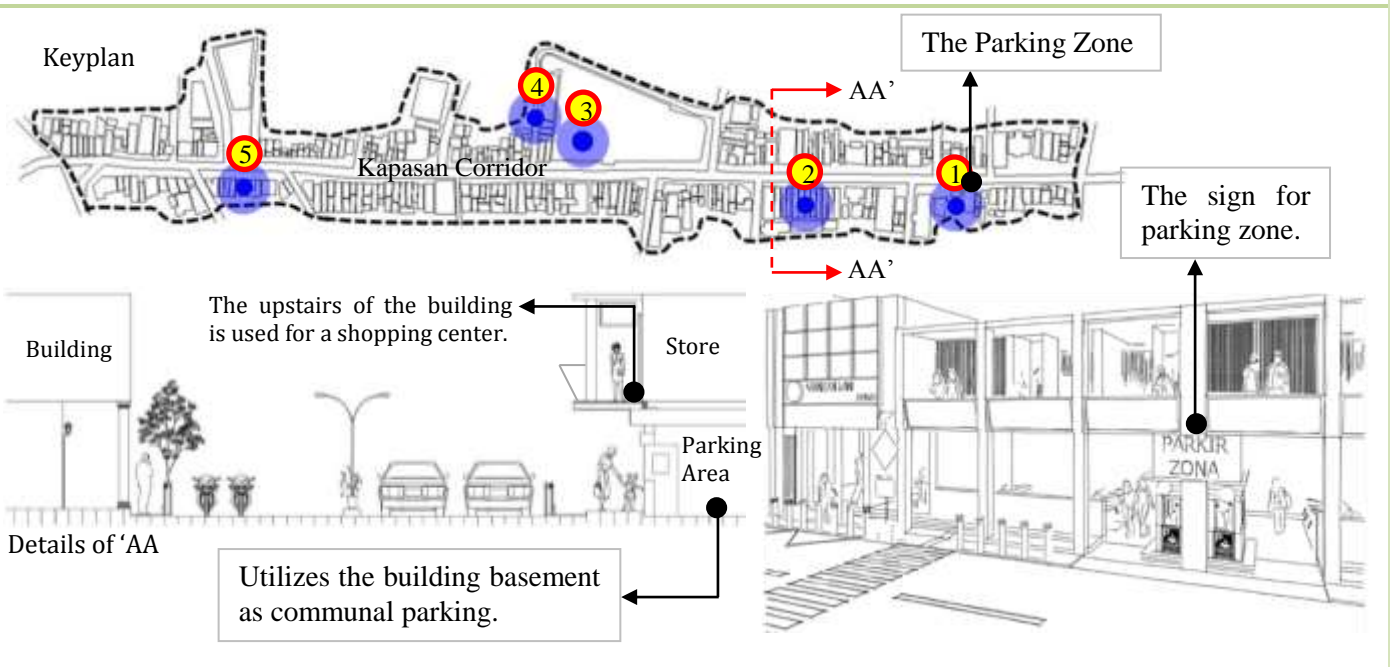
Establish the connections between circulation modes by arranging and regulating all informal activities, illegal parking and loading-unloading activities on the circulation path.



Source: Author, 2019

Table 4.2 The Macro Concept for Arranging The Parking Area.

Arrange the parking on-street and provide the communal parking area that utilizes the basement of shopping buildings, so it can be the convenient parking zone for the visitor of the trading area.



Source: Author, 2019

4.3 Facilities and Infrastructure

Kapasas commercial corridor needs to provide the facilities and infrastructure related to trade activities. The provision of infrastructure includes pedestrian way, street furniture, and signage. The pedestrian way of Kapasas commercial corridor was doesn't really available. The condition is damaged, perforated and dirty track causes the pedestrians prefer to use the main road for access.

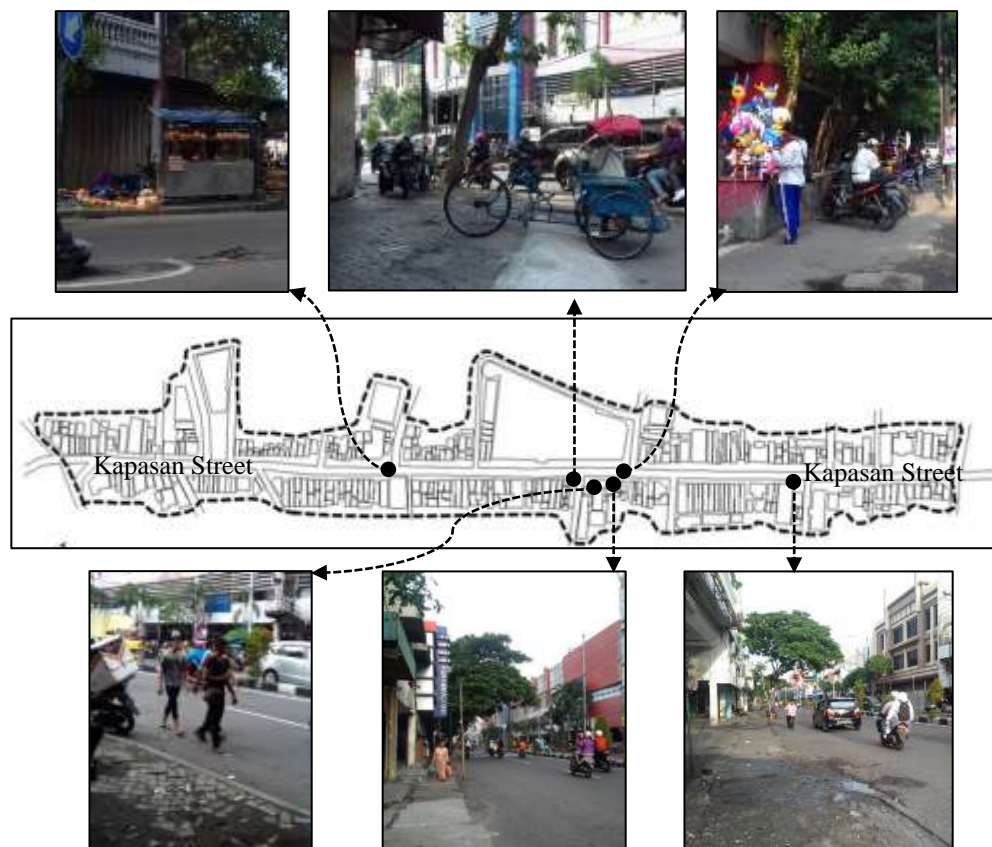


Figure 4.4: The Pedestrian Way Condition

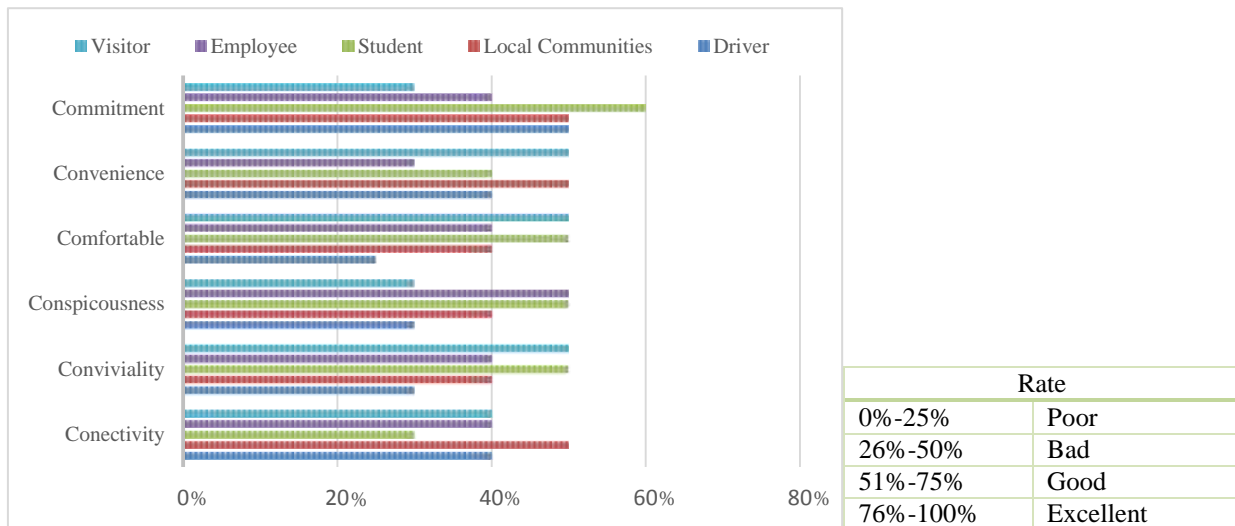
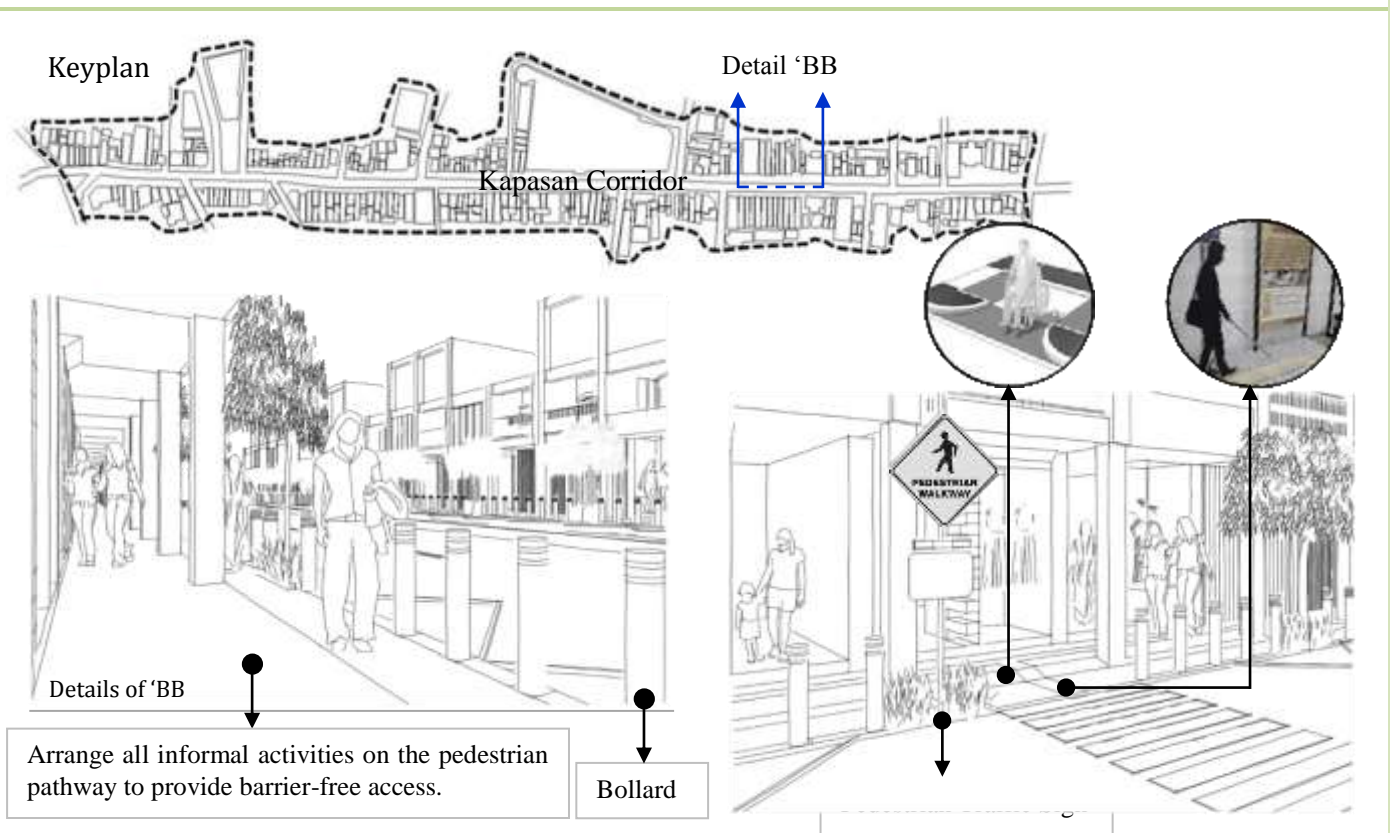


Figure 4.5: The Assessment Chart of Pedestrian way

The evaluation index indicated that the parameters of connectedness and comfort are low percentage. While some participants considered that the pedestrian lane is quite easily accessible. The results of the assessment indicate that the quality of the pedestrian path is not good enough and does not reach 65%. This caused by damaged structures, the broken pedestrian lines and unavailability of the guiding block. So, the availability of pedestrian way should be supported by completing the street furniture. Furthermore, it is necessary to apply the arrangement concept based on walkability principles for Kapasan commercial corridor. The implementation of the macro concept for arranging the pedestrian way is in the table below:

Table 4.3 The Macro Concept for Arranging The Pedestrian Way.

Providing adequate facilities towards the pedestrian pathway to support pedestrian convenience.



Source: Author, 2019

The effort to implement comprehensively arrangement aims to improve physical and visual quality. Whereas, Kapasan commercial corridor doesn't properly provision of public facilities and that cannot accommodate the trade activities overall. Participants assess the availability of facilities and infrastructure of Kapasan corridor, and the following are the results discussion:

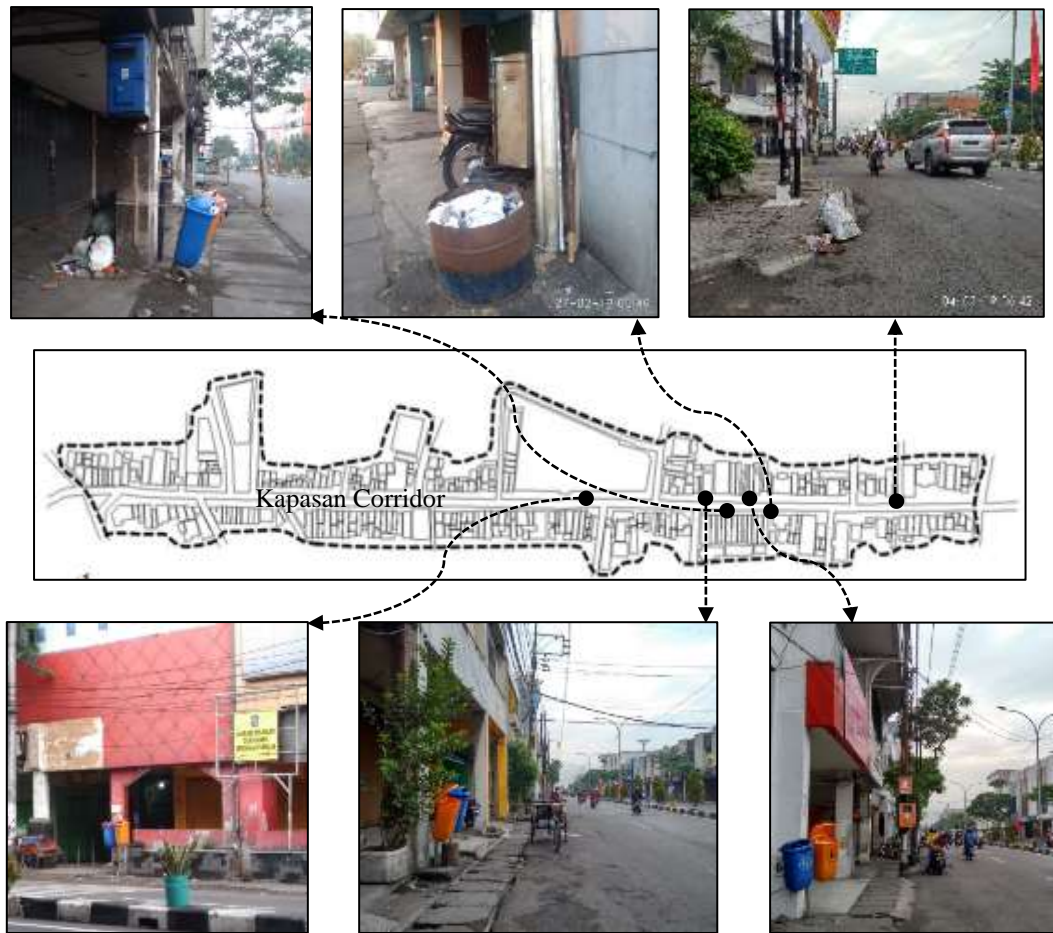


Figure 4.6: The Provision of Trash Bin

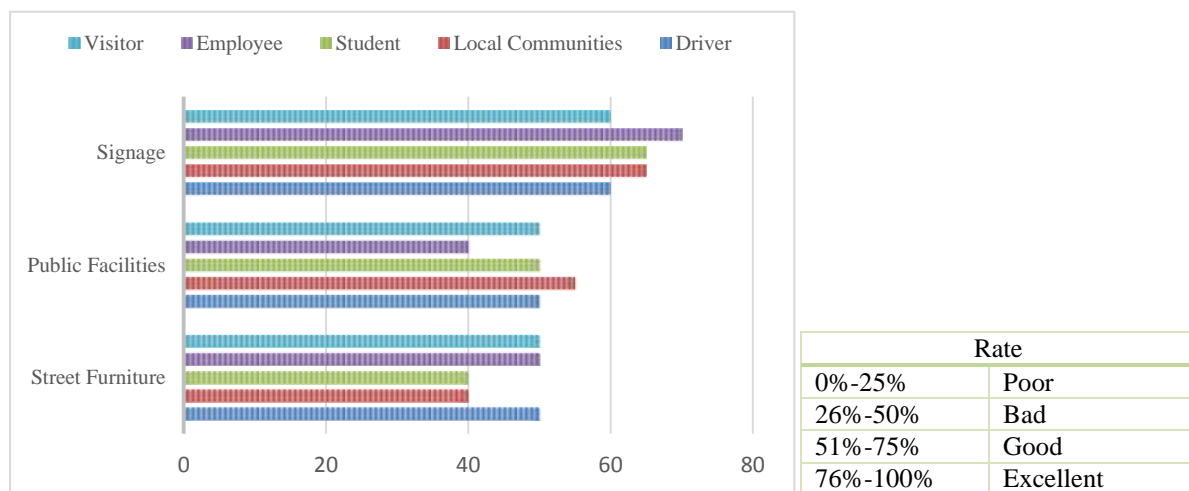
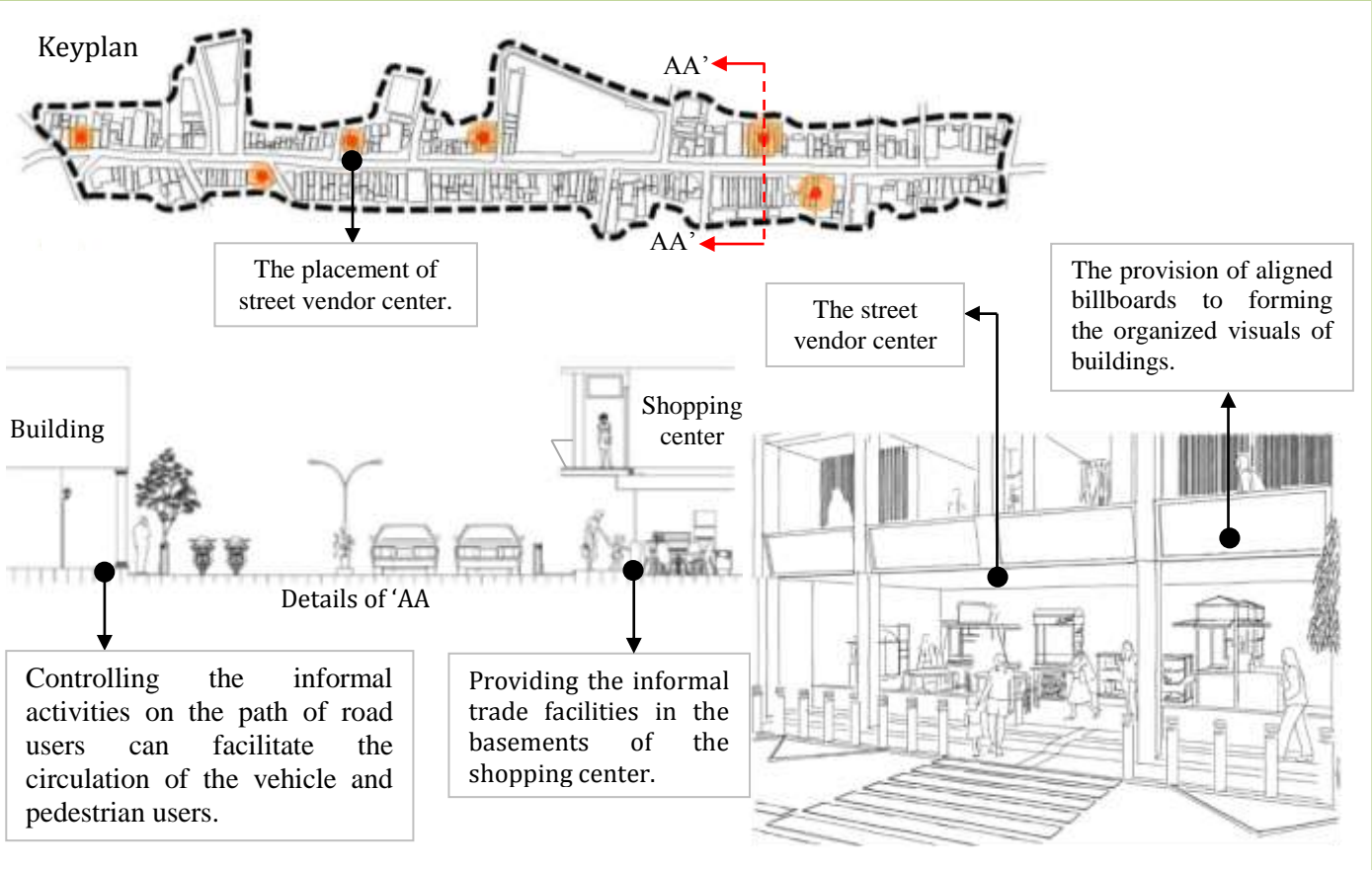


Figure 4.7: The Assessment Graph of Infrastructure Provision

The assessment index, indicate that the signage has the highest value. This indicates that the signage is quite good and can direct pedestrian trips and vehicle users. While the provision of public facilities and street furniture is still very low. This condition has not been able to support visitor activity properly. According to this, it is necessary to complete the public facilities for all user of Kapasan commercial corridor. The implementation of the macro concept for arranging the public facilities are in the table below:

Table 4.4 The Macro Concept for Arranging The Public Facilities.

Arrange the informal activities on the circulation mode path and provide the informal communal means such as street vendors centres, that utilize the basement area of shopping buildings. So, it cannot interfere with the main activities in the trading area.

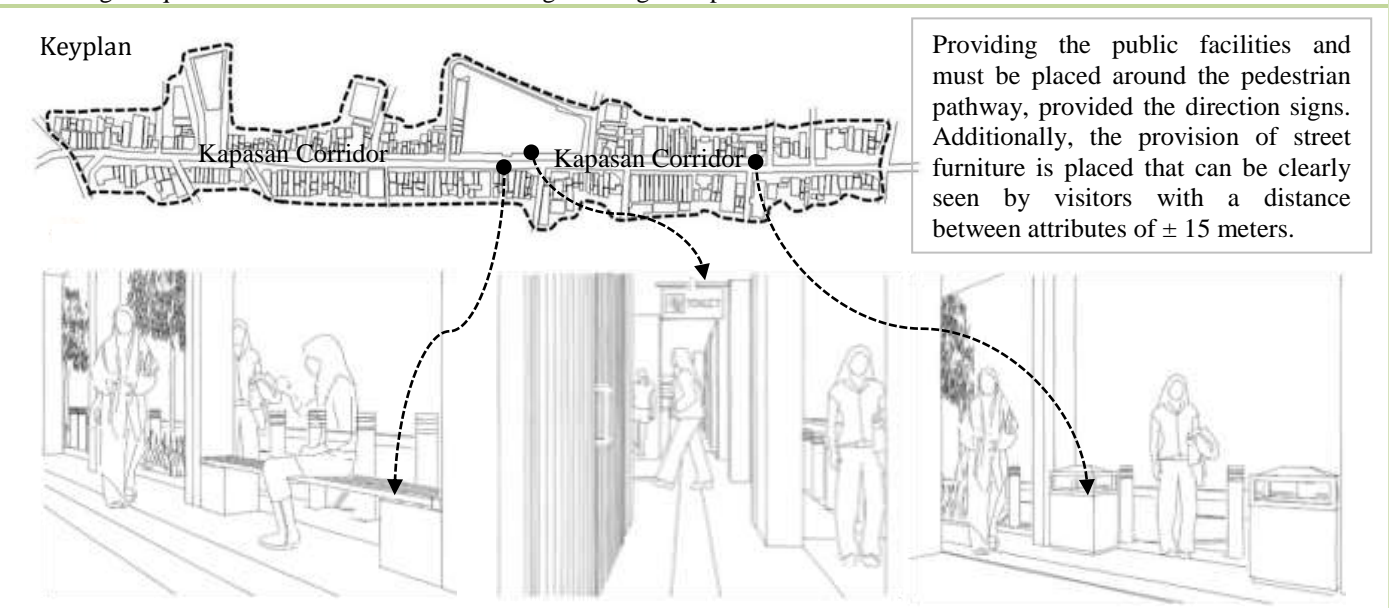


Source: Author, 2019

The provision of public facilities should be located and spread evenly along the corridor to suppress density points in one spot/zone. Furthermore, providing the equipment street furniture that accommodates all activities of users. The provision of attributes must be neatly arranged and easily visible to users. The implementation of the macro concept for arranging the public facilities are in the table below:

Table 4.5 The Macro Concept for Arranging The Street Furniture.

Providing adequate street furniture to form an integrated regional pattern that can increase the effectiveness of trade activities.



Source: Author, 2019

4.4 Visual Quality

The discussion of the visual character of buildings is presented with a linear side view technique that is able to clarify the appearance and conditions of street view at the research area. Thus, it can be known related to unity, proportion, scale, harmony, rhythm, and contrast of a building mass order in an environment. The linear side view is divided into several segments to clarify the appearance of the building against the street view. Then the following is an explanation of the existing discussion and visual quality of building:



Figure 4.8: Linear side View of Visual Buildings

The buildings of Kapasan commercial corridor have a distinctive appearance characterized by colonial characteristics. The appearance of the building forms a visually impressive area is dominated by the symmetrical building masses with square patterns. The facade composed of decorative elements: glass, trident and jalousie windows as ventilation. The buildings have a basic and inconspicuous white and light brown color. The buildings are directly adjacent to the roads, which have an impact on the absence of safety for visitors. In this regard, participants assessed the impression created by the appearance of the building, while the results of the assessment can be seen in the following graph:

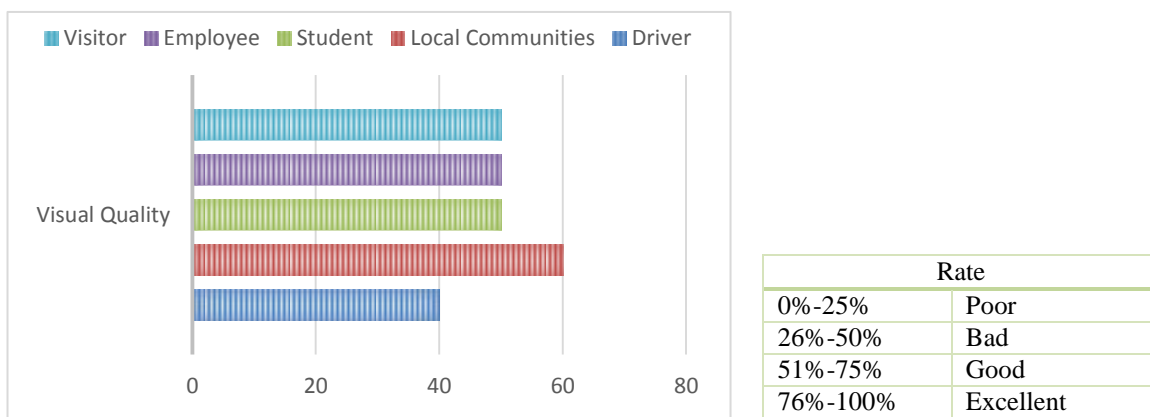
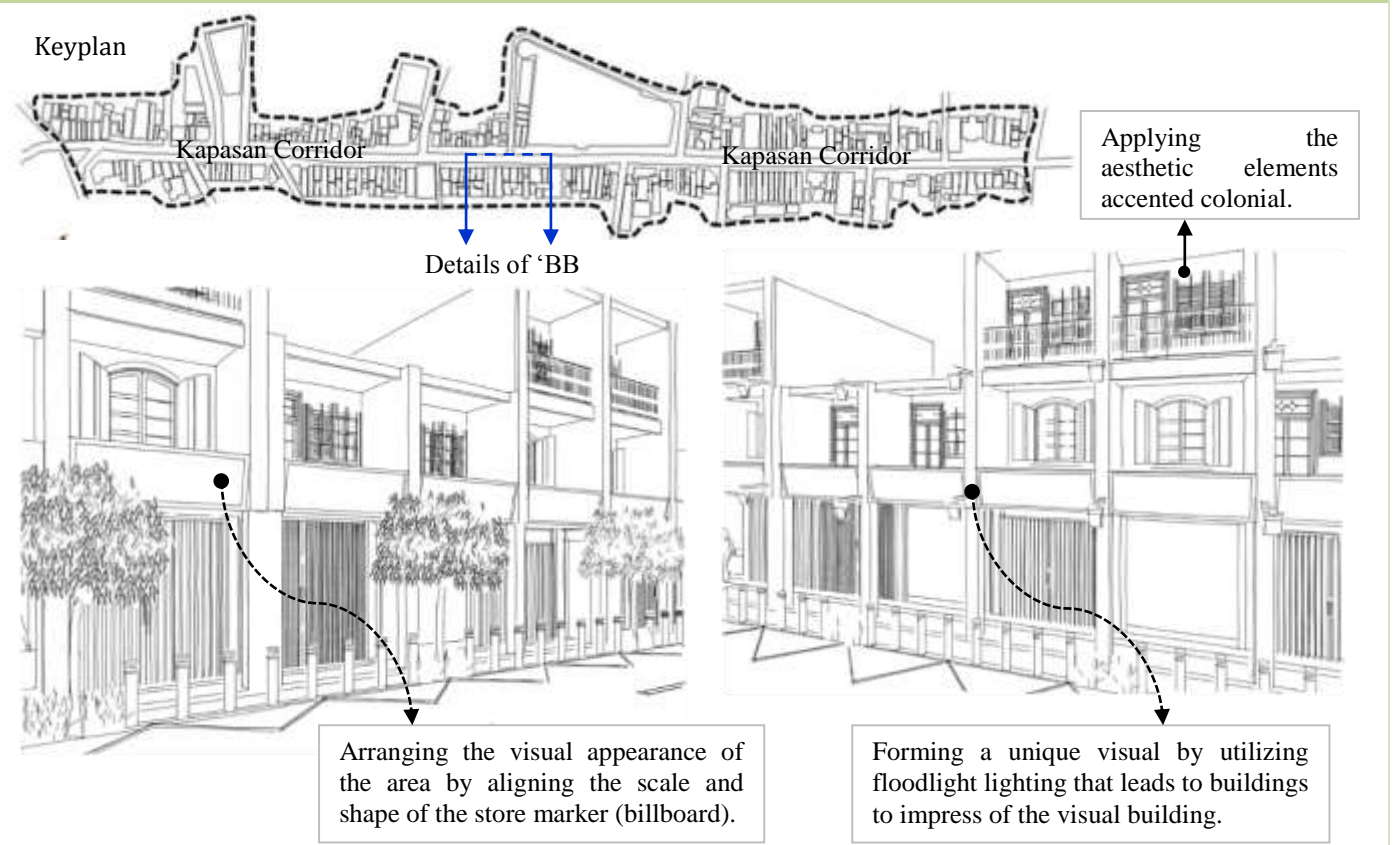


Figure 4.9: The Rating of Building View.

According to the data, indicate that the valuation results are quite-low with an average of 50%. This condition shows that the appearance of Kapasan trade area does not appeal to visitors and all user. Furthermore, it is necessary to arrange the building view such a point of interest in the trading area. The implementation of the macro concept is in the table below:

Table 4.6 The Macro Concept for Arranging The Visual Building.

Arranging the attributes of marking (shop billboards) on the facade of the building, that can be a highlight the visuals of the building.



Source: Author, 2019

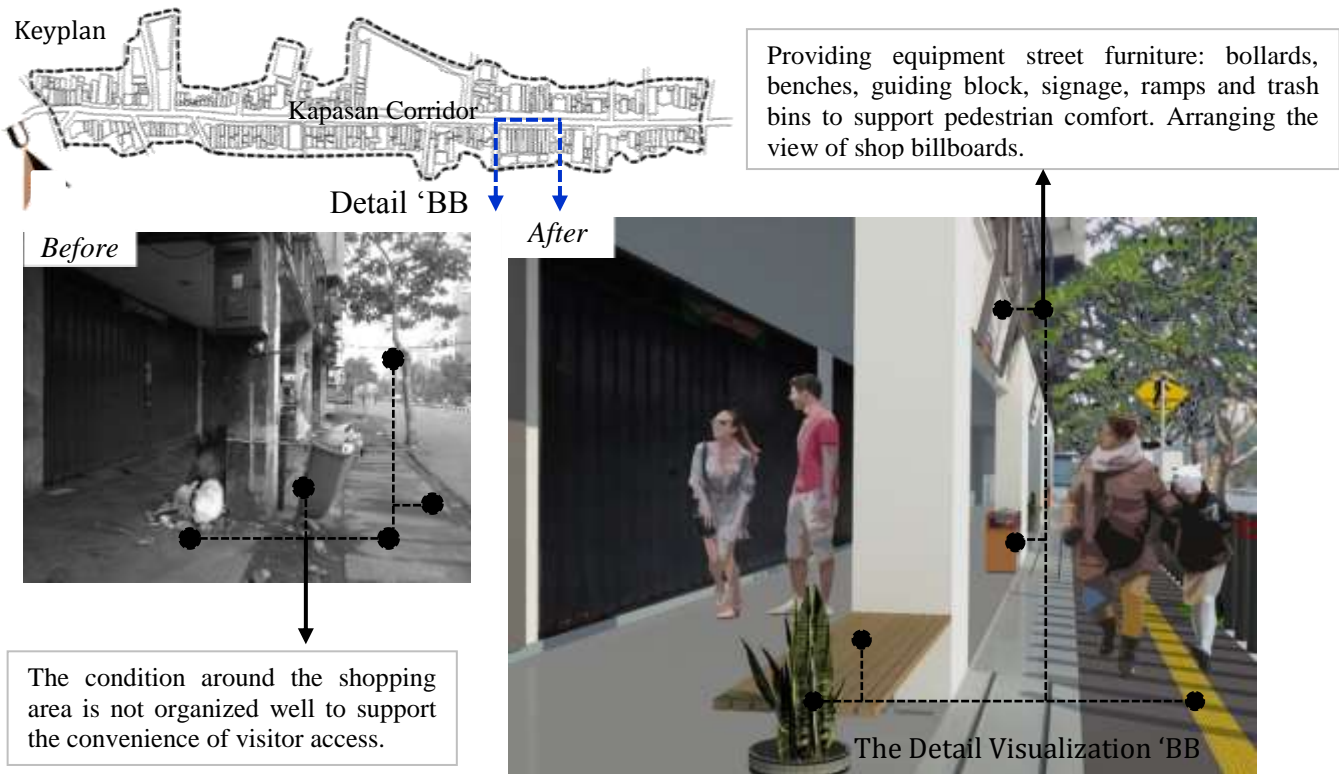
Overall, the physical arrangement of the trading area can form a well-organized visual area. So, that it can attract the interesting of visitors and impressing to the trading area. Thus, the physical arrangement potentially increases the environmental quality to improve the visual area comprehensively. The arrangement visualization is the following below:

The Arrangement Visualization of Kapasas Commercial Corridor



Source: Author, 2019

The Arrangement Visualization of Kapasan Commercial Corridor



Source: Author, 2019

5. CONCLUSION

The results of this study indicated that the physical and visual enhancement Kapasan commercial focused on three aspects: circulation-parking, the provision of facilities and infrastructure and the visual enhancement of the area. The seven-C of walkability criteria: connected, convivial, conspicuous, comfortable, convenient, coexistence and commitment potentially form the urban area to be a walkable city life. Through this process, it is known that uncomplying the prevailing policies are the biggest obstacle to improving the physical quality of the trade area. Thus, forming a regional structure needs well integrated from each other (stakeholders). The results of this study can be beneficial in walkable city development participation.

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