

## **INFLUENCE OF PHYSICAL ELEMENTS TOWARDS THE LEGIBILITY OF PASAR BESAR AREA MALANG**

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## ABSTRACT

*This study is about how to find legibility of pasar besar area through understanding the existed city element and the recent image of pasar besar. In order to apply suitable city element criteria, identification of city element condition, user's activity and the physical element of the commercial corridor are needed. Synchronization of physical element and streetscape design aspects to the city element is done to get the suitable criteria for the enhancing the area's image. So then, the city element criteria are obtained based on the specific activity inside corridors and is applied to emphasize the area image of old china town in Malang City as a shopping tourist destination.*

**Keywords:** *image; legibility; area*

## 1. INTRODUCTION

### 1.1. Research Background

Malang is one of big city in East Java which known for its various natural tourism. Commercial activity has changed the concept of a resort city into a tourist-shopping city. One of tourist destination and economic driving in Malang City is commercial activities that placed in commercial areas. The old commercial area in Malang is Pasar Besar area with Pasar Besar as the main building that has existed since the 1930s. The building was formerly a private market belongs to the Chinese, which had taken over by the local government. Pasar besar became the primary traditional market that greatly affects the growth of commercial building around it. The commercial corridors in the area are consists of stores, hotel, office, and bank. The stores along these corridors are already known and always full of visitors.

Known as "Chinatown" of Malang City, this area was formerly the residential and trade area of Chinese that have typical building style. Most of the buildings are in colonial style, but Chinatown decoration and atmosphere are no longer visible, because of the physical changes in the building and the surrounding that did not follow the original characters and lack of street face (streetscape) improvement as commercial areas. Therefore, although it has long been known by the residents and was named as Chinatown, visitors cannot directly recognize the indigenous character.

As a commercial area visited by both citizen and tourists, the area is always crowded. Commercial activity is not only happening in the stores, but also outside the building by the street vendors. The street vendors' area has not yet specifically provided, so they settled in pedestrian ways, parking zones and on the streetscape. Streetscape in pasar besar area is not only important to support commercial activities, but also to support the visual character of the area.

The area's image should clearly recognizable to persuade the visitors and increase the tourism. In order to obtain the criteria to enhance the legibility of pasar besar area, the legibility of existed area should be understood. Then, the comprehension of physical element and streetscape is necessary to help the image enhancement. Combining the legibility and streetscape element will get not only the object or facilities that should be provided, but also perform the image of Chinatown as its history and Malang's local culture.

### 1.2. Research Location

This research took place in Pasar Besar Area, Malang City. This area is regional commercial and trade of the City in Malang Spatial Plan. Moreover, pasar besar area is part of strategic area plan of Malang city, that address both for economic growth (trade and services , tourism, industry), and socio-cultural (cultural heritage and historic buildings).

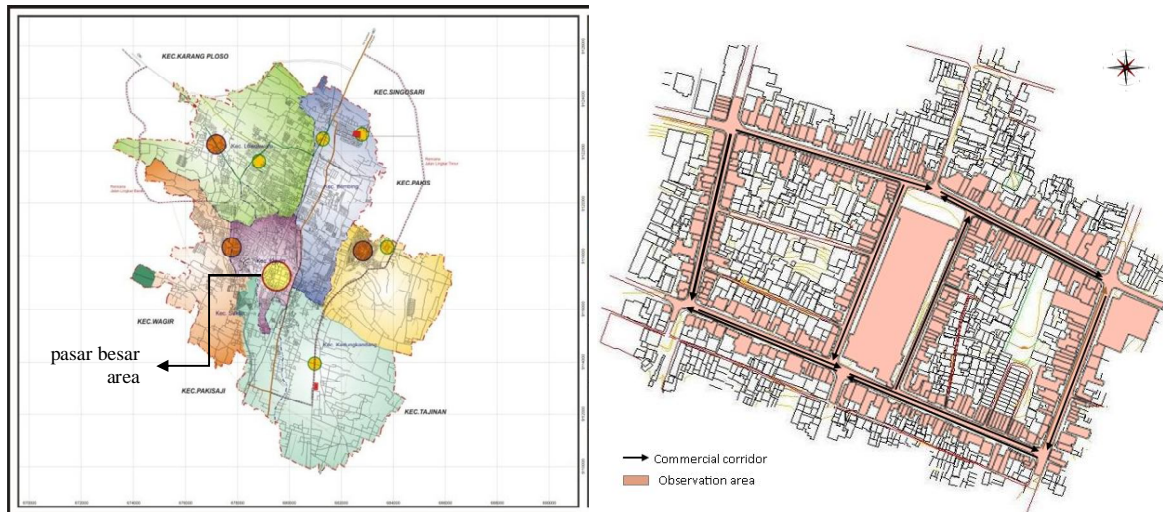


Figure 1. Position of Pasar Besar Area; 2. The observation area  
Source: spatial plan of Malang City (2010-2030)

## 2. LITERATURE REVIEW

### 2.1. Legibility

Legibility is clarity of the city's image that can easily perceive by the observer. The image is the expression of the city-forming element that shows the indigenous character of a city or a place. The measurement of legibility is not only by evaluated the beauty and the order, but also the logic of layout pattern. To understand the city layout, people create mental maps that represent the city contents and the specific element that may exist. Lynch (1960) defines the physical feature of the city into five elements,

- Path: The lane the people move around the city. The path identifiable and continuity should clear to clarify the destination of the track.
- Node: a node can be a junction of paths or the concentrations of characteristics. A successful node needs a unique feature and the strong character of surrounding.
- Edge: Edge should provide a strong visual form of two areas barrier. However, it should as well define as unity seams.
- District: a specific area indicated by distinctive physical element such as ornament, decoration, form and space that can differentiate with other area.
- Landmark: external point that is defined as a single physical element that creating spatial predominance with surrounding element. Landmark should make the district to be unique and memorable.

A legible city will directly understood as a correspond pattern that form a recognizable symbol. In consequence, it was formed by an identifiable district, landmark or paths that can grouped to become a whole pattern.

### 2.2. Shopping Tourism

World Tourism Organization (UNWTO) (2014) defines a tourism destination as a space in which a tourist spends at least one overnight. Tourism space contains the support services and attraction as the tourism product. It also has administrative boundaries and physically bordered to define its management and the image that define its marketing competitiveness. Shopping tourism have its uniqueness. It indentified as a fundamental element that decorate the city by its activity. Shopping tourim also utilized and decorated to boost its appeal and support economic growth. Through its improvement, shopping tourism can serve the urban regeneration by adding value to the

area, impact the socio-culture aspect of the resident, and increase the partnership to international promotion.

Based on UNWTO observation, shopping tourism can be defined as a contemporary form of tourism fostered by individuals for whom purchasing goods outside of their usual environment is a determining factor in their decision to travel. The primary motivation of their travel is leisure to seek enjoyable activities outside their homes.

### 2.3. Commercial Corridor

A corridor has an important role not only for the area, but also for the whole city configuration. The relation between main corridor with the other, the land use and the density of the uses of the corridor are important aspects for streets observation. The depth of the corridor and its connection with other corridors also show its important role as the strategic corridor to reach a specific area from the surrounding area (Darjosanjoto, 2005). Commercial corridor is a street used as the main lane that connects commercial area to sub urban area (Bishop, 1989). The commercial corridor consists of stores, which contribute to the city decoration (Moughtin, 1999) with some elements that create the visual continuity:

- Facade: front side of building that give visual experience for observer through decoration of display window and arcade
- Corner: the building at the end of crossroads to connect the same function or to differentiate the different function of area
- Skyline and roofscape: the shape of the building roof that inform the local character
- City floor: texture, pattern and color of the floor to form the continuity of the track or to distinguish some area
- Landmark, sculpture and furniture: three dimension decorative object as ornamental aspect or inside the building details and street furniture
- Color in the city: the color scheme applied on the building, furniture, open space or in city landmark that related to the local character

### 2.4. Streetscape

Streetscape is to define the street quality with its visual effect-the building, street surface, and the furniture (Charlwood, 2004). Streetscape is the collective appearance of buildings, footpaths, gardens and landscaping along a street (Woodcock, 2013). Streetscape is also refers to urban roadway design that influence street users and residents. It is an important public space for social interaction, which helps not only the people's mobility, but also the community's identity, economic activity, health and social cohesion (TDM Encyclopedia, 2016). Streetscape consists of physical element of a corridor that are grouped into three zones, sidewalk, parking, and roadway. The connection of these zones is important to support and improve the user's interaction inside.

Streetscape elements are functional and aesthetic items in pedestrian space that provide amenity and utility to pedestrians and other street users (better street san Francisco, 2008). Those elements arranged and repeated to form a particular rhythm. The following streetscape elements summarized from the article "Sustainable streetscape as an effective tool in sustainable design" (Rehan, 2012).

- Sidewalk: pedestrian lane that provide safety, comfort and attractive space
- Street corner: the corner of the sidewalk with a wide space to give social interaction opportunity and waiting area for crossing
- Trees and landscape strips: a lane between sidewalk and roadways as the buffer and barrier
- Planters: a space divider that helps define a building or an area entrance

- Street furnishing: fix furniture such as benches, lighting, trash receptacle, signage and bus shelter, to support both pedestrian and vehicle that should be designed harmoniously with the architectural style of the street
- Median: three main function of median are divide the opposite traffic direction, provide a space for vegetation and provide a transition for crossing area
- Curbs: a border of the sidewalk as barrier to prevent any vehicle enter the sidewalk
- Bicycle facilities: a safety lane for cyclist movement and an adequate parking area
- Crossing: an important element to maintain the the pedestrian's continuous circulation
- Public art: an element that is used to represent a symbol of the local identity
- Cafe spaces: outdoor dining that is placed in the inner part of the sidewalk to provide interaction space

These elements should be provided in Pasar Besar commercial area in order to give the proper facilities, guidance, and a specific theme of Chinese commercial area for both citizen and tourists.

### **3. METHODOLOGY**

This research is a qualitative research that aims to reveal the real condition and facts of pasar besar area. The stages to obtain the research objectives are theoretical study, observation and synchronization. The theoretical study about legibility is to determine the pattern and the clarity of pasar besar area based on city image element. Legibility analysis is used to know the position and the condition of city element in pasar besar area. The elements are drawn on the mental maps and show the clarity of the path, edge, node, district and landmark. Observation by the user's perception of the elements' role will provide the actual condition of the legibility of those elements (Urban Design Toolkit, 2006). The theoretical study of physical elements of the street and streetscape elements are to find out what aspect should show the street decoration and what facilities should be exists. Furthermore, the criteria of city element will be obtained by synchronizing those elements.

### **4. RESULT AND DISCUSSION**

Based on theoretical study, the existence and visual form of Lynch's city elements help to recognize a city. Combination of the element will perform the whole image of the area. However, the other elements and buildings inside the area form district itself. It can be said that a clear path, node, edge and landmark will form a clear image of a district. Legibility of the area discovered by observing the path, edge, node, district and landmark. The observation is done based on both direct observation by the researcher and user perceptions in interpret these elements.

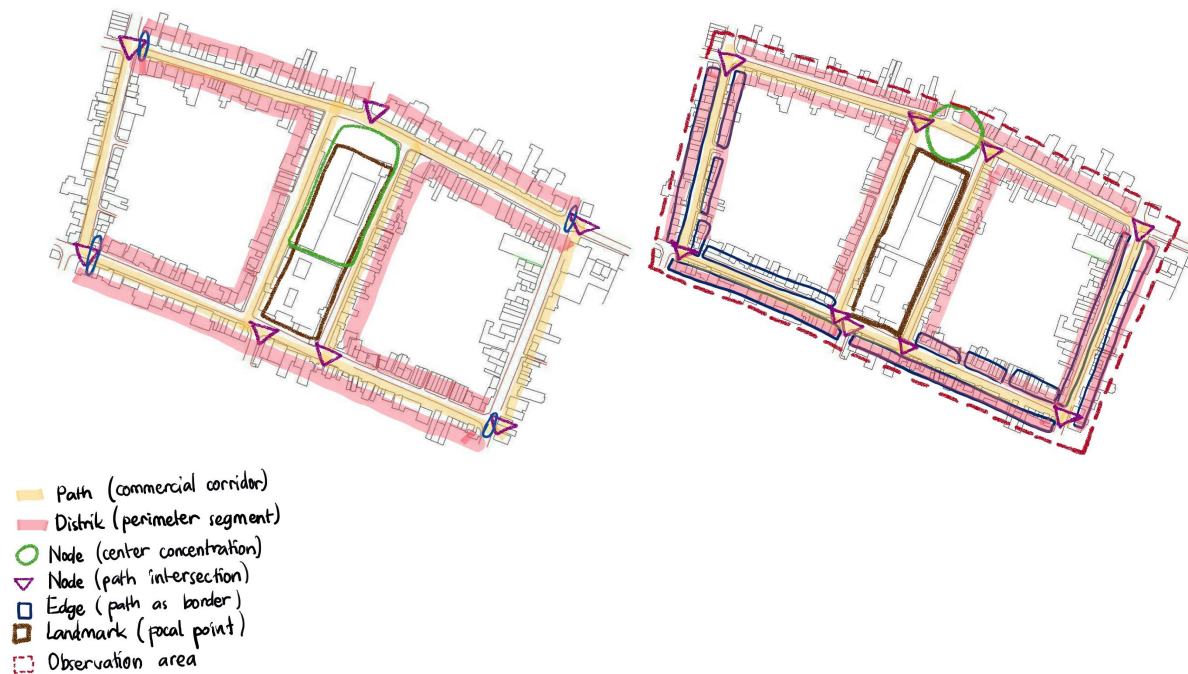


Figure 3. City element based on user perception;  
4. City element based on researcher observation

Source: researcher illustration

There are some differences between user perception and researcher. Path is found as the streets that connect the building and area. Node elements are the intersection of path, but based on its appearance and user perception, one node has a role as the center concentration or activity in the area. Specific and distinct edge of the area is not found. The potential edge of the area is a gate in south corridor and the building along the boundary of the area. However, based on the theory, these cannot be categorized as edge. There is also no landmark found the area. Pasar Besar market is considered as the focal point of the area, but it cannot be categorized as the landmark. The district cannot be easily determine because of the variation of physical element on the building facade and has not been supported by other elements.

Path and node are the city image elements that can be found in pasar besar commercial area. The clarity of these elements is important for user movements. Besides, the decoration inside the path will shows the unique character of pasar besar area as well as leads the user for the direction. The tourism aspect of the area is the commercial activity itself, and the city elements are improved to enhance it. The use of the paths and nodes are different, depend on the commercial activity inside it. The different activity performs the different needs of streetscape elements. However, the continuity of every path should be accomplished to obtain the unity of the commercial area.

Legibility theory shows that physical aspect can give more contribution to the element clarification. As a tourist's destination, the elements and facilities design will represent the indigenous character and give the specific atmosphere, which is the Chinatown and Malang culture ornament. However, the placement of the physical aspect should pay attention to the commercial activity needs. The difference of the store facade, entrance, and visitors' type will affect the streetscape zones.

According to legibility element, path become the most important element because it organize the urban mobility. From the theoretical study about streetscape, the element is corresponding with path and node element. Streetscape elements are focus on the quality of the track and the connection between them. Both sidewalk and roadway zone for any kind of vehicle is important to

be comfortable and accessible. On the other hand, the designs of these elements are also contribute to clarify the culture character. Color scheme, roof shape, material and ornamental detail of combining Chinese culture are needed to serve the specific theme of culture.

The following elements can improve the clarity of the path:

- a. Continuity of pedestrian and vehicle mobility
  - Sidewalk should provide continue pedestrian lane from the start point to the main tourist attraction in Pasar Besar Market. It is also important to emphasize the store entrance along the path by the sidewalk pattern, and color. Moreover, the material and color of the city floor should be clear to differentiate the functions.
  - Trees and landscape strip to provide shade for pedestrian. It should not place in front of the entrance and cover the store sign.
  - Street furniture such as store sign, route guide, parking sign, street lamp to emphasize a particular area and provide rest area in the path and the open space with the Chinese element design
  - Crossing should provide to connect the shopping strip and the focal point area with a sign and must be separated from parking area
- b. Clear visual view
  - Planters placed beside the store door to define the building's entrance
  - Median can divide and clear the path view
- c. Direction and turn guidance
  - Street furniture such as signage can guide the next route of the turn and node. It show the direction to the commercial features and tourism spots
  - Some types of trees have a role as guide to travel inside the path. It should guide the people to the next route and the focal point of area
  - Curbs are important element to distinguish the pedestrian and vehicle lane. It forms a line that can lead the vehicle to travel through the path. Curbs area consists of bollard with the same color with other furniture to border the sidewalk and the open space.

The paths intersections in the area are classified as the node. It is located in the side of the area that have role as the entrance. Its visual appearance should give the information of the original character and show the guide to the tourism spot in the area. However, the other node as the center concentration of the area is the center intersection of Pasar Besar Street with other street. It surrounded by Pasar Besar Market's facade, two street corners and an open space. Located as the focal point of the area, this is a potential spot to perform the specific character of Chinatown as central market of Malang.

The harmonization of the surrounding is important to make a successful node. Street corner element should provide a clear vision to make a turn and a waiting area for crossing. Public art is decorative element that can improve both path and node. It helps inform the area's character through the specific design of sculpture or ornament of "Topeng Malangan" and Chinese ornament. Specific ornament in the open space is necessary to strengthen the area as Chinese heritage and the local traditional place. To create a neat environment, cafe spaces element for street vendors can be placed in the open space or inside the sidewalk. This element is important to improve social interaction in Pasar Besar Area.

## **5. CONCLUSION**

Based on the research discussion, the city image elements that exist in Pasar Besar Commercial Area are path and node. Its existence can enhance the image of this commercial area. In other words, the legibility of these elements will clarify the district of shopping tourism in Malang. Streetscape should support the path and node's visual design by adjusting commercial activity in

it. Those elements have to guide the route to the tourism spot and area features as well as show the Chinese and Malang's culture ornament. Each building entrance needs to be emphasized and every building function has to clear by the window and signage design. A specific area for street vendors should provide inside the sidewalk or in the open space. The pedestrians need a clear and safety lane, so do the cyclists. Every streetscape element is contributing to the legibility of the area as well as provides the supporting facilities to the users.

## 6. ACKNOWLEDGMENT

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## 7. REFERENCES

- BISHOP, Krik R., (1989), *Designing Urban Corridors*, American Planning Association.
- C. Charlwood, (2004), *Torbay Streetscape Guidelines*, Torbay Council, Torques.
- DARJOSANJOTO, Endang T S, (2005), '*Kembang Jepun*': *Jalan Dominan Kota Surabaya*, Jurusan Arsitektur Universitas Petra, Surabaya.
- LYNCH, Kevin, (1960), *The Image of the City*. Cambridge MA: MIT press
- MOUGHTIN, C, Taner O.C, and Steven T, (1999), *Urban Design, Ornament and Decoration*, Oxford: Architectural Press
- REHAN, R.M., (2012), *Sustainable Streetscape as an Effective Tool In Sustainable Urban Design*. Department of Architecture Helwan University, Egypt.
- San Francisco Planning Department, (2008), *Better Streets Plan: Policies and Guidelines for Pedestrian Realm*. From nacto.org
- Urban Design Toolkit, (2006), Ministry for the Environment, New Zealand. From mve.govt.nz
- Victoria Transport Policy Institute, (2016), *Streetscape Improvements, Enhancing Urban Roadway Design*. Canada: TDM Encyclopedia
- WOODCOCK, Scott, (2013), *Your Home, Australia's guide to environmentally sustainable homes*. Australia: industry.gov.au
- World Tourism Organization (UNWTO), (2014), *Global Report on Shopping Tourism, Spain* : UNWTO