



Community-responsive Design Guidelines for Urban Street Corridor in Medan, Indonesia: Some preliminary ideas

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Abstract

The objective of the paper is to formulate the corridors design guidelines that focus on the local community's needs. The exploration of the ideas is based on our commercial street-corridors studies in 2016-2018 in Medan, Indonesia. The methodology used a qualitative approach, which was started by summarizing the main findings of previous studies. In this stage, the study highlighted the people's characteristics and requirements, the physical quality of the corridors, and the relevant regulation to be considered. Next, the preliminary ideas were formulated to guide the aspects of access and linkage, functions and activities, physical qualities and facilities, management, and the implementation strategy.

Keywords: design guideline; urban street corridor; public space; community-responsive design

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1.0 Street Corridor in Medan, Indonesia: The Issues

Society really needs public open space. This can be seen from the level of usability of parks and squares which is quite intensive, although the design quality is not good enough (Nasution and Zahrah, 2017). Medan City, as the provincial capital, must face the pressure of urbanization. Several new superblocks were built in the center and suburbs. Inside, there are facilities for the upper middle-class community: hotels, shops, *hyper-mart*, private sports facilities, and recreation facilities. Meanwhile, free public space is limited. The Medan City Parks Service noted that there were only seven public open spaces, for a population of around 2.6 million, who lived in an area of 265.1 square kilometers. These parks are located around the city center, that it is not a settlement facility on a neighborhood scale. Other parks are inside the gated community area and privately owned, although public access is still possible (Nasution and Zahrah, 2017). In the midst of this 'pessimistic' situation, there is optimism for other free public open spaces: the streets. Compared to parks and fields, streets are available in all corners of the city. In this space, there is almost always a pedestrian path, which is part of the public open space typology (Carr, 1992).

As a public open space, streets' function is broader than just a place for circulation. This place should function as a space for the community. According to the Project for Public Space (2009), public open space is successful if it meets the criteria of accessibility, activities, comfort, and image, and sociability. The facts show that the streets in Medan are generally easily accessible, but more so by those who use motorized vehicles, especially motorbikes. Pedestrians can access streets easily, but their space is more intervened by street furniture that is 'wrongly designed' (traffic signs, billboards or plant pots that are too large, so that they take up most of the pedestrian lane space), street vendors, expansion of store areas (they make the sidewalk as a display area for merchandise), even parking vehicles (Zahrah et al., 2016)! In addition, most dimensions of the pedestrian path are narrow (less than 1.5 meters, except for some parts in the city center), the material conditions are often broken and endanger safety. It is not uncommon to find 'claim' of

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building owners against the sidewalk, so that the sidewalk can be changed in height and the pathway suddenly disappears in certain parts, fused with the building (Zahrah et al., 2017). The community can move, but in uncomfortable situations, due to various 'intruders' and lack of facilities (there are no benches and other supporting street furniture). More social interaction activities are carried out at the street vendors, which are actually illegal. Still, the street as a public space in Medan is currently available, though the planning has provided more space for motorized vehicles, not human-oriented. This condition is common in many cities in various parts of the world (Njeru and Kinoshita, 2018; Rahman et al., 2018). However, at least, there are already pedestrian lanes and green lanes with shade trees. These two elements are currently more occupied by street vendors and motor vehicle owners.

It all starts with the city planning mindset. When arranged by the Dutch as *gementee* in the early 20th century, Medan was shaped by the urban design approach. The heritage can still be seen as the Dutch 'garden city' in some of the old areas of the city of Medan, such as Diponegoro, Imam Bonjol, and Sudirman Streets; Merdeka Square and its surroundings, with the character of the villa -type house, spacious with shade trees. However, after independence, this tradition did not continue. After the New Order period, the city was regulated by the City Spatial General Plan. 'General Plan' means planning on a regional scale, depicted on large-scale maps. The plan created the structure of city space, street network, and general zoning. Even if there are regulations regarding building coverage and setback, for example, the implementation is not consistently controlled. Meanwhile, life continues. Real community activities take place on streets, yards, buildings, and spaces in between. And there are no detailed plans for this. There should be a plan that makes a city as the allocation of space for various interests: circulation and modal transfer, communal activity, place connectivity, orientation, and space experience. A space that is not just a place of activity, but affects emotions. All of this is the realm of urban design, and this type of plan is not popular in the city of Medan. Finally, the city space developed spontaneously, without guidelines, and various interests were mixed up. Urban space without guidelines is the main cause of chaos in the face of the city, including streets. People are born, grow and live life in a space like this. It is coupled with urban policies that did not popularize mass transport, as well as the "aggressive attacks" on the marketing of motorbikes and cars. On the other hand, citizens continue to try to meet their needs. They consist of all groups: upper middle-class people who use cars and motorbikes for their mobility; middle to lower societies that survive through the informal economy. They all shop, circulate, make a living, and seek entertainment in the city corridors. But, city space is not ready. The urban space has to bear so much burden and interest. "The cure" from this unhealthy state is 'design'. A design guideline can guide street spatial planning, so it is no longer just a 'car-container' or 'stall-basin', but it returns its function as a place where communities interact and celebrate harmonious social life.

1.1 Purpose of the study

The purpose of the study is to explore the preliminary ideas of the corridor design that responds to the community needs in Medan, Indonesia. It is expected that these ideas contribute to the future corridor design guidelines that fit local people needs.

1.2 Objective of the study

The objective of the study is to determine aspects to be considered in formulating design guidelines of the commercial street corridor, particularly in Medan, Indonesia.

2.0 Methodology

The study was based on the research of public life and urban space quality in several commercial street-corridors in Medan, Indonesia, that carried out from 2016-2018. To formulating some preliminary ideas of the design guidelines, there were three stages as follow:

- a. Analyzing the main findings of previous studies, particularly to identify the community's characteristics and requirements. The aspects were collected through field survey and observation, and the interviews to the corridors users. They are the building owners, the street vendors, the pedestrians and the cars and motorbike users.
- b. Analyzing the urban design guidelines of street-corridors considerations through a literature review of researches and 'success stories' of some corridors design.
- c. Formulating the preliminary ideas in some crucial aspects that respond well to community needs, such as access and linkage, functions and activities, physical quality and activities, regulation and management, and implementing strategies.

3.0 The Findings of the Previous Studies

3.1 The community's characteristics and needs

Street users in the city of Medan consisted of various groups with various interests: shopping, selling, and circulating. They moved on the vehicle circulation path, on the pedestrian track, on the building yard, and inside the building. The general characteristics of street users were related to two things: the dependence on motorized vehicles, and the pressure of the informal sector economy (Zahrah et al., 2016). Very rarely pedestrians came to get recreational activities, such as sports, playing, sitting together while chatting with family or friends, activities that should fill the street space. The replacement was dozens of street vendors and hundreds of riders. These two parties had the most 'mastered' street space. However, it did not mean that outside of the two groups did not need street space for their activities. Although existing conditions indicated that groups who only wanted to 'enjoy the city space, themselves or together' are excluded, they had no place. Regardless of whether they are interested or not in public open space in the street corridor, the design

must accommodate them. Because, as the mayor of Bogota from 1998-2001, Enrique Peñalosa, said that a good city is "one that can tempt its citizens to go out of their homes and enjoy urban space". One of the essential functions of design is to provide experience, and, thus, educating the community. This means that in formulating people needs for street space design, all aspects must be considered.

Unlike the street spaces that have been established, especially in cities with better economic levels, street space in the city of Medan had to respond to the character, traditions, and culture of the community. First, the people of Medan who had been using the street so far were the middle to lower income groups. So the street space should be an 'economic solution' for this group (Dimas, 2008), of course without disrupting the rights of other citizens. Second, Medan people were the high dependence on motorized vehicles (Zahrah et al., 2016). For this group, the first alternative was being accommodated. Sufficient parking area should be available, and this requires space allocation. The second alternative, this situation was being anticipated. The design should educate them to 'release dependency' on the vehicle. For this matter, a broader analysis was needed regarding the transportation and linkage system within the city. Third, the people of Medan were much attached to a lot of rituals, often using street space as an area for cultural and/or religious ritual activities, such as birth, marriage, death, and various ceremonies that require space for hundreds of guests. This need cannot be easily accommodated in the street corridor because it means that it will completely cover part of the street-space for personal concern. To respond to this needs, a multi-function public building and/or open space facility (multi-purpose public open space) should be provided in each neighborhood unit.

3.2. The quality of urban space

The main issues in urban design guidelines of street corridors were the deep attention to human needs, known as 'human-oriented design'. This approached related to the dynamics of comfort accessibility and linkage for pedestrians, traffic calming, and the activity support that lived the public life (Jacobs, 1961; Gehl, 1996; Hamid, 1996; PPS, 2009). Unlike those principles, the urban street corridors in Medan seem prioritized cars and motorbikes more than pedestrians. These facts could be seen through the allocation of urban space. The motor-vehicles path was wider than the pedestrian path. The quality of the car lane was better than the walking pathway. It was common to find the sidewalk that had broken materials, discontinued the line, and no adequate street furniture to support communal life. However, there were some activities supports along the corridors, such as retails, cafes, restaurants, and street vendors. Unfortunately, there was no suitable arrangement for these functions. For example, there was no formal portion for street vendors. Thus, they claimed public space as theirs, both pedestrian path and a part of vehicles lane. Besides, the walkway which was supposed to be the communal space also was seized by the building owners. Thus, they seemed freely modified the shape, level, materials, and function of the public property. The reality shows that the actual urban street-corridor was not public-friendly.

3.3. The regulation and management

Based on the interview with the officials of the Medan City Government, it was confirmed that the planning of the municipality referred only to the general planning, Rencana Umum Tata Ruang Kota (RUTRK – general planning of urban space), and Rencana Detail Tata Ruang Kota, (RDTRK – detail planning of urban area), a regulation for city's sub-districts. This law already had the provision of land use, building coverage, and building setback. Nevertheless, the law-enforcement was very weak. There was no effective control to ensure the order was implemented. Furthermore, there was no Urban Design Guidelines that conduct the more detailed arrangement, such as activity supports, building frontage and mass, the pedestrian path design, circulation and parking, signage, and street furniture. As a result, the urban space grew spontaneously, followed the individual interest. The condition had injured the community.

4.0 Some Preliminary Ideas

The population of North Sumatra, where Medan is the largest city, ranks second lowest in the Indonesian happiness index (Badan Pusat Statistik, 2017). Meanwhile, cities are citizens. A good city is one that respects its people. A city must be able to maintain and improve the quality of life of city dwellers and make them happy in the city space. The main idea to design the street corridor in Medan is based on the aspiration to create the city space belongs to people, where they grow, develop and live a harmonious life with other citizens, and with nature and the environment. Street space must outperform the privatized public space to attract the attention of citizens. That is, it must be of high quality, guarantee the safety and comfort of every activity. Therefore, the main idea for the spatial planning of the city of Medan is founded on the purpose of making the Medan city corridor as:

a) Interaction container for all groups of society

The people of Medan, like the Indonesian people in general, actually have an original culture of mutual cooperation, working together and being active in social organizations. This tradition continues until now, but in spaces that are not accommodative. The housing environment is densed and has no adequate courtyard, and also gated communities that provide no enough place for interaction, changes in lifestyles that are busier and lack of free time. Street corridors must function as a place for communal activities, starting from small group activities, to various cultural festivals involving the wider community.

b) Educational media for the community

Initially, the street was a place to walk. But when cars and motorbikes filled the city space, walking places did not get proper compensation. Medan's people were born and grew up in this situation, city scape that did not provide a place for pedestrians. Urban planning only referred to general plans, did not have detailed design guidelines where each activity was organized, allocated and engineered. As the result, the street became the mixing of various actions, without control, which produced potential conflicts: between pedestrians and vehicle users, between street vendors and pedestrians and vehicle lane users, between vehicle users and other

vehicle users. The community did not have experience of well-designed space, where all interests are regulated and do not clash. Therefore, the design serves to give a 'new experience' about how to live in a city, where every citizen must share resources, including streets.

c) A place for people to meet their needs

Previous studies showed that the community met their necessities in the street-corridor: buyers, traders, operators, and users of public transportation. This was possible because the street space is very physically accessible. Street corridor design must be able to meet these needs proportionally, safely and comfortably.

4.1 Access and Linkage

Good access guarantees the community comes to the urban space easily. Ideally, the more choice of modes the better. The best accessibility of public space is the using public transportation, bicycles and walking. The facts showed that people accessed the street by private vehicles, especially motorbikes (Nasution and Zahrah, 2018). This dependency should be 'cut-off' by providing a safe and comfortable pedestrian route, which link up residential areas and activity centers continuously, without interruption. This also relates to the provision of a mass transportation system that joints the transit points to pedestrians' network. Special bicycle lanes should be provided as an alternative for people to access the street space. Even if there is a parking area for cars and motorbikes, it must be placed behind or below the building block.

4.2 Function and activities

According to the Project for Public Space (2009), space does not stop as 'just space' but must be able to be 'place.' For this reason, the corridor should have at least ten "things to do," such as eating, reading, chatting, sitting, biking, window shopping, playing, shopping, watching shows, art-performance, walking and taking "selfie" photo. The street corridors must function as interaction spaces, recreation area, and cultural arena with various activities generators. Places of interaction can be in restaurants, cafes, stairs, outdoor seating and in the street space. Recreation zone accommodates sports activities, play, and relaxation. The cultural space becomes the 'stage' of cultural festivals, such as the arena of creativity (art, culinary). It is highly recommended to integrate public buildings that are commonly used by the community as places of interaction, such as mosques and other places of worship. The existence of shops is maintained by paying attention to the connection with pedestrian lines so that people are comfortable taking window shopping. Street vendors are given space allocations along the corridor, at certain points that together with shops serve as 'eye on the street' (Jacobs, 1961).



Figure 1: Illustration of recreational and art spots by uniting pedestrian lines with the building's yard

4.3 Physical Quality and Facilities

The street corridor design should be user-friendly by meeting security and comfort requirements (PPS, 2009; Rahman et al., 2018). Security includes anticipation of crime and accidents. Crime is prevented through the design of building facades that make access and openings to the street, arrangements for street vendor points along the corridor, positions of space that where people can see and be seen without other 'blocking' elements, and an adequate night lighting. Protection against accidents is done by the design of pedestrian material that is flat, continuous, not slippery, and maintained from damage. In addition, a buffer between pedestrian lines and vehicle lanes is needed, for example with green lines or bollards. This also prevents motorbike intervention on pedestrian lines. It

should be considered comfort in the climate of high-intensity rain and heat. A shade tree is an element that is mandatory. The material should be chosen which is not slippery when it rains. Arcade buildings and bus stops can be used as shelter areas when it rains. Secondly, enough space for a variety of communal activities has become a suitable area for various elements of street furniture, such as seating, information boards (signage), lighting and street markings, trash cans and plant pots. Advertising boards may not dominate pedestrians. The design must be integrated with other street furniture elements, for example at stops, street lights, and sitting areas. At some points along the corridor, a small plaza can be planned, which can be used as a play area, or a sitting area with attractive artwork.

Existing corridors generally have a very narrow proportion of pedestrian lanes compared to vehicle lanes. Expansion of this pedestrian path can be done by first, closing the drainage lane and making it a pedestrian area, uniting the building yard with the pedestrian, and, second, narrowing the pathway of the vehicle. The second action requires a broader scale solution, involving the provision of mass transportation and alternative streets for long distance travel within the city. The urban corridor are better functioned to become public spaces, with more dominant pedestrian areas.

4.4 Management

One of the main problems of public open space in Medan and North Sumatra is weak management (Nasution and Zahrah, 2013, 2018). Surveillance that is not carried out allows activities that can damage facilities, such as illegal traders or vehicle interventions to the pedestrian area. In line with public education efforts, every public open space, including street corridors, should have at least two types of officers, namely janitors and security officers. The janitor currently looks a lot on duty, but the behavior of street users - street vendors and the general public that disregard cleanliness - is still a "homework" to repair. So far the Government has also assigned the Civil Service Police as a security facility for city facilities, whose existence is more synonymous with "hunting," raids and eviction of street vendors. With new management, the city guards should be assigned more to oversee open space security, check the quality of facilities, as well as sources of information for visitors. This is expected to create a sense of security for residents to move. A board should be formed to manage public open space, given the huge role this place plays in the lives of city residents.



Figure 2. Example of expansion of pedestrian area by closing drainage lines

5.0 The Implementation Strategy

Design, in the architectural scope of work, resembles a dream or fantasy. In fact, making it is not always easy to execute. Some city-designed results involving the authors could not be so simple to be applied by the City Government. Written guidelines and current design planning documents already exist. The Ministry of Public Works, for example, stipulates Regulation no. 3 of 2014 concerning Guidelines for planning, supplying and utilizing pedestrian network facilities and infrastructure in urban areas. However, significant implementation has not been seen in the city of Medan. There have been improvements in pedestrians around Merdeka Square, but have not paid attention to the linkage. New pedestrian line repairs carried out at JalanDr Mansur, were immediately occupied by street vendors. Meanwhile, several other big cities, such as Bandung, Surabaya, Jakarta, and Solo have increasingly applied the principles of street corridor planning (www.thecolourofindonesia.com). The main problem is in the mindset, knowledge, awareness, ethics, and

capacity of the government and citizens who must be taken seriously. This includes the leadership of city leaders (Permana et al., 2016). The study we conducted shows the low level of knowledge of building owners in the corridor towards the boundaries of public and private space and the right to use it (Zahrah et al., 2016, 2017).

5.1 Marketing Plan and Design: Public Education and Participation

Previous studies have shown that the level of public knowledge was not good enough about urban spatial management (Zahrah et al., 2016, 2017), especially the boundaries of private and public spaces. This is reasonable considering that the source of knowledge does not work: regulations are not socialized and are not enforced. Like a small child who does not understand the rules of life, in his growth his parents never educate them. So they grow up in the wrong perception, without realizing their mistakes. Even if the situation is improved by design, an intensive 'advertising' and 'marketing' must be done about the plan to be applied. Public education can be done with thorough socialization by utilizing all possible media. In addition, it is also essential to take into account the participation of city residents. Involving citizens in city planning of various success stories Corridor design is the key to a successful corridor as a space for the community (PPS, 2008). Furthermore, gradually the regulations are enforced, and supervision is carried out continuously.

5.2 The enhancement of government capacity building

The city government is like an old man who cares for his children, the city residents. He must be smart, firm, and full of love. The city space where people of various socio-economic backgrounds live, and problems of needs and interests that tend to cause the conflicts of interests, require a high-level skill. Getting to know the characters, traditions, and needs of the community is a compulsory condition for the success of the plan. So, the government must go down to the citizens, not just stay at the 'throne.' In addition, the leaders and all their devices must also have a good city management expertise. Strong leadership is needed for the implementation of various plans and designs, considering that there will be some parties who are likely to 'lose their place' or 'lose convenience' when the interests of the wider community are prioritized.

6.0 Conclusion & Recommendations

The design ideas expressed in this paper are not new at all. Some have been implemented in several cities in Indonesia, and have been successful. However, this paper attempts to outline the root causes of the street corridor issues in the city of Medan, the effects they have caused, and recommendations that are expected to be a solution. The integration between the formation of a government mindset and city residents, design instruments, and enforcement of regulations are some of the things that must be focused. It is hoped that this idea can become an input, especially for the city government, to improve the quality of Medan's city space.

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