Kampung as a model of transit-oriented development: a case study of Kampung Muka, North Jakarta

Fachrian Nabil Fauzi1 and Herlily1

1 Departement of Architecture, Faculty of Engineering, Universitas Indonesia
Email: rianabil@gmail.com1, herlily@eng.ui.ac.id2

Abstract. Transit-Oriented Development is becoming a catchphrase nowadays in metropolitan areas – especially Jakarta – since the operation of rapid mass transit. TOD - as an abbreviation of Transit-Oriented Development –is a transit-oriented development of an urban area, there has been a misconception that it is a middle upper-class mixed-use superblock development around stations by developers. The significance of dwelling and living around TOD are being neglected since these areas are inhabited by the working class. The kampungs are now being transformed into the so-called ideal TODs by developers and evicting the original dwellers who have been there all their lives. This paper will explore the potential of kampung as one of the living typologies of Transit-Oriented Development. Methods used in this research are literature study, areal circulation simulations, case study as to collect field observation to observe the building increments and locals’ interview to obtain a clear view of the locals’ perception towards their area. The case study of Kampung Muka, North Jakarta, was chosen because of its proximity to Jakarta Kota and Kampung Bandan Stations. In this observation, Kampung Muka has the potential to be classified as transit-oriented development.

1. Introduction
The growth of metropolitan cities has resulted in more packed areas in the city. This densification has an impact on the circulation and movement of people inside and out of the city. This act of transit is an exhausting journey endured by every individual working in it, which is due to the majority of people living outside the region. They are attracted to the city because it offers a place to work, shop, eat and drink, study, recreate, socialize, worship, seek treatment, have fun, and rest [1]. These conditions are what developers and planners envision as an ideal TOD.

These areas become the pinnacle of transit or rapid mass stations and then evolve into centers, which encourages the development of the area until it becomes independent towards its surroundings. Every building increment must influence the area as a whole, so each building must be able to create a synchronization and connection with the surrounding public space. The conditions involved are pedestrian spaces, communal spaces, parks, liaison for vehicles and public transit, and also the availability of parking spaces so as not to disturb the surrounding environment [2].

From this independent area, considering that model of settlement this paper is aiming refers to a kampung. The definition of the kampung according, to the KBBI, is the smallest administrative unit that occupies an area, located under the sub-district or kecamatan. Kampung is usually associated with conservative and old school behaviours because of the values, but when put in an urban context it serves more like a sanctuary for working class from across Indonesia. When we look at the conditions that arise from these kampungs, there are several of scenarios that arise. From culture assimilations,
rapid settlement growth, eviction, the emergence of boarding and rampant rented housing that allows more outside people into the village.

Observing the development of metropolitan cities around the world - in this case, Jakarta, Indonesia – it is growing to become more unbearable than before, which encourages people to live outside the area to commute daily to arrive at a destination inside the city. In these daily commutes, buildings have to create a union between pedestrian space and communal spaces [2]. These areas then become independent towards one another and turn into settlements or a kampung.

This paper aims to discuss the meaning of kampung as transit-oriented development. Understand, observe and study the development of kampung as a model of transit-oriented development in Jakarta so Kampung Muka, North Jakarta was chosen to be the case study. The aim of this paper is to observe whether Kampung Muka is a transit-oriented development. This paper is expected to be a catalyst for further explorations towards kampungs as the center of developments in the region.

2. Method
The observation regarding the existence of TODs in kampung uses several methods, which includes space syntax and image building of areas by intelligibility. Space syntax is an analytical method that observes circulation, connectedness, and integration that occurs in a region [3]. This method eases the understanding and predictions during the observations, so there is an illustration of how the interaction would be. As in image development, intelligibility refers to an individual’s understanding of the environment, which is considered common [4]. Thus, in understanding and observing the kampung, it must be stated that this is a model or type of TOD, not an area that is integrated towards it. These achievements are expected to potentially classify Kampung Muka as a transit-oriented development.

3. Results and Discussions

3.1. Kampung as A Transit Oriented Development and Its Understanding
An understanding of transit-oriented development includes an understanding of sustainable development as its basic concept, since its consideration of equal opportunity for future generation to obtain resources. Transit-oriented development is most effective for an area [5] because it considers human aspects, interactions, and the environment. Thus, TOD is an area that acts as an alternative to settle or reference to create a coherent, independent community and improve the well-being of its people, which is located near transit points.

Urban areas become attractive areas for migrants and bring spontaneous development in establishing a place to live. These gatherings bring diverse cultures and identities which encourage cultural assimilation in these areas. Kampung is a settlement model that has developed spontaneously and informally. Its development in particular regions triggers an identity that is consistently applying traditional values in it. Development occurs due to the need for socializing, residing, and livelihood in this particular area. This spontaneous development triggered informality in the lives of the villagers. Informality arises from the limited space that causes open space to accommodates places to gather and interact.

From these conditions, a settlement emerges spontaneously and unregulated by the local government. The definition of kampung as a TOD is a living model that develops spontaneously and informally, so it becomes a complex, independent community and seek to improve the well-being of the people living in it. The development then triggers the marginalization of the environment, as a result of the image formed by this community. Even though this development method can be used as a model for understanding urban life because kampung is the second city in the city [6].

3.2. Brief Description of Kampung Muka
Figure 1. The Region of Kampung Muka

The area confined by Jalan Raya Kampung Bandan, Rails of the KRL Commuter Line, Kali Besar and Kampung Bandan Station. Administratively Kampung Muka is a part of Kecamatan Pademangan and Kelurahan Ancol. Kampung Muka is located near several landmarks of North Jakarta, namely Jakarta Kota Station, Kota Tua Area, Sunda Kelapa Port, Taman Impian Jaya Ancol, Tanjung Priok Harbour, and Mangga Dua Mall. This condition elevates Kampung Muka to a strategic point in reaching those places. Marginalizing of the area are other factors that contribute towards the lifestyle. This is triggered because it lies close to the main road, which is usually passed by heavy vehicles.

3.3. Analysis of Kampung Muka, North Jakarta

Observation of the kampung is to obtain the development as a whole, interactions internally and externally, circulation, access, and morphological studies. Mental mapping and interviews of locals, would give an idea of the relationship between people with their built environment to represent the life in the kampung. To obtain an overall picture of life in the kampung, locals give their perspective and understanding of it. From their statement there are several aspects such as, their definition of living in the kampung, interactions that occur, effort in living this lifestyle, problems faced by the community, and their personal stories of how they finally got there.

The observation of circulation and access understood by calculating the connectivity and integration of the roads in Kampung Muka. This aim is to observe the linkage and connections of routes in the kampung.
Observation of circulation and access inside the *kampung* is created with the movement of people in it. Circulation is determined by the number of roads and routes that could be endured by many people, but with the spontaneous growth of Kampung Muka gave way to unusual paths that occur. The access from the *kampung* has several accesses that opens a path to let people inside and outside of it.

Circulation has variations of movement in every individual, that is riding motorcycles, bicycles or walking. This journey creates a unique path that has spots that become meeting points when people are running their daily activities. These meeting points become important because of their significance so interactions could occur. Access in the *kampung* extends to connect the roads inside it to the main roads on the Northern side of the area and some informal places on the other sides. These informal entrances give way to most of the dwellers that reach the area by foot.

Observing the calculation of space syntax, then circulation and access in Kampung Muka is represented not only by space syntax but by field observations. From these analyses we could observe the connectedness and relation of the community with surrounding communities in the areas. This implies that Kampung Muka is excluded from other areas and in return becomes independent.
The usage of these two different mappings ensure to obtain a clear picture of the ideal form of circulation and access in the area and incremental observation in spots known to be alive in some periods of the day. These observations give a depiction of interaction patterns, connectedness and dependency of the dwellers with their environment.

Circulation and access in Kampung Muka are represented by field observation and calculation on space syntax application. From these analyses we could observe the implications of the relations and connectedness towards itself as a community and communities surrounding the area. These conditions depict an independent community from observing the formal accesses, which is confined to only four entrances from Jalan Kampung Bandan on the North side and several informal entrances from other sides.
The development morphologically is described as a process gone through by the Kampung Muka from year to year. Observations of morphological development of the region will give an idea of the process gone through, until it has achieved a better, more established, and organized kampung physically. This development has implied that the overall development has made Kampung Muka an independent community by looking at its connections internally and externally. This development is a process that gave way to better conditions and physical order of the kampung. This condition defines the universal development of the kampung that became a community that is independent and connected circulatory with itself and the other regions.

Figure 5. Surveyor’s Mental Map

On observing and understanding the significance of the lifestyle of the kampung, we need to understand how people would interact with the built environment. This understanding is achieved by creating a mental map [7]. These mental maps are based on analysis which observes the intelligibility of locals and their dynamic interactions in their area. That is obtain by the surveyor while following prominent figures such as snail seller, pepes sellers, and surveyor. These subjects are picked because of their knowledge and intelligibility of routes and roads contained inside the kampung, while for the map produced by the surveyor is used to give a picture of how ‘an outsider’ could navigate inside the labyrinth of the kampung.

From those two journeys, the surveyor could understand the complexity and the intelligibility of locals towards their built and spatial environment [6]. From these interactions of people and environment, the mapping of landmarks and nodes inside the kampung gives an understanding and uniqueness of their community. Comprehensive depiction of the subjects gave an overall perception of their intelligibility towards the kampung extensively and the environment they live in.

4. Conclusions

Kampung is a settlement model that has developed spontaneously and informally. This development initiates identity which laden and consistent with the application of traditional value in it. As an urban area, Transit-Oriented Development is an area that acts as a settling alternative or reference to create a community development that is coherent, independent and increases the well-being of people living near transit modes. The understanding of existence of TODs in kampungs is a settling model that is developing in a spontaneous manner and informal until they become a complex community, independent, and improving their well-being. This opinion is based on the understandings of kampung and TOD as a response to living in urban areas. In understanding and observing kampungs
as a form of TOD, it is affirmed that this is a model or type from TOD region not an area that is integrated to it.

Kampung Muka could be potentially classified as a transit-oriented development in Jakarta, this is observed from historical process of the kampung’s development, its complexity of socializing patterns, independency, and their daily lifestyle. The complexity is by observing systems used in the kampung for defining blocks, which uses roads and landmarks as reliefs to determine the sense of one’s place. The process of gaining independency is achieved by the spontaneous growth, which leads to ambiguity and later marginalization of the kampung. This will lead to the independency of the kampung towards surrounding areas. This triggers intelligibility of locals and their relationship with their built and spatial environment.

Acknowledgements
We thank Mr Bahrun, Mr Thofan, Mrs Yuli, Mr Darsono, Mrs Keong, Mrs Kaesani, Mrs Kusiah for their availability to be interviewed and providing data for this research. We also thank the Directorate Research and Community Engagement (DRPM) Universitas Indonesia for their financial support for this research and publication under the scheme of PITTA B Grant, 2019, Contract Number NKB-0737/UN2.R3.1/HKP.05.00/2019

References
[1] Speck Jeff 2013 *Walkable City : How Downtonwn Can Save America, One Step at a time* (Farrar, Straus and Giroux)
[2] Alexander Christopher 1987 *A New Theory of Urban Design* (New York Oxford University Press)
[3] Hutama Irsyad 2016 *Exploring The Sense of Place of an Urban Kampung*. Netherlands. Faculty of Geo-information Science and Observation of the University of Twente.
[4] Salheen, M. 2001. A Comparative Analysis of Pedestrian Environment: The Case Study of Cairo City Center. Heriot-Watt university, Edinburgh College of Art, Faculty of Environmental Studies, School of Architecture.
[5] Calhtrope, Peter. 1993. *The Next American Metropolis: Ecology, Community, and The American Dream*. Princeton Architectural Press.
[6] Nugroho, Agung Cahyo. 2009. Kampung Kota sebagai Sebuah Titik Tola dalam Membentuk Urbanitas dan Ruang Kota Berkelanjutan Bandar Lampung. Jurnal Rekayasa: Vol 13; No 3.
[7] Hidayetoglu, M Luthfi. Yildirim, Kemal. Akalin, Aysu. 2012. *The Effect of Color and Light on Indoor Wayfinding and The Evaluation of The Perceived Environment*. *Journal of Environmental Psychology*. Sciverse Science Direct.