CHALLENGES FOR SURABAYA CITY AS A SMART CITY

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ABSTRACT

Currently living in the city of Surabaya is much more comfortable compared to decades of the previous years. A city that is increasingly green, clean, follows the development of information technology, and promotes a healthy environment. Various awards were won by the city of Surabaya, one of which was "smart city". There were three indicators in determining smart city, namely smart government, smart living, and smart environment. Behind these achievements, there are various challenges that will be faced by the city of Surabaya, namely the increasing of in-migration, the increasing proportion of young people, changes in land use for housing, and global community competition. Recommendations that can be given in this study are population quantity control program through the Family Planning program, order and ease in population administration services, and the availability and convenience of public transportation that reaches to all corners of the city to supportive need for the dynamics of citizens' activities.

KEY WORDS : Green and clean, Smart city, Challenges

INTRODUCTION

It is undeniable, that currently living in the city of Surabaya is much more comfortable compared to decades of the previous year. This is thanks to the hard work of all components of the community that are fully supported by the City of Surabaya government. The population of almost 3 million, the city of Surabaya is inhabited by various ethnic groups in Indonesia, Javanese (53%), Chinese (25.5%), Madurese (7.5%), and Arabic (7%). Many expats also live in the Surabaya area, especially in the West Surabaya area, with Chinese, Korean, and Japanese being the largest expatriates(Central Bureau of Statistics, 2020).

Almost all the protocol roads to the aisles look green. The road section has a beautiful garden. Cleanliness is also more awake. Early in the morning there were no yellow troops or called by "Cak Koen" but the city was clean before dawn. That means, the janitor works from midnight until dawn. The gas station has been turned into a city park, added vegetation in the green belt, and the presence of urban forest as an effort to provide green open space (Landsberg, 1981). The effort was arguably successful. Gas stations which were originally located in the green lane, were dismantled and functioned again in accordance with their purpose, namely as a green lane area along the highway (arterial road and collector road). The existence of a green belt along the highway in the middle of the city, is intended to reduce pollutants due to vehicle emissions, while increasing oxygen supply and functioning as a highway aesthetics (Moccia, 2006). The community is increasingly aware to green their respective home pages. For example, the Surabaya Green and Clean program, in that way, the amount of land covered by plants can increase. Although urban land is very limited, it does not become an obstacle to planting, because residents are required to be creative in planting with various methods (potted plants, polyback, etc.). The Green and Clean program can produce plants that function aesthetically (beauty) as well as productive plants that benefit directly in everyday life (vegetables, fruits) (Pauleit and Duhme, 2000).

Other breakthroughs carried out by the Surabaya City Government, in order to realize Surabaya City as a multimedia city, have installed Hotspots in many places, having previously made parks with

wireless internet access facilities (Hotspots) (Schaffers *et al.*, 2011). Hotspot placements are determined at the main points of the protocol road in this City of Heroes. Some public areas and parks in Surabaya that have been built hot spots include; Apsari Park - Pemuda street, Bambu Runcing - Panglima Sudirman street, Mpu Tantular Museum Park in front of Al Falah Mosque, Sulawesi Park, Achievement Park, Mojopahit Hotel and M Duryat Park, Surya City Hall Garden, Bungkul Park and Flora Flora Bibit Park which are currently nicknamed Techno Park. With the availability of this Hotspot service, people are interested in the development of information through cyberspace and are familiar with the development of information technology today.

The concept of building construction towards the green building and green office has always been a prerequisite in the design of new buildings. It is hoped that with this concept, the building will provide infiltration areas, green open spaces, save energy, or even use alternative energy.

The city of Surabaya regulates its citizens in activities related to smoking, in this case the issuance of Surabaya City Regulation No. 5 of 2008 concerning No-Smoking Areas and Restricted Smoking Areas. The No Smoking Area referred to here is an area that is declared prohibited for the activities of production, sale, advertisement, promotion and / or use of cigarettes. While the Smoking Restricted Zone is a place or area where smoking activities should only be carried out in special places. It is expected that the citizens' right to get a healthy environment will be fulfilled, in this case a smoke-free environment in a predetermined place (schools, health care facilities, in public transportation, etc.).

In addition to the Adiwiyata Program from the Ministry of the Environment, an environmentally friendly school program that targets primary and junior high schools and high schools, the Surabaya City Government sees the need for environmentally friendly colleges (Universities) through the Eco Campus Program. The program is a breakthrough so that the campus environment in Surabaya is environmentally friendly so that it provides comfort for the teaching and learning process on campus, including also instilling educational nuances in the field of cleanliness and a culture of environmental love for the academic community.

Achievements of Surabaya City

A number of achievements for the efforts made by the Surabaya City Government together with the townspeople reap results. Surabaya has become a city full of achievements at regional and national levels, even internationally.

Adipura and Adipura Kencana. Adipura won the highest award for cleanliness and environmental preservation of the City. This award is given annually to cities that are able to maintain and preserve environmental cleanliness. Surabaya has won Adipura since 2006, 2007, 2008, 2009, 2010, and 2011, although the acquisition value standards continue to increase and the level of difficulty is increasingly complicated. Since it has been five years in a row, since 2012, 2013 has been awarded the Adipura Kencana award in the Metropolitan city category.

ASEAN Environmentally Sustainable City Award. The city of Surabaya continues to improve its achievements, winning the ASEAN Environment Sustainable City award as the city with the best sustainable environmental arrangement compared to other major cities in ASEAN. There are three basic criteria used by the jury in the assessment, namely greening which not only looks green but has succeeded in cooling the city, the river in Surabaya is relatively cleaner, and the air in Surabaya is considered cleaner than other major cities in ASEAN.

MURI record for City Park. The construction of 13 City Parks in Surabaya from ex-SPBU land carried out during 2008-2009, reaped a quite unique award. The 13 parks were recorded as the most park development records in the former SPBU land in the Indonesian Record Museum.

ICT PURA. ICT Pura is an award for cities that manage ICT successfully so that they contribute significantly to the life systems of their communities by the Ministry of Communication and Information. ICT Temple which was held for the first time in 2011 confirmed the City of Surabaya the Main Category, namely as a city that was ready and able to compete in the field of ICT to outperform 165 other Regencies / Cities from 33 Provinces in Indonesia or on average each Province was represented by 5 cities / districts chosen by the Ministry of Communication and Information to take part in ICT Pura.

Wahana Tata Nugraha. Wahana Tata Nugraha is given to cities that are able to carry out their traffic order. For the umpteenth time, Surabaya won the 2010 WTN award in the Metropolitan City Category

The 2013 Asian Townscape Award (ATA). Taman Bungkul International Award "The 2013 Asian Townscape Award (ATA) from the United Nations",

is the first award won by Indonesia. Get support from the UN Habitat Regional Office for Asia & the Pacific, Asia Habitat Society, Asia Townscape Design Society and Fukuoka Asia Urban Research Center.

Smart City Award 2011. Surabaya City won 3 out of 4 awards namely Smart Governance, Smart Living and Smart Environment, setting aside 59 other participants from 33 provinces in Indonesia.

Other awards for the last 2 years are still very much related to the environment, Regional Environmental Status (SLHD) at the National level, Wahana Tata Laksana (WTL) for Hygiene in 2013, Adiwiyata Mandiri, National Satya Lencana Wirakarya National Clean Competition Competition Award, Socio-economic field , Population Award categories of population quality, IT, Nutrition, health, child-friendly cities. Indonesia Digital Society Award (IDSA) 2013: The Best of Diamond Champion in the government category, Future Gov Award Indonesia 2013 in the Future City of the Year category.

Surabaya as a Smart City

A city can be called to be "Smart" if it is able to use modern Human and Social Resources, transportation, and infrastructure of Communication and Technology to realize sustainable economic growth and improve the quality of life of the community by managing natural resources wisely through governance based on community participation (Schaffers *et al.*, 2011). Smart City has become a landmark in city planning. Smart City is the result of the development of intensive knowledge and creative strategies in improving the socio-economic, ecological, and competitive quality of the city. The emergence of Smart City is the result of a combination of human capital (for example, an educated workforce), infrastructure capital (for example high-tech communication facilities), social capital (for example open community networks) and entrepreneurial capital (for example creative business activities). Strong and trustworthy government accompanied by creative and open-minded people will increase local productivity and accelerate the economic growth of a city (Kourtit and Nijkamp, 2012).

Smart City Award is an award event from the "Warta Ekonomi" and "Warta eGov" magazines aimed at districts or cities that have implemented information and communication technology in their life arrangements so as to create smart / smart cities. In the event, Surabaya won 3 of 4 awards, namely Smart Governance, Smart Living and Smart Environment, setting aside 59 other participants from 33 provinces in Indonesia.

The indicators assessed and determine the victory at the event are as follows (Schaffers *et al.*, 2011):
1. Smart Government, including: (1) Participation in Decision Making (ICT Strategic Plan, Public Involvement in Decision Making, Population Administration System, Licensing Administration System, Citizen Participation, Public Area Monitoring System), (2) Public Services and (3)) Transparent Governance
2. Smart Living, includes: (1) Education Facilities (Online New Student Reception, Online School SIM, Tourism Portal, CCTV Traffic Monitoring, Traffic Management Center, Cooperation between Agencies related to eGov, Cooperation with Private related to eGov, Free wifi facilities in public places (2) Touristic Attractivity and (3) ICT Infrastructure Availability
3. Smart Environment, including (1) Sustainable Resource Management (Early Warning System / Early Warning System, (2) IT-Based Waste Management System (3) IT-Based Water Monitoring System.

A CHALLENGE FORSURABAYA CITY

1. Incoming migration flows more and more
   The flow of migration into Surabaya is not only due to economic reasons, but also due to educational reasons. In the city of Surabaya, educational facilities at various levels and even from abroad can easily be found. There are 4 educational facilities in the form of state universities in Surabaya, namely Unair, ITS, Unesa, UINSA and UPN which are PTN. Beyond that there are still a large number of private tertiary education facilities and are no less popular than the various state universities. A number of these public and private education facilities eventually become magnets for residents from outside Surabaya to move into circular, semi-permanent or even permanent migrants. Every year it is certain that each of these educational facilities accepts new students, some of whom are from outside Surabaya. Unfortunately, after graduating, a number of scholars did not return to their hometown, but stayed in Surabaya to look for work.
2. Large proportion of youth ages.
   Most of Surabaya population is dominated by

age between 15-29 years at 35.10%, with details of the population aged between 20-24 years reaching 12.67%, followed by residents aged 25-29 years at 12.24% and then followed by the age group between 15-19 years which is 10.19%. In the city of Surabaya is the area that gives the most hope for young people in particular to get a job. There are two groups of successful and unsuccessful youth here. Successful groups exist because they are supported by the quality of skills and education that are the basis of getting a job. This group adds to the glitter of consumerism. The development of entertainment venues in urban areas is generally supported by this group. Recognized or not, the majority of consumers from entertainment establishments and shopping centers are young people. But on the other hand in Surabaya there is another group who are less fortunate: they have not been able to enter the sectors that promise high salaries but still continue to stay. The failure of the second group is more due to the skills and education requirements that are not able to penetrate the sectors that provide high salaries. As a result, this group enters whatever sectors that are important that they can survive in Surabaya while waiting for the possibility of a change of fate.

3. Increased land for housing and changes in land use for human activities
Settlements shifted from the concept of housing to apartments will have an impact on different social developments, especially for children and adolescents. Surabaya's low topography is a threat to the development of the city itself (buildings, dwellings), as well as threats to global warming, especially the impact of rising sea levels and extreme climate change

4. The existence of competition and global policies, making the City of Surabaya as an area that is included in the initial order of impact, for example MEA 2015 (Asean Economic Community which will take effect starting in 2015)

Recommendations

1. The population quantity control program through the Family Planning program must continue to receive attention because the population of Surabaya City is already above 3 million. If this population control is not considered, it is not impossible that what Surabaya has achieved in the past few years will be difficult to achieve again for future generations because of the large population of Surabaya.

2. Order and ease of population administration services become a very important part, as a material for planning, implementing and evaluating programs in the fields of economy, taxation, education, health, environment, clean water, food, law and the provision of infrastructure facilities.

3. The availability and convenience of public transportation that reaches to all corners of the city, is a very supportive need for the dynamics of citizens' activities.

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