IMPLEMENTATION OF SMART CITY POLICY TO ADVANCE THE ECONOMY IN BANDA ACEH CITY (CASE STUDY: URT CINTA KASIH HOUSING, PANTERIEK VILLAGE) ACEH PROVINCE

Ridha Mafdhul\textsuperscript{a}, Muttaqin\textsuperscript{b}, Safwan\textsuperscript{c}

\textsuperscript{a}Magister Teknik Sipil, Jurusan Teknik Sipil, Universitas Syiah Kuala, Banda Aceh, Indonesia
\textsuperscript{b}Jurusan Teknik Sipil, Universitas Syiah Kuala, Banda Aceh, Indonesia
\textsuperscript{c}Jurusan Arsitektur dan Perencanaan, Universitas Syiah Kuala, Banda Aceh, Indonesia

*Corresponding author, email address: ridhamafdhul@gmail.com

**ARTICLE INFO**

**ABSTRACT**

Smart city is an urban development and management strategy designed to assist various activities and provide easy information to the public. Since 2017, the Banda Aceh City Government has adopted an electronic-based planning system to encourage policy making and create a transparent and participatory bureaucracy. In addition, Banda Aceh is a trading and service city that has a significant micro-economic potential with the growth of the MSME sector reaching 25\% per year and is the backbone of the city's economy (Bappeda Banda Aceh City, 2019). This potential must be encouraged by the use of technology and information as well as digital means to achieve better economies of scale. Therefore, the implementation of smart city Banda Aceh is expected to continue to grow to improve the economy and quality of life of the community. The focus of the research is the implementation of a smart city in Banda Aceh City and the role of the smart economy in improving the community's economy, especially HBE in Panteriek Village. By using a qualitative method involving the government, 23 household business actors, and digital marketing practitioners, the results show that the development and management of smart cities has been carried out optimally from a government perspective. However, the implementation is still not optimal due to the limited human resources from the government and users. On the other hand, the growth of business groups and the support of internet facilities provide great opportunities for the development of a smart economy by optimizing financial support to developing a marketplace to improve the economy and people's welfare.

©2022 Magister Teknik Sipil USK. All rights reserved

1. INTRODUCTION

In the last two decades, city governments in various countries have tried to reduce various urban problems and challenges by utilizing information and communication technology known as the smart city concept. Smart city in another language called smart city is a city planning concept that puts forward the principles of effective and efficient technology-based which is considered a key element in managing the future of the city (Albino, 2015; Tyas, et al. al, 2019; Marisa, H. & Andree, 2019).

The implementation of smart cities in Indonesian cities cannot be separated from the encouragement and mandate of Law no. 23 of 2014 concerning Regional Government which requires improving the performance of regional administration to carry out various innovations. Innovations that can be carried out by local governments are reforms in government administration that refer to innovative policies, efficiency,
effectiveness, transparency, improvement of service quality, oriented to the public interest, and accountability for the results not for self-interest (Nilma, 2018).

Since 2017, Banda Aceh City has implemented a smart city program. Based on the Banda Aceh Smart City Master Plan, the Banda Aceh City Government took the first step by implementing an electronic-based planning system. In another context, managing a smart economy, Banda Aceh as a city of trade and services has the potential for a micro economy to grow significantly. Data compiled by the Banda Aceh City Bappeda in 2019, the MSME sector experienced significant growth reaching 25 percent and became the backbone of the city’s economy (Bappeda Banda Aceh City, 2019). This potential must be boosted by utilizing digital means to achieve better economies of scale with an ever-increasing market share as the locomotive of the local economy as a source of people's livelihoods and reducing unemployment. The implementation of a smart economy should have an impact on increasing income and product or marketing innovation for small industries on a household scale (URT). For this reason, by taking the research location at the Cinta Kasih Housing, Gampong Panteriek with the majority of the community working in the informal sector economy, namely household businesses, this study formulates research questions related to the implementation of smart cities to improve the community’s economy such as the implementation of smart cities in Banda Aceh and the role of smart cities in the community. smart economy in improving the community's economy, especially URT in Panteriek Village.

2. LITERATUR REVIEW

2.1 Policy Implementation

Implementation is considered as the main form and a very decisive stage in the policy process. Edwards III emphasizes that without effective implementation, the policies that have been decided will not be successfully implemented (Akib, 2010). Policy implementation is a dynamic process as an effort to solve public problems that tend to be complex and have room for intervention from various interests (Mursalim, SW, 2017; Widiastuti & Suryawati (2021). In an effort to identify policy implementation problems, Edwards III formulates what factors only that can support and hinder the success of policy implementation. These factors are formulated into four things, namely 1) communication, 2) resources, 3) disposition or attitude of implementers, and 4) bureaucratic structure (Akib, 2010).

2.2 Smart City

Smart city in Giffinger, et. al (2007) view is a city with good service quality that is built based on the ‘intelligence’ of self-awareness of the community. Another opinion, Firmansyah, et.al (2015) explains that a smart city is a city that is able to handle its own city problems and maximize the city's potential to create a good and sustainable quality of life. Meanwhile, Prof. Suhono Harso Supangkat, a smart city expert in Indonesia defines a smart city as a city that knows the problems that occur in it (sensing), understands the conditions (understanding), and can manage various existing resources to achieve goals that are effective and efficient in providing services to the community. (Supangkat, 2015).

Giffinger, et. al (2007) & Cohen (2014) as the most popular concept in questioning smart cities divide into six dimensions of smart cities, namely smart economy, smart mobility, smart environment, smart people, smart living, and smart governance. Meanwhile, the Banda Aceh City Government formulated six pillars of Smart City Banda Aceh related to governance (smart governance), regional marketing (smart branding), smart economy (smart economy), residential ecosystem (smart living), community environment (smart society), and environmental care (smart environment) (Bappeda Banda Aceh City, 2019).

2.3 Smart Economy

Smart economy is an innovative economy that seeks to advance the economy by implementing new models of cooperation in production, distribution, and consumption (Tyas, WP, et.al, 2019). The presence
of a smart economy in a city has a positive impact on the increasing number of entrepreneurs and the development of city promotion through city branding (Astutik, EP & Gunartin, 2019). This study aims to investigate the role of the smart economy on the development of MSMEs, especially those operating on a household scale. In order to measure the implementation of the smart economy policy, the indicators of the smart economy coverage refer to the research studies that have been carried out as shown in Table 1 below.

### Table 1. Smart Economy Indicator

<table>
<thead>
<tr>
<th>Indicators Used</th>
<th>Scopes</th>
<th>Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home Business</td>
<td>• Type and number of Industries&lt;br&gt;• Industrial Conditions and Facilities (internet access)</td>
<td>• Cohen (2014)&lt;br&gt;• Firmansyah (2015)</td>
</tr>
<tr>
<td>Entrepreneurship</td>
<td>• Entrepreneurial Condition&lt;br&gt;• Financing or Capital</td>
<td>• Giffinger (2007)&lt;br&gt;• Bappeda Kota Banda Aceh (2019)</td>
</tr>
<tr>
<td>Innovation</td>
<td>• Utilization of social media&lt;br&gt;• Buying and selling transactions (cashless)&lt;br&gt;• Modify / Generate new ideas</td>
<td>• Nilma (2018)&lt;br&gt;• Cohen (2014)&lt;br&gt;• Bappeda Kota Banda Aceh (2019)</td>
</tr>
<tr>
<td>Society Participation</td>
<td>• Involvement in development in the environment</td>
<td>• Jaelani (2019)</td>
</tr>
</tbody>
</table>

Source: Processed by Authors from Various Research (2021)

#### 2.4 Home Business Enterprise

Home Business Enterprise (HBE) is an activity that converts finished goods into semi-finished goods or from less valuable to goods that have a higher value to be traded with a relatively small number of workers 1-4 people (Joesyiana, K, 2017). According to Law no. 3 of 2014 concerning Industry, HBE is classified as a small-scale industry with an investment value of Rp. 500,000,000 (five hundred million rupiah), which does not include land and buildings for business premises. Other characteristics of the HBE sector are employees who come from families or family workers with a salary payment system, unpaid, only provided with food and drink facilities, and housing facilities (Joesyiana, K, 2017).

The existence of HBE and the application of the smart economy itself has been described in the research of Tyas WP et al (2019) that the use of the internet as one of the cornerstones in smart city development has a good effect on business productivity both in terms of profits and business promotion. However, success in the URT sector is also highly dependent on the type and characteristics of the business itself and the environmental scope of the business location (Reuschke and Mason, 2020).

### 3. RESEARCH METHOD

#### 3.1 Data Processing and Analysis Method

The research was conducted at the Cinta Kasih Housing Center, Banda Aceh based on the development of housing conditions used as residences and business spaces. The type of research used is qualitative research to provide a more detailed description of a symptom or phenomenon to the development of the Banda Aceh City smart city program, especially in the home industry economic sector. Sources of research data from primary data and secondary data. Primary data obtained from observation, documentation, and interviews. The informants involved in this research are the government sector, the financing sector, digital marketing industry players, and 23 household business actors. Meanwhile, secondary data is from the Banda Aceh smart city planning document.
The analysis used is triangulation of data sources from various sources to determine the implementation of the smart city of Banda Aceh City and the smart economic transformation that has been carried out on household businesses in the research location.

4. RESULTS AND DISCUSSION
4.1 Banda Aceh Smart City
Banda Aceh is a medium-sized city, with a population of 259,913 thousand people (Bappeda Kota Banda Aceh, 2019). In an effort to develop Banda Aceh as a smart city, the city government carried out various readiness studies of the city structure, infrastructure, and superstructure. The Banda Aceh City smart city program which has been started since 2016 and was inaugurated in 2017 continues to undergo several changes with concepts that continue to adapt to urban dynamics and community needs. In 2019, the Banda Aceh City Government formulated six pillars of Smart City Banda Aceh related to smart governance, regional marketing (smart branding), smart economy (smart economy), residential ecosystem (smart living), community environment (smart society), and environmental care (smart environment) (Bappeda Banda Aceh City, 2019).

4.2 Banda Aceh Smart City Policy Implementation
Policy implementation can be seen from the communication pattern of the implementer, the resources, both human resources and facilities, the disposition or attitude of the implementer, and the government bureaucracy. A more detailed explanation of the implementation of the smart city concept in Banda Aceh City is as follows.

a. Communication
Effective implementation will be carried out if decision makers, namely stakeholders, can convey clear and consistent information. In an interview, Fadhil (2021) as the Head of the Banda Aceh Communication, Informatics and Statistics (Diskominfotik) Service said that the government continues to strive to build coordination and cooperation to make decisions and public policies that are right for the welfare of the community. Meanwhile, the Head of the SME Cooperatives and Trade Service, M.Nurdin (Diskopukmdag, 2021) conveyed the role and attitude of the Mayor of Banda Aceh in building humanist communication to make several development agendas work well. However, Mufied Alkamal (2021) who acts as Director of
LKMS Mahirah Muamalah conveyed the challenge of building cross-sectoral communication, namely smart city sociization, which is not yet optimal in the community, including in financing and program assistance. This is also felt by most of the informants of household businesses who do not know optimally about the role and function of smart cities.

b. Resource

In order to realize a policy optimally, implementers must be supported by adequate resources with sufficient staff (number and quality), required information, authority to carry out tasks or responsibilities and required facilities. So far, the city government has issued 107 websites consisting of 45 websites for the City Government Work Unit (SKPK) of the Banda Aceh City Government and 62 websites for Gampong. It is acknowledged by the government that human resources in the government are still limited. The number of employees with a background in information science and technology has not fulfilled all SKPK (Interview with Fadhil, Head of Discominfotik City of Banda Aceh). On another occasion, Suhail (2021) as a digital marketing practitioner assessed that the shortage of human resources affected the understanding of the main implementer, namely the government in providing socialization and program preparation.

c. Disposition

The attitude of the implementer is the implementer's commitment to a program or policy. The commitment to implementing a smart city in Banda Aceh can be seen from the signing of the joint commitment of all SKPKs in realizing the Banda Aceh Smart City. In addition, several programs that will be implemented in the future include the construction of the Banda Aceh Command Center, providing financial assistance through LKMS Mahirah, online payment facilities and free internet access at Mahirah Market. Mufied Alkamal (2021) assessed that the government's commitment to smart city development in Banda Aceh has been running and has had a positive impact on the community. One proof is the Smart Governance category award from the Ministry of Communication and Information in 2021.

d. Bureaucratic Structure

The bureaucratic structure is a standard operating procedure that regulates work organization and policy implementation. The Banda Aceh City Government has established the Banda Aceh Smart City Council in Banda Aceh Mayor Decree Number 392 of 2019 and the Banda Aceh Smart City Implementation Team Number 392 of 2019 (Fadhil Interview, 2021). The application of the smart city concept in Banda Aceh City has been going well in terms of the government sector. The application of technology in terms of public services and also starting to take advantage of social media. challenges and obstacles in government still occur, such as coordination between agencies both at the vertical and horizontal levels. In addition, other factors that are also inhibiting are administrative problems. For this reason, it is necessary to seek more innovative ways so that the lower class can participate more in the implementation of smart cities which are actually for their own benefit (Mufied Alkamal, Interview, 2021).

The implementation of smart city development requires cooperation from all parties from the government to the community, uniting digital systems with institutional (Angelidou, 2014) and support from technical, institutional and human factors (Nam and Pardo, 2011). The implementation of a smart city in Banda Aceh City has sought to involve all parties through the pentahelix collaboration mechanism, namely elements of the government, academics, private sector, mass media, business actors, communities and society. For now, the main challenge is from the human factor, both from the capacity of government bureaucrats and also the wider community who are literate. The hope is that through the use of technology and information, it can create improved services and quality of life for the people of Banda Aceh to create an Islamic and Innovative Smart City.
4.3 Implementation of Smart Economy for Home Business Enterprise

In this study involved 23 informants of household business actors in Cinta Kasih Housing. From gender, the majority were 14 women (70%) and 9 men (30%). In the age profile grouped by young age (20-39 years) there are 7 people (30%) while the older age (40-59 years) is 16 people (70%). Types of business in the buying and selling sector of goods with 21 businesses (91%) and the service sector with 2 businesses (9%).

Smart economy research studies focus on four main indicators in developing a smart economy for household businesses, namely household businesses (type of industry and internet access), entrepreneurship (entrepreneurship and financing conditions), innovation (utilization of social media, buying and selling transactions, and generating ideas), new) and community participation (involvement in the environment).

a. Household Business

The majority of household business actors are in the trading sector, such as opening a grocery store that provides a variety of daily needs, culinary, and selling clothes and other necessities. While in the service sector, the informants opened a sewing business, washing clothes and workshops. Meanwhile, from the facilities, Cinta Kasih Housing has been connected by an internet network connection, but the provision is still independent and has not been facilitated for free by the government.

b. Entrepreneurship

The majority of the informants started a business because of the crush of economists. Some other informants gave reasons for seeking extra money and wanting to pursue a profession as an entrepreneur. In the conditions of business space for household business actors is still very limited. Generally they take advantage of the garage or yard space as a business location. This phenomenon is in line with Strassman's opinion that household business actors use their residence as a business location with the aim of earning income or as part of a survival strategy (Tyas, 2016). In the financing sector, the majority of informants use business capital sourced from personal savings. As stated by Timur Delianti (46), the capital used is own capital or savings. Similar to Nurdin (55), the capital used comes from his personal capital. In fact, the Banda Aceh City Government through LKMS Mahirah has launched the Mothers' Financing Program (Promak) and the Financing Program for Youth Entrepreneurs (PROPAMEN). However, the lack of socialization and the low level of financial literacy among the community have caused the program with the aim of family economic resilience not to run optimally. This is acknowledged by Mufied Alkamal (2019) that the socialization of financing assistance from Islamic financial institutions has not fully gone well due to limited personnel in socialization, concerns about loans, to the administrative process which is considered complicated.

c. Innovation

Several informants such as Elly (48) and Alisya (20) have used social media as a medium for business promotion. The use of social media cannot be separated from the type of business and market reach such as culinary businesses and online shops which are aimed at increasing interactions such as Whatsapp and sharing content or photos such as Instagram (Chen in Tyas, 2016). The majority of household business actors still use payments or receive in cash. In addition, the informants do not yet have ideas for developing their businesses. This is also a weakness in the sector in developing smart economy programs to foster people-based economic development (Bappeda Kota Banda Aceh, 2019). It is hoped that the government can work together with academics and the young entrepreneurial community to carry out socialization and assistance for MSME actors for the community at the village level.
d. Society participation

In the indicator of community participation, the majority of informants are involved in maintaining the cleanliness of the business and living environment. In addition, the community participates in social and religious activities organized by the village apparatus. In the economic sector, the presence of household entrepreneurs plays a role in absorbing labor. For example, the Bakso Panteriek business run by Mr. Dek (56) absorbs workers in the community. It is the same with Elly Catering, which involves the local community in running its business. With the presence of the household-based business, actually the values in Islam have been implemented and can achieve sustainable development due to the increased sense of ownership of the surrounding environment (Jaelani, 2019). However, problems in household business activities have an impact on the comfort and cleanliness of the environment. For this reason, it requires
cooperation from business actors and assistance from village officials to minimize the environmental impact of HBE activities.

From the discussion, the supporting factors for the smart city program in Banda Aceh, especially in the development of the smart economy, are the commitments such as a financing assistance program for business actors through the Islamic financial institution, LKMS Mahirah. On the other hand, the obstacles and challenges in developing the smart economy, the type of home industry that is still traditional in terms of equipment and facilities, human resources, especially for the younger generation in responding to technological and information developments, to the attitude of business actors who do not have the intention to innovate. This issue is a challenge for the government in collaboration with business actors and other sectors to provide socialization and training so that the use of digital-based information technology can provide economic improvement and community welfare (Tyas, 2016).

Table 2. Appropriateness of Smart Economy Implementation for Household Business Actors in Cinta Kasih Housing

<table>
<thead>
<tr>
<th>Indicators Used</th>
<th>Scopes</th>
<th>Checklist</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home Business</td>
<td>• Type and number of Industries</td>
<td>√</td>
</tr>
<tr>
<td></td>
<td>• Industrial Conditions and Facilities</td>
<td>√</td>
</tr>
<tr>
<td></td>
<td>(internet access)</td>
<td></td>
</tr>
<tr>
<td>Entrepreneurship</td>
<td>• Entrepreneurial Condition</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>• Financing or Capital</td>
<td>X</td>
</tr>
<tr>
<td>Innovation</td>
<td>• Utilization of social media</td>
<td>√</td>
</tr>
<tr>
<td></td>
<td>• Buying and selling transactions (cashlees)</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>• Modify / Generate new ideas</td>
<td>X</td>
</tr>
<tr>
<td>Society Participation</td>
<td>• Involvement in development in the environment</td>
<td>√</td>
</tr>
</tbody>
</table>

5. CONCLUSIONS AND RECOMMENDATION

Based on the results of the research that has been done, the conclusions are as follows:

1. The implementation of smart city Banda Aceh has been carried out optimally from a government perspective, from the development of several technology-based information, applications, to the existence of a public service mall, to facilitate government bureaucratic services. However, in several other sectors, the smart city program is still in the development process and has not been maximized as a whole because of the many internal obstacles and challenges such as limited human resources that are still not adapting to ICT, socialization, and awareness or initiatives from the community itself in supporting Banda Aceh smart city program.

2. Several indicators of the smart economy have been running well, such as the diversity of home industries, internet connection facilities, the use of social media to market business products and community participation in maintaining a clean and comfortable environment as important capital for the development of a smart economy program. The problem with business actors, development that still lacks innovation to the implementation of electronic transactions is an ongoing process with government support through financing assistance and optimal socialization.

According to the results, the recommendation are as follow:

1. The suggestions that can be given based on the research results are; Banda Aceh City Government can accelerate the acceleration of the Banda Aceh smart city program by strengthening human resources by
providing training and involving other stakeholders. In addition, the government must try to ground the smart city program to the wider community so that the policy plans and programs that have been running can be implemented from government bureaucrats to the community so that policies can run optimally and sustainable development will be achieved for the welfare of the community.

2. In the smart economy process to improve the economy of household business actors, the government can collaborate with cross-sectors to provide socialization, convenience for home business actors in financing assistance and assistance for the use of social media as a means of promotion. For the community, namely household business actors, they should have the urge to innovate and develop businesses and take advantage of the financial support provided by the government, so that household business actors can avoid the practice of moneylenders and are able to manage finances more modern so as to achieve a better standard of living.

REFERENCES


UU No. 3 Tahun 2014 tentang Perindustrian.