# Implementation of the Smart City Program to Improve Public Services in Semarang City

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## ARTICLE INFO

## ABSTRACT

This study aims to determine the implementation of Semarang Smart City in improving public services. This study uses qualitative research methods sourced from various literature or literature studies in answering the research results. Smart living is responsive to various community reports, such as reports on water pumps that don't flow. Bright Environment successfully manages a harmonious, comfortable, and clean Capitalization by turning a slum village into a healthier and cleaner city. Smart mobility with the Bus Rapid Transit (BRT) service aims to provide an alternative mode of transportation that is reliable and safe for the citizens of Semarang City. The implementation of good governance is the existence of services starting from the management of children's birth certificates, death certificates, Electronic ID cards, and various other public services that provide convenience for the people of Semarang. Intelligent people develop formal education in schools and universities that are evenly distributed to citizens based on IT, such as the implementation of e-learning, providing internet access as a source of information, and free schools for elementary and junior high school students. An innovative Economy is realized through increasing access, equity, relevance, and quality of essential social services, improving the quality and competitiveness of the workforce, controlling the number and rate of population growth, and increasing citizen participation.

## INTRODUCTION

The Industrial Revolution positively impacted life worldwide, including in Indonesia (Lailyn Puad, 2019). The positive effect of the industrial revolution is the

formation of a Smart City that can improve welfare and public services (Faidat & Khozin, 2018). Smart City is a form of implementing a safe, comfortable city, facilitating access for the community, and strengthening competitiveness in urban areas of technology, economy, and society (Conoras & Hikmawati, 2018). Communication technology is the capital of an urban or regional area in proclaiming itself as a Smart City (Kusuma & Negara, 2020). The formation of a Smart city in Indonesia is an effort to realize good governance by Presidential Instruction No. 3 of 2003 concerning the National Strategy for E-government Development (Adi Suhendra, 2018).

The application of Smart City considers the socio-economic benefits in the community by building political understanding in managing Smart City (Wibowo, 2018). Cities in Indonesia are currently directed to use Smart City. They have six smart dimensions that must be met: smart living, innovative environment, smart mobility, smart governance, intelligent people, and intelligent economy so that Smart City implementation can be carried out correctly (Rini Rachmawati, 2018). Application assistance makes it easier to access information needed by the community and local government through a program known as Smart City, which is proven to be able to solve problems quickly, as well as create a sense of security, comfort, and order in people's lives (Utomo & Hariadi, 2016).

Smart City is the right step to advance the city in such a way for the benefit of the community, incredibly ineffective and efficient resource management (Hasibuan & Sulaiman, 2019). The Smart City concept is a form of service in accelerating regional development, including public assistance (Gunartin, 2018). The city of Semarang is currently launching the Semarang Smart City, which can be helpful in the broader community in accessing the information needed (Rachmani et al., 2020). The 2017 Indonesian Smart City Rating states that Semarang City has succeeded in becoming

one of the smart cities along with 14 other cities that cannot be separated from the journey of Smart City, which was born in 2013, which success is a fierce commitment in implementing Smart City by the Semarang Government (Fauzi & Dewi Rostyaningsih, 2018). The city of Semarang has won nine categories of the City Towards Smart award from Goesmart 2019, which was held by the Bandung Institute of Technology (ITB). The nine categories include the Smart Economy rating, Smart Social, Smart Environment, Smart Health, Smart Security and Disaster, City Development and Management, Digital Governance Readiness, Integration Readiness, and City Towards Smart City Peak Rating (Detik.com, 2019).

The Smart City concept includes the concept of systemic (connected to the system), monitorable (can be monitored), accessible (easy to access), reliable (trustworthy), and time-bound (time limit) (Fitri, 2019). In 2011 almost all areas in Semarang City experienced road damage. They included flood-prone areas, so this resulted in investment entering Semarang City less than Rp. 1 trillion, which caused the economic growth rate in Semarang to tend to be low (Alfi Kholisdinuka, 2019). The problems that exist in the city of Semarang can be solved by achieving the index of human resource development and economic growth through the Semarang Smart City, which will facilitate access to reporting and monitoring (Insani, 2017). The implementation of the Semarang Smart City is an effort of the Semarang City government in increasing competitiveness and developing the growth of human resources in the City of Semarang (Wibowo, 2018). The economic growth rate of the city of Semarang increased by 6.52 percent; investment growth increased to Rp. 27.5 trillion, the decrease in poverty was followed by a decrease in slum areas, and the welfare of the community experienced an increase from 77.52 to 82.72 percent (Alfi Kholisdinuka, 2019).

Innovative city development is a dimension in creating competitiveness and meeting the community's social needs (Insani, 2017). In Surakarta, a complaint service unit (ULAS) was formed as a way to improve service quality and ensure the delivery of public services in accordance with the principles of good governance, including the realization of public information disclosure in response to public complaints dissatisfied with the service they received (Utomo et al., 2019). Other cities in Indonesia are currently directed to use Smart City. They have six smart dimensions that must be met: smart living, innovative environment, smart mobility, smart governance, witty people, and intelligent economy so that Smart City implementation can be carried out correctly (Rini Rachmawati, 2018). The performance of Smart City requires support and readiness to be carried out optimally, so this research focuses on implementing the Smart City program to improve public services in the city of Semarang by fulfilling the dimensions of the six basic principles of Smart City development, namely: smart living, innovative environment, smart mobility, smart governance, intelligent people, and intelligent economy so that Smart City implementation can be implemented and improve the quality of public services (Rini Rachmawati, 2018).

## METHODS

This type of research is qualitative research, namely conducting data descriptions through investigations and analyzing data in depth (Creswell, 2018). The focus of this research is to look at the analysis of the implementation of the Semarang Smart City implementation in improving public services in the city of Semarang by fulfilling the dimensions of the six basic principles of Smart City development, namely: smart Living, innovative Environment, Smart Mobility, Smart Governance, intelligent people, and intelligent Economy. Smart City

implementation can be implemented and improve the quality of public services (Rini Rachmawati, 2018). Smart Living refers to citizens' quality of life and culture that affect the availability of needs, security, safety, convenience, and comfort of life (Rumpak, 2016). Bright Environment with environmental protection efforts and sustainable resource management (Setijadi et al., 2019). Smart Mobility by providing sustainable infrastructure that includes innovative and safe transportation (Wibowo, 2018). Innovative Governance is public participation in public service participation that is transparent (Maizunati, 2018). Intelligent People create qualifications for human resource development with learning methods that open ideas, be creative and participate in public service participation (Faidat & Khozin, 2018). Innovative Economy by managing the Economy through competitive innovation (Lopes, 2017). The data used in answering the results of this study is through the Semarang Smart City web and is complemented by various previous study literature or literature studies to answer the successful implementation of the innovative city program to improve public services in the city of Semarang. This research only reports on the performance of the creative city program in the city of Semarang in creating public services by implementing good government.

## RESULT AND DISCUSSIONS

The implementation of Smart City requires support and readiness to be carried out optimally. The performance of the Smart City program in Semarang City pays attention to the six dimensions of the basic principles of Smart City development, namely: Smart Living, innovative environment, smart mobility, smart governance, intelligent people, and intelligent economy, so that Smart City implementation can be implemented and improve the quality of public services (Rini Rachmawati, 2018). Smart City with smart

economy dimensions, creating an innovative spirit for entrepreneurship, builds an excellent economic image with the resulting productivity (Setijadi et al., 2019). Creative economy by managing the economy through competitive innovation (Lopes, 2017). Smart Living by meeting the safety of each individual, clean housing quality, and the availability of adequate educational facilities (Vishnivetskaya & Alexandrova, 2019).

Bright Environment with environmental protection efforts and sustainable resource management (Setijadi et al., 2019). Smart Mobility by providing sustainable infrastructure that includes innovative and safe transportation (Wibowo, 2018). Smart Governance is public participation in public service participation that is transparent (Maizunati, 2018). Intelligent People create qualifications for human resource development with learning methods that open ideas, be creative and participate in public service participation (Faidat & Khozin, 2018). Smart City implementation creates open access to public services and generates a quality of life for the community (Kurnaedi et al., 2017).

## Smart Living

Smart Living refers to citizens' quality of life and culture that affect the availability of needs, security, safety, convenience, and comfort of life (Rumpak, 2016). Smart Living by meeting the safety of each individual, clean housing quality, and the availability of adequate educational facilities (Vishnivetskaya & Alexandrova, 2019). Smart Living in question refers to the Semarang Smart City website, which is contained in the Smart Living sub-section: PDAM, Smart Police, and Transportation— realizing smart Living with three sub-sections that must be fulfilled, namely: Adequate educational facilities and the use of information technology such as the provision of accessible and healthy internet facilities. Both filtering/proxy systems.

Smart City Semarang city provides access and convenience in terms of providing facilities, infrastructure, and information related to the potential of regional tourism properly and attractively by utilizing information technology such as a geographic information system for mapping the location of tourist objects, the process of ordering admission tickets and hotel rooms online and mobile. The distribution of hotels and information related to booking hotel room tickets is a form of commitment from the Semarang city government to provide public services and implement the Semarang Smart City in a very open and supportive manner in increasing progress and the economy of the city of Semarang. Adequate information technology infrastructure so that public services can run well through the availability of a good internet network.

Free Wifi service is a program of the Semarang city government in realizing easy access for the community with 131 free wifi points spread in park areas and public places scattered in various areas of the city (16 sub-districts) To facilicate internet access for the comunity online networks. To enable access to information and various services in the city of Semarang (Semarangpedia, 2017). Implementation of Smart City in Semarang by successfully installing free Wifi in different public places, providing an excellent ambulance service, "Si Cepat," which is always ready 24 hours, and motorbike ambulances spread throughout the city and providing data on the availability of beds in hospitals. Throughout Semarang, other conveniences are the availability of free disabled-friendly tour buses and an information system through the Semarang City Government website, available in four languages. There are complaints related to clogged pumps or PDAM water that does not flow. The public directly sends messages/SMS or telephone to the call center, which follows up quickly; complaint services and licensing services will be completed within a maximum of 10 working days, and the implementation of various reporting activities or information can be accessed on the "Semarang Great" application (Mentari Nurmalia, 2018).

The Semarang City Government cooperated with PT Mora Telematika Indonesia (Moratelindo) to free the Semarang City sky from cables by implementing a ducting system of more than 500 kilometers in 362 roads through cooperation carried out in the form of an investment worth Rp 617 billion. It improves public services in telecommunications and manages city infrastructure for a better aesthetic (Detik.com, 2019). Work on the ducting system by dismantling massive sidewalks, considering the cable channels will be placed underground, and seeking coordination with PLN, PDAM, to be able to simultaneously arrange their respective service networks into the ducting that has been built (Suara Merdeka.com, 2019). Project implementation with network design and infrastructure aesthetics of a city will prepare Semarang City for towards a smart city that supports the development of intelligent governance (Arafah & Winarso, 2020).

The bright city concept that the Semarang City Government is launching is included in terms of prevention, so the Police are trying to innovate in terms of reducing crime rates by launching an android-based application called Smile Police. Smile Police are part of the Central Java Regional Police website, which is designed to integrate all information systems and applications used by the Central Java Regional Police into a web-based interface by the Central Java Regional Police (Yulianti, 2018). Smile Police have the main feature, namely the Panic Button, where when the button is pressed, it will directly connect to the server, then the server will notify the nearest police officer of the location of the call. If the call is fake three times, the server will block the phone number registered to the user so that the number cannot use the Smile Police application again (Setiawan & Wijaya, 2018). The implementation of government programs in realizing good governance is an effort to improve the quality of life of citizens through the application of Smart living, which refers to improving the quality of life and culture of citizens which has an impact on the availability of needs, security, safety, comfort, and convenience of living in the city of Semarang.

## Smart Environment

Bright Environment with environmental protection efforts and sustainable resource management (Setijadi et al., 2019). The assessment criteria here include the process of sustainability and better resource management with various technologies related to environmental management and humans themselves, Smart environment, namely by providing comfort to the Environment now and in the future with sustainable ecological development. Physically and non-physically (Martatiwi, 2017).

Smart Environment in Semarang City by turning slums into healthier and cleaner villages is suitable as a vacation spots for young people with a new atmosphere (Utomo & Hariadi, 2016). Success in creating a clean environment in Semarang City is a creative idea and the result of cooperation in making a more comfortable community place to live (Rini Rachmawati, 2018). Around 300 houses were repainted to the streets, beautified with various colors that made the village beautiful to look at from a distance, and added many ornaments and well-arranged mural paintings along the way (Novianti Siswandini, 2020). The number of themes and images can attract visitors to take photos (Adi Suhendra, 2018). Hanging umbrellas, ornaments, artistic-style seating, and many more Instagramable photo spots attract visitors. During the pandemic, Kampung Pelangi Semarang also applies strict health protocols for visitors who are ensured to be healthy, wear masks, wash their hands and keep their distance. To avoid the spread of the Covid-19 virus (Novianti Siswandini, 2020). Smart Environment in Semarang City has succeeded in creating a dimension

in a smart city specializing in making an intelligent environment (Faidat & Khozin, 2018).

Community Empowerment in Kampung Pelangi is carried out by inviting the entire community to participate in all activities related to Kampung Pelangi with an empowerment process through three stages, namely awareness, capacity building, and the power-giving stage (Cahyaningrum, 2018). The first stage emphasizes the process of socializing the painting of people's houses, the capacity stage is a form of intervention from stakeholders to strengthen the community empowerment process through training and human resource development by inventorying the potential for food processing training, skills training, and also training for pokdarwis in Kampung Pelangi, and the stage of providing power, community empowerment through the development of Kampung Pelangi, namely the government's role in providing physical assistance such as making parking lots, rainbow village icons, viewing posts and other infrastructure, while non-physical assistance is business permits and also granting Business capital loan Credit Wibawa so that people can try and develop Kampung Pelangi tourism while increasing economic income (Cahyaningrum, 2018).

The government creates tourism facilities and infrastructure, and promotional strategies are mostly done through social media (Wahyuningsih, 2019). The government as a dynamist is to establish relationships with institutional, community, and private stakeholders regularly with Pokdarwis members, which is carried out during events in Pelangi village (Siti Suci, 2019). Factors that support the development of Kampung Pelangi tourism are unique tourist destinations, close to Tugu Muda, Lawang Sewu, and souvenir centers, facilities provided by the government, and the Kampung Pelangi participation community (Cahyaningrum, 2018).

The presence of the rainbow village gave birth to a new culture of participation in the community through collaboration in all processes to determine the priority activities of all community components working together (Achmad Fatchul, 2020). The implementation of cooperation in every element of society acts as a collaborator (Siti Suci, 2019). The collaborative participation model in the management of Kampung Pelangi brings all elements of the community into co-learning, where each element of the community shares knowledge which allows each to gain new knowledge even in the context of sustainable empowerment (Juwariyah et al., 2018).

The forms of community participation include attending socialization meetings, providing input, contributing energy such as being directly involved in the painting process, helping to repair houses whose housing conditions are not suitable, cleaning rivers of garbage, felling trees that have started to disturb and become wild (Achmad Fatchul, 2020). The mobilization of energy in the process of improving Kampung Pelangi also cooperates with volunteers from outside the village, such as art activists and creative communities in Semarang, so that it is very helpful for residents in terms of design creations that will be made (Siti Suci, 2019). Citizen participation is also seen by volunteering in monetary contributions to the formation of groups to organize activities at the program control stage (Achmad Fatchul, 2020). Smart Environment in Semarang City has succeeded in creating a dimension in a smart city specializing in making an intelligent environment (Faidat & Khozin, 2018).

## Smart Mobility

The concept of Smart Mobility is the use of information technology to answer transportation problems. Classic problems in transportation, congestion, pollution, connectivity, and quality of road infrastructure are expected to be answered correctly and quickly (Subowo, 2015). The goal of Semarang Smart City is the aspiration of the Semarang City

government to realize good resources and economic competitiveness. Intelligent Transportation service is a form of service provided to the public in terms of ease of access to information about the convenience of visiting Semarang City with various access options offered, thereby creating a sense of trust between the government and the community, as well as the creation of quality public services. The Trans Semarang Application Innovation provides benefits and ease of service for the community. The features available in the Trans Semarang application are very easy for its users. Among other things, prospective Trans Semarang passengers can find out the position of the bus and the position of the shelter just by using the application, then, route information based on the corridor, traffic conditions that Trans Semarang passes, as well as information on the arrival of the bus when the passenger is waiting at the shelter (Wibisomo, 2020). Transportation problems are usually in the form of congestion which will cause inefficiency in the community, some of the harmful effects such as the non-smooth flow of goods, time efficiency for workers, an increasing number of accidents, waste of fuel, and air pollution (Subowo, 2015).

The Semarang City Government, through the Department of Transportation, Communication and Information (DISHUBKOMINFO) and appointed the Public Service Agency (BLU) as the manager has created and implemented the Trans-Semarang BRT (Bus Rapid Transit) to serve the people in Semarang with a system where the bus stops do not stop. This is done at every place, but there are specific points that are built shelters (bus stops) to raise or lower passengers to implement the program to improve public transport services for people, aiming to provide alternative modes of transportation for the citizens of Semarang City that are reliable, safe, comfortable with fares. Affordable as part of handling transportation problems in the city of Semarang (Amri, 2016).

Since its initial launch on July 7, 2017, Trans Semarang now has become the prima donna for residents of the city of Semarang and its surroundings to travel with operating hours from 05.30 - 17.30 WIB (where the Airport Corridor runs from 18.00 - 00.00 WIB) at a rate of 1,000.00 for Children under six years old, holder of Child Identity Card, Student in school uniform) & Student (by showing KTM). However, this particular Student and Student rate does not apply on national holidays, including Sundays. For general users, the Trans Semarang tariff is 3,500.00. (Pergimulu.com, 2021). Public services provided by BLU UPTD Trans Semarang using Gopay, not all users feel that the service they get is faster because all users with their respective payment methods have to queue to be served by officers (Astri Kurniawati, 2020).

Officers provide equal service to service users and officers who deal directly with and serve service users either in the fleet or at the shelter. In implementing these services, the author did not find any significant negative complaints or criticisms by informants of Gopay services; it's just that many service users need a promo or cashback again at BRT Trans Semarang. The implementation of services using Gopay shows that this is a consistency of efforts to improve services at the Trans Semarang BRT (Astri Kurniawati, 2020). The initial benefit of the Trans Semarang BRT still uses cash. It is now developing to provide services using cashless both,  from tap cards to E-BRT, BRIZZI, and digital technology such as Gopay, OVO, and Link Aja (Fitri, 2019).

Changes in the traffic light cycle settings (cycle time) are made when the density of vehicles passing through the intersection is monitored. The green light from the applied plan is not sufficient to break down the queue of vehicles passing through the intersection. It is usually an additional turn-on time if such a situation occurs. Green traffic lights in the densely monitored phase so that the density of the vehicle queue can be decomposed (Galih

permadi, 2019). The length of time that the green traffic light is added cannot be ascertained. The additional time the green traffic light is on at intersections that are observed to be dense is carried out until the density of vehicles can be decomposed. It depends on the level of vehicle density that occurs (Setiawan & Wijaya, 2018). The manifestation of the success of the Semarang City Government in realizing a Smart City that can solve transportation problems and facilitate transportation access in the City of Semarang.

## Smart Governance

Innovative Governance is a part or indicator of a Smart City specializing in Governance (Sauda & Agustini, 2020). Innovative Governance is public participation in public service participation that is transparent (Maizunati, 2018). The cooperation between the government and citizens is expected to realize the Governance and running of a clean, honest, fair, and democratic government and better quality and quantity of public services. Smart Governance consists of three parts: Citizen participation in direct and online decision-making, increasing the number and quality of public services, and Transparency in government so that citizens become aware and intelligent (Lailyn Puad, 2019).

The implementation of good governance creates access to openness in realizing transparent and effective public services. Public services in the performance of Smart Governance are the services that can be seen in Figure 7, starting from the processing of children's birth certificates, death certificates, Electronic ID cards, and various other public services. Multiple services provided by the Semarang City Government are easy to access. That are felt directly by the people of Semarang in fulfilling public affairs. The various implementations of these public services can be seen in Table 1.

Smart City implementation, in this case utilizing information technology, can be done by providing web and mobile-based information systems for public services (making ID cards, driving licenses, etc.), providing valuable, time-saving, and automatic financial/payment administration services (payments). Electricity, water, etc.), and the existence of a structured and well-organized database to store data and information related to public services. Table 1 shows the data on public service reports to make services more accessible and more effective. The community can monitor their reporting process and create trust from. The public in the government which is a form of the

Table 1. Smart Governance Services

| Service Type | Total |
| --- | --- |
| Reporter Registration | 107.515 |
| Birth certificate | 40.125 |
| Death Act | 11.609 |
| Electronic ID card | 19.589 |
| CIC (Child Identity Card) | 14.944 |
| Family card | 23.213 |
| Outgoing | 8.621 |
| Arrival | 11.164 |
| Update Data | 14.488 |
| Other Services | 26.858 |

Source: Semarang Smart City

Semarang City Government's success in implementing the Semarang Smart City.

The access provided by the Semarang City Government in improving the quality of public services has been running optimally, and various services have become faster, easier, and safer (Maizunati, 2018). The findings found that the Semarang City Government was considered successful in carrying out three main aspects of intelligent government: information and communication technology in government, namely with WIFI procurement to realize the cooperation of the MoU signed in 2013 by the Mayor of Semarang and representatives of PT. Telkom to provide a network in the city of Semarang built accessible WIFI facilities in public areas in building a smart city. Public services in implementing Smart Governance start from managing childbirth certificates, death certificates, Electronic ID cards, and other public services. Various services provided by the Semarang City Government are easily accessible, which are felt directly by the people of Semarang in fulfilling public affairs (Suara Merdeka.com, 2019).

Second, realizing transparency and data openness, namely the City of Semarang utilizes information technology by providing web and mobile-based information systems for public services (making ID cards, driving licenses, etc.), providing financial/payment administration services that are effective, time-saving, and automatic. (payment). For electricity, water, etc.) and a structured and well-organized database in the storage of data and information related to public services that show data on public service reports that make services more accessible and practical. The public can monitor the reporting process and create of public trust in the from the public to the government which is is one form of the success of the Semarang City Government in implementing the Semarang Smart City (Pergimulu.com, 2021).

Third, formulating policies according to the needs of citizens, namely the Semarang City Government, has evolved the service system by creating many applications and online service systems, thus providing complete convenience for the community in services and easy access to the community. PIC (Public Information Center) is a

collaborative project between the Semarang City Government and PT. Telkom to build integrated service facilities related to the information to the public for transparency and efficiency of access to data by the people with all public needs for information and transparency of government performance can be obtained through the Public Information Center (Suara Merdeka.com, 2019).

The Semarang City Government regularly implements computerized training and socialization programs to improve bureaucratic capabilities related to technology-based systems and provide knowledge and instill knowledge about intelligent cities so that bureaucrats' awareness is created to build a professional climate in smart cities implementation. Until this climate can be made to the lowest level of government such as urban villages (Wijaya & Permatasari, 2018). The application of Intelligent Governance in Semarang City has issued transparent, professional, and accountable policies in providing public services (Maizunati, 2018).

The Semarang smart city concept with technological advances and through Diskominfo presents experts from abroad such as Australia, Singapore, England, Malaysia, and India who are experts in developing an area into a smart city (Juwariyah et al., 2018). Cooperation between the Semarang City Government and PT. Telkom is building Semarang SMAT city is going well and has been able to produce programs that are efficient and innovative in meeting the needs of improving the quality of public services that can support the effectiveness of implementing the programs that have been built (Fitri, 2019). Declaring Semarang Smart City with the inauguration of free internet access (WIFI) by PT. Telkom at several protocol road points as one of the connection and information services, it is hoped that the public can take advantage of these facilities to support high productivity, besides that the WIFI network service can be used by the public to deal

directly with the city government, both complaints and accessing information (Jatengprov, 2019).

PIC (Public Information Center) is a collaborative project between the Semarang City Government and PT. Telkom to build integrated service facilities related to the information to the public, PIP was built with the aim of transparency and efficiency of access to information by the public (Fitri, 2019). The form of bureaucratic reform minimizes the operational flow in providing information. Where people who have an interest or want to know information related to government processes and government performance can come to the PIP location equipped with suggestions for accessing information and the internet (Juwariyah et al., 2018). Semarang City Government cooperation project by facilitating a digital community in Semarang City that increases Semarang City's digital products that can compete with other regions (Jatengprov, 2019).

## Smart People

Intelligent people are indicators that the Semarang City government will achieve through the Semarang Smart City (Gunartin, 2018). A technology-based educational network such as e-learning is used by schools in the learning process with various access to information sources/learning materials. Semarang Smart City has used and implemented Education services by providing access to lessons for school children from grades 1 to grade 9, equipped with learning syllabuses such as informatics lessons, Natural Sciences, Citizenship Education, Crafts, Cultural Arts, as well as a question bank for grade 1 up to grade 9 which can be used in support of Education and can be accessed indefinitely. The city of Semarang also launched a free school bus program for students in the city of Semarang to minimize the costs that students have to pay for Education so that there is no longer any reason for children in the town of Semarang not to go to school (M Zaenal Arifin, 2017).

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In the field of education, the city government of Semarang requires 15 years of compulsory education, child-friendly schools that provide a School Safety Zone (SSZ) with crossings and free schools up to junior high school level, and make the education function a priority for the Semarang City Medium Term Development Plan through Smart Houses, of which there are already 154 Smart Houses at the Semarang Urban Village Level (Jatengprov, 2019). Child-Friendly School is an effort to create a generation with good insight, intellect, and knowledge. The Semarang City Government carried out this step in several schools, one of which was through the Declaration of Child-Friendly Schools and Schools for Preserving Traditional Games (Pemkotsemarang, 2019). Socialization in Child-Friendly Schools was carried out massively in schools to provide information and knowledge about the development of Child-Friendly Schools to academic units; several schools also held independent declarations in their respective schools (Vedyana, 2019). The mass declaration of SMP and MTs in Semarang City towards Child-Friendly Schools was carried out in the theater room of Karangturi Junior High School Semarang; the Declaration was read in front of the Mayor of Semarang by the MKKS chairman imitated by 800 participants who attended from representatives of all schools (Vedyana, 2019).

The fun learning system is equipped with Wifi facilities that can be accessed in finding information or in the learning system (Gunartin, 2018). Semarang Smart City has used and implemented education services by providing access to lessons for school children from grades 1 to grade 9, equipped with learning syllabus such as informatics lessons, science, Citizenship Education, Crafts, Cultural Arts, as well as question banks for grades 1 to grade 9 which can be used to support Education and can be accessed indefinitely (Vedyana, 2019). The city of Semarang also launched a free school bus program for students in the city of Semarang to minimize the costs that students have to pay for Education so that there is no longer an excuse for children in the city of Semarang not to go to school (M Zaenal Arifin, 2017).

## Smart Economy

Innovative economy by managing the economy through competitive innovation (Lopes, 2017). The economy is one of the pillars supporting the region/city/country. Economic management of an area should be done better and computerized. The implementation and assessment of Smart City in the wise economy section (indicator) include two things, namely, the innovation process and competitiveness. These two things help achieve a better and brighter nation's economic improvement because innovation and competitiveness are the principal capital for the country's progress and resource development. The direction of resource development in an area is realized through increasing access, equity, relevance, and quality of essential social

services, improving the quality and competitiveness of the workforce, controlling the number and rate of population growth, and increasing citizen participation (Martatiwi, 2017). The economic activities developed by the Semarang City government in supporting the prosperity of the community can be seen in Table 2.

Semarang Smart City has succeeded in creating economic leadership for the community through Smart Economy. The ease that can be felt by the community in marketing the products being promoted and access can be easily reached. Economic development by the people of Semarang is the management of crackers with 28 production sites until the craft area

increased economic growth and is a form of good governance that is friendly to the community's economy. Information obtained from one of the Smart Economic menus, SiHati (Commodity Price and Production Information System), is the development of rice commodity prices. In addition to rice commodities, there is also some information on costs for other items, such as prices for meat, eggs, onions, cooking oil, and LPG (Kompasiana, 2019). Economic activities developed by the Semarang City government to support the community's prosperity and various price information can be easily accessed.

The economic activities developed by the Semarang City government in supporting the prosperity of the community from the

Table 2. Economic Management

| Economic Management | Total |
|---|---|
| Crackers | 28 |
| Fish | 18 |
| Soy | 21 |
| Snack & Catering | 16 |
| Salted egg | 8 |
| Food stalls | 28 |
| Food Management | 22 |
| 2014 Fostered MSMEs | 202 |
| Souvenirs | 18 |
| Souvenir | 30 |
| craft | 42 |

Source: Semarang Smart City
http://smartcity.semarangkota.go.id/Dashboard.

goes to 42 production sites. The perceived access has a broad impact on the people of Semarang and other regional communities. These various management can be accessed quickly and can obtain the required information. Innovative Economy management in Semarang City has

findings show that the Semarang City government carries out financial management among the community. Semarang Smart City has succeeded in creating economic leadership for the community through Smart Economy. The conveniences that can be felt by the

community in marketing the products being promoted and access can be easily reached. Economic development by the people of Semarang is the management of crackers with 28 production sites until the craft area goes to 42 production sites. The perceived access has a broad impact on the people of Semarang and other regional communities. Information is obtained from one of the Smart Economy menus, SiHati (Commodity Price and Production Information System), where the people of Semarang City can find out the development of commodity prices for rice, prices for meat, eggs, onions, cooking oil, and LPG. Economic activities developed by the Semarang City Government support the community's prosperity, and the fulfillment of various price information can be accessed easily. Innovative Economy management in Semarang City increases economic growth and is a form of good governance that is friendly to the community's economy.

The Omah Batik Semarangan e-commerce application for promotion and online communication with the web addresshttp://omahbatiksemarangan.info helps consumers see the available products (Fauzi & Dewi Rostyaningsih, 2018). Services in the form of offline and online are available on this website so that consumers will easily make inquiries, orders, or transactions (Fauzi & Dewi Rostyaningsih, 2018). Omah Batik Semarang is a home industry business engaged in batik, which is concerned with Semarang batik; the home page of Omah Batik Semarangan is made with navigation in the form of pages that have been calculated previously (Wijaya & Permatasari, 2018).

The e-commerce facility is a collaboration between the Semarang City Government and PT. Telkom, which facilitates SME groups in Semarang, this collaboration project is a form of economic sector development to create intelligent economic conditions as one of the foundations of smart cities (Wijaya & Permatasari, 2018). E-commerce is intended to facilitate network expansion and market reach by SME entrepreneurs by bringing together SMEs in an E-commerce platform. Through E-commerce, SME players are assisted in receiving training on the use of technology in business, and online marketing processes via the internet, which can be obtained free of charge by SMEs in Semarang City (Suara Merdeka.com, 2019). The innovative economy can manage the economy through competitive innovation (Lopes, 2017).

The Semarang City Government encourages Micro, Small, and Medium Enterprises (MSMEs) in Semarang City to penetrate the ASEAN economic market. This was revealed by the Secretary of the City of Semarang, Iswar Aminudin, after opening the Technical Guidance (Bimtek) for Tourism Sector SMEs in cooperation between the Semarang City Government and the Ministry of Foreign Affairs (Fauzi & Dewi Rostyaningsih, 2018). They are seizing economic opportunities so that MSMEs can go international (Lopes, 2017). The potential of MSMEs in Semarang City is large enough to encourage MSMEs, especially in Semarang City, to enter the ASEAN market (Juwariyah et al., 2018).

## CONCLUSION

Semarang Smart City has provided access and convenience for the community in obtaining public services. Smart living refers to the quality of life and culture of citizens that affect the availability of needs, security, safety, convenience, and comfort of living in the city of Semarang has been going well with various free Wifi services, providing excellent ambulances. "The Fast" service which is always ready 24 hours. Hours and motorbike ambulances that are spread throughout the city as well as the availability of data on the availability of beds in hospitals throughout the city of Semarang, the availability of free tour buses that are disabled friendly, and complaints or reports of clogged pumps or PDAM water that does not flow can directly send messages/SMS or call the call center with a responsive process and launch an

android-based application called Smile Police to reduce crime rates.

Smart City with the Smart Environment principle by managing a harmonious, comfortable, and clean environment by turning slums into healthier and cleaner villages suitable as a vacation spots for young people with a new atmosphere. Smart mobility, which specializes in transportation and community mobility with the Bus Rapid Transit (BRT) service, aims to provide an alternative mode of transportation for the citizens of Semarang City that is reliable, safe, and comfortable at affordable rates as part of handling transportation problems in the city of Semarang. The implementation of good governance is the existence of services starting from the management of children's birth certificates, death certificates, Electronic ID cards, and various other public services that provide convenience for the people of Semarang.

Smart People through formal education levels in the form of schools and colleges that are evenly distributed to citizens and based on IT such as the implementation of e-learning, providing internet access for sources of information/discussion learning, and encouraging the progress of education in Semarang City by implementing free schools for students. Private Elementary School (ED) and Junior High School (JHS) in Semarang City. An innovative Economy is realized through increasing access, equity, relevance, and quality of essential social services, improving the quality and competitiveness of the workforce, controlling the number and rate of population growth as well as increasing citizen participation and various conveniences felt by the community in marketing promoted products and access. It can be reached easily.

## ACKNOWLEDGEMENTS

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