Journal of Engineering Science and Technology
Vol. 16, No. 1 (2021) 044 - 051

THE STRATEGIC ROLE OF SMART CITY (BANDUNG CARE) IN THE DEVELOPMENT OF BANDUNG CITY

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Abstract

The aim of this study is to create a smart city application in order to improve the quality of citizens life and strengthen a growth reputation as a technology city in Indonesia. It also helps to integrate all infrastructure and services from the government to the community using information technology services. This research used a qualitative data collection technique, observation, and literature review methods. The research results are to achieve the city assets governance by utilizing information of technology. Other benefits that can be received in Bandung Care application is a breakthrough information in technology to provide ease of service for Bandung community in various activities, such as for household, health, business, education, and other needs. The Smart City concept could sustain the agenda of cities as an encouragement for another city to improve their city management.

Keywords: Application Bandung care, Integrate infrastructure and services.

1. Introduction

Internet could influence people's lives. Nowadays, information technology has entered digitalization era which makes various products begin to emerge. Bandung is a city that is experiencing regional, social, and economic development. Along with the development of technology, the government began to utilize technology to provide services to the community more optimally. It led to ideas and creative stages with the presence of smart city. The purpose of building smart city is to improve quality of life, service efficiency, and the needs of citizens in the development of the city. Globalization impact on borderless economy shows how ICT (Information and Communication Technology) can enhance the sustainability of a city by facilitating the management. With the trend of rapid technological advancement, Smart City is a model for cities to remain relevant and competitive [1].

In 2016, the innovation and entrepreneurship development Bandung Institute of Technology (ITB) and Bandung Regional Development Planning Agency (BAPPEDA) compiled the master of Bandung Smart City [1]. In 2015, Bandung city government has made improvements on internet facilities for all offices and formed a smart city council to improve government performance [2]. According to the Mayor of Bandung, Oded M. Danial, although the city has a variety of applications, the smart city program is not only about technological aesthetic but can also be utilized in providing services to the community. Meanwhile, the Ministry of Communication and Information Technology stated that it continued to support the Government of Bandung City in developing public services through the Smart City Program [3]. Information of technology has become an important part in organizations, especially for organization that is business-oriented [4].

The pervasive definition of smart cities concerns the use of technology, specifically ICT and smart computing, in shaping the live ability and sustainability of cities. Within the above context, technology is seen as central to the operation of the future at large [5]. Smart city is a concept that has integrated various fields to provide a practical and efficient impact on city management [6].

The concept of smart city arises because of a dramatic shift in the number of populations in urban areas, that encourages citizens, urban planners, business people, and government to see a new vision of smart cities [7]. The concept includes both technology and human-driven approaches [8]. Internet of Things (IoT) is a concept that aims to expand the benefits of continuously connected internet connectivity [9, 10].

In terms of the mobile application, IoT plays a significant role as an interface for users to interact with the mobile application [11]. Measurement and improvement of services, applications can improve the scorecard on the use of online transportation in Bandung [12]. The globalization marked by the rapid information technology, the Small and Medium Enterprises (SMEs) must adjust so that the existence of information technology can be utilized for the benefit of the development of IT System [13].

It can be concluded that the goal of the realization of smart city is to create a city that is comfortable, safe, efficient and improves the quality of life of citizens by utilizing technology and network (IoT). The method used data collection

with a qualitative approach. Data collection techniques used observation and literature study.

2. Research Method

This study used data collection and sampling technique. Data collection method was carried out by analysing documents obtained from several studies and news about smart city and also observation aimed at observing the development of the situation in the field. The idea of citizen participation had also been discussed previously, and this time, the top management team and city councillors took up the challenge [10]. The sampling technique used random sampling with 22 respondents in which the data were randomly chosen in relation to community responses about public services.

3. Results and Discussion

From the questionnaire, the data were obtained as follows (See Table 1).

Table 1. Satisfaction value table.

No.	Satisfaction	Very Unsatisfied	Unsatisfied	Enough	Satisfied	Very Satisfied
1	Transportation	0	8	5	7	2
2	Health Services	1	4	9	6	2
3	Public Wi-Fi Services	4	4	10	3	1
4	Employment Service	0	8	12	1	1
5	Information Services	2	4	11	3	2
6	Culture	0	7	9	4	2
7	Tourist Attraction	1	5	11	2	3
8	Social Services	1	5	14	0	2
9	Traffic	5	8	6	1	2
10	Public Space Services	3	6	9	1	3

From the Table 1, it was found that the respondents are familiar with the existence of Smart City. They gave the following comments and suggestions that Smart City should have hospital call center, more space for public services and facilities. In addition, it should involve government concern to solve traffic congestion, environment sanitation, disaster mitigation, social problems and the misuse of public facilities.

The results showed that Bandung Smart City need to be implemented with modern technology which is Internet of Things (IoT). We propose a concept to implement the smart city technology as shown in Fig. 1.

Besides the existence of this concept for Smart City in Bandung, we also made a smart city application concept which named Bandung Care. In the application, users can find out various information updates in Bandung. The following Figs. 2-4 are examples of menu interface.

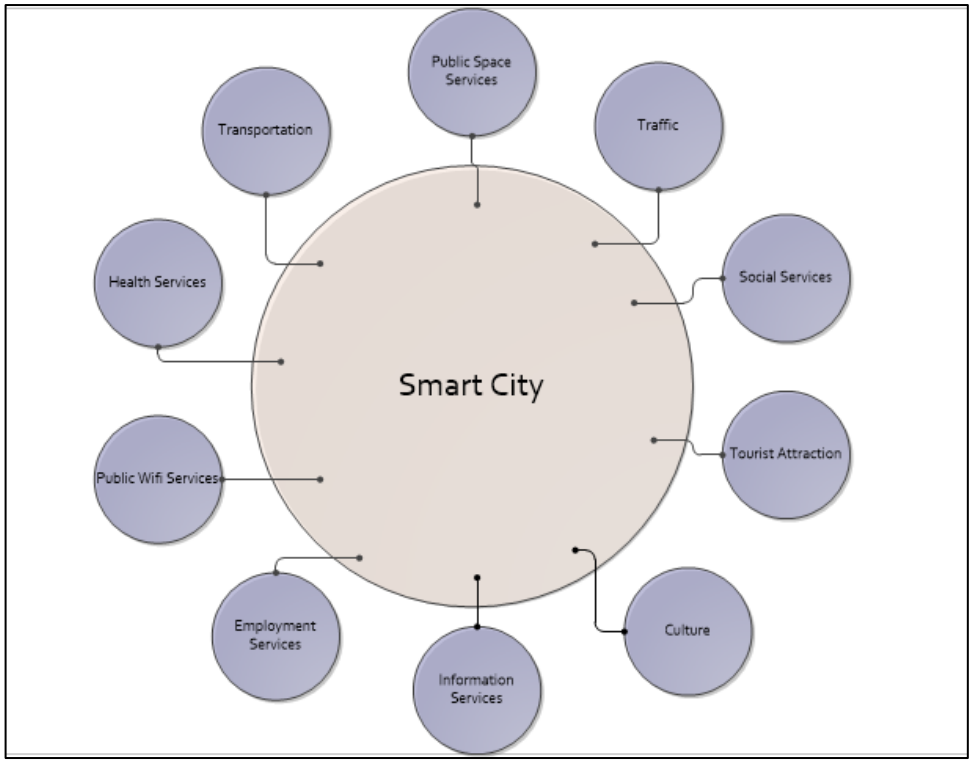

Fig. 1. Concept of smart city.

Fig. 2. Login menu.

Fig. 3. Register menu.

Fig. 4. Main menu.

Figure 2 explains the login menu, the user must have an account beforehand. When the user wants to open the application, the user must login first by entering the email address and password that the user has previously registered. Then, press enter or login button. If email address and password entered are correct and appropriate, the user can login successfully. However, if the user does not have an account, the user must register first. If the user forgets their account password, then tap forget password to reset the account.

Figure 3 explains the registration menu for those who do not have an account. If the user does not have an account, they need to do a registration first. Fill the data user and log in to the application. In registration process, the user is required to fill in a form regarding user identity correctly. The identity consists of e-mail account, first and last name, password, confirm password, and many others. If the identity data enter is proven correct, then the register or sign-up process that user do is completed. After user sign up, the user can login with the username and password that they registered earlier.

Figure 4 explains the appearance of the main menu in Bandung Care Application. In the main menu, there are 6 menus, namely:

1. Health menu, which help to find out hospital information.
2. Transportation menu serves to find out what transportation can be used as well as traffic jams information.
3. Business Center menu serves as information places of business/shopping centres.
4. Playground area menu, which is for children or family area.
5. Playground menu is for school or university information.
6. Tourism menu is for tourist attraction information.

Other benefits that can be received in Bandung Care application is a breakthrough information in technology to provide ease of service for Bandung community in various activities, such as for household, health, business, education, and other needs. The development impact of Bandung care application technology is that the application can be used not only by Bandung community but for local government as well. Efficiency and effectiveness services to Bandung residents in particular increases performance in services to Bandung residents. Several practitioners mention that the development of information technology is to perfect the existing technology; individuals, organizations, and companies utilize this [5]. Practitioner uses information technology for computer simulation which resulted in a model that can evaluate numerically. The data is collected to estimate the actual characteristics of the develop system [14]. Existence of a system that has interface completeness, website simplicity, security features, clear office and team, legal entities regulation, responsive customer service, speed of deposit or marketplace withdrawal affects traders in the marketplace [15, 16].

Smart city governance strategy

Several strategy recommendations that have been analysed based on data and field conditions are as follow:

a. Smart city governance management

One of the management components is Human Resource. Based on this, the government needs the formation of special organizations or institution to

participate in building smart cities and optimizing coordination with institutional organization in information and communication. Therefore, programs in the smart city can be implemented.

b. Optimizing information technology infrastructure in human resource

With the development of information technology that increasing made technology used in all aspects. In addition, the management of data now uses computer devices and digital files. In this case, digitalization is defined as the use of internet technology and the latest program or application to optimize Human Resource Management.

4. Conclusion

After conducting research and analysis, it can be concluded that the use of smart city can optimize human resource. Second, a city can be more efficient and effective. Third, the use of information technology can integrate all infrastructure and services from the government to community. Therefore, the Smart City concept could sustain the agenda of cities as an encouragement for another city to improve their city management.

Acknowledgment

We would like to thank all parties involved in developing this system.

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