CHAPTER I INTRODUCTION

I.1 Background

The development of information technology is something that cannot be avoided, especially at this time information technology is one of the measuring tools for the progress of a country (Ngafifi, 2014). In Indonesia itself, the development of information technology almost occurs in all aspects.

Such as, in the government sector itself, the development of information technology began with the enactment of Presidential Instruction No. 3 of 2003 concerning the implementation of e-government. The development of e-government itself aims to develop electronic-based government administration to effectively and efficiently improve public services.

One form of e-government implementation in Indonesia is the existence of official websites of government agencies and the availability of integrated services with an online system. With online services, people no longer need to come to the place directly. In the economic sector, developments in information technology help process and make decisions and shape strategies to gain a competitive advantage.

The impact of technological developments in the economic sector is the rapid economic growth in a country. An example of technological developments in the economic field is the existence of e-commerce. With e-commerce, people can make sales, purchases, distribution, and marketing goods or services that rely on electronic systems.

Now, the development of information technology in society itself occurs almost in all aspects of daily life. Many Resident activities are starting to be replace or assisted by information technology. The implementation of information technology in the social sector, for example, is that people can do and find what they need through technology, such as communicating with friends, looking for goods in the marketplace, and reading news.

So that, the development of information technology in government, economy, and society can help and change people's lives. The rapid use of information technology in all aspects of life, from government, economy to society has encouraged several cities in Indonesia to implement the use of information technology in the form of integration of city elements to support technology-based urban life, which is commonly called smart city (Meijer & Bolívar, 2016).

Smart city is an innovation of sustainable planning approach at the city level that promotes knowledge-based development through the continuous learning of human resources as an integrative part of urban resource development, especially in encouraging urban built up area as a part of urban spatial system in the context of national development planning system (Sutriadi, 2018). In Indonesia itself, smart cities are supported by at least eight main elements, infrastructure, capital, assets, behavior, culture, economy, social, technology, politics, environment (Prakoso et al., 2015).

In implementing the smart city concept, it is also necessary to pay attention to the regional scale. It is because each regional level has different conditions, problems, and speeds of development. So there needs to be research or observations so that the implementation of smart cities is right on target and following is needed in the city.

Bandung is one of the cities in Indonesia that have implemented the smart city concept. Based on the Bandung mayor's regulation number 1470 of 2018 concerning the Bandung Smart City Master Plan. The purpose of the regulation is to develop "Bandung Sebagai Kota Cerdas" based on the six dimensions that exist in a smart city.

First is, smart governance is to change traditional bureaucracies to produce more effective, efficient, and communicative services. Second, smart economy is to realize urban regional economic growth that can meet the challenges in the rapidly growing era of globalization. Third, smart society is to create a humanist and dynamic Resident ecosystem. Forth, smart branding is nnovation in the marketing

of Bandung so that it can increase the competitiveness and selling value of Bandung by developing elements of tourism and business. Fifth, smart living is the feasibility of the Resident's standard of living is assessed from three elements, namely the feasibility of a lifestyle, quality of health, and transportation to support the mobility of people and goods. Sixth, smart environment is urban development pays attention to the balance of physical infrastructure development and sustainable infrastructure.

Today, the application of smart cities in Bandung has occurred in several sectors. Almost all Organisasi Perangkat Daerah (OPD) in the Bandung Government have utilized technology in providing their services. Whether it's services from web pages or applications available via cell phones. For example, population and civil registration services in the city of Bandung can be accessed online through digital applications. Likewise with licensing services in the city of Bandung which have implemented the Online Single Submission (OSS) system. The majority of applications used by the Bandung government are provided by Dinas Komunikasi dan Informatika (Diskominfo) Bandung. There are several systems used in the Bandung city government, one of which is the SIP (Sistem Informasi Pemerintah). In the public service sector, Bandung Government has used an application called SALAMAN (Selesai Dalam Genggaman). In March 2021, Bandung was awarded the "Top 50 Smart City" with a ranking of 28.

This assessment is based on the results of a study from Eden Strategy Institute, a strategy consulting firm based in Singapore. So Bandung has implemented several systems that support the "Bandung Sebagai Kota Cerdas" In line with the development of a smart city in a smaller scope, the technology-based sub-district concept has been implemented, commonly called a smart village. This concept appears as an adopted concept or a derivative concept of a smart city. one of the differences is in the location of the implementation, if the smart city is implemented in the city, the smart village is implemented at the village level. Smart village adopts a system from smart city, it has the same goal as providing solutions to rural problems, such as problems of poverty, health, and education. Smart village is an innovation of a sustainable planning approach at the village level that promotes

knowledge-based development through the continuous learning of human resources as an integrative part of village resource development, particularly in the development of the rural areas as part of a regional system inside the national development master plan (Sutriadi, 2018).

The purpose of the smart village is the realization of empowerment, institutional strengthening, and improving Resident welfare through the use of information technology (Herdiana, 2019). With a smart village, it is not impossible if from the village a national economic strength based on MSME (Micro, Small and Medium Enterprises), superior human resources, clean and transparent government, and a good social environment will emerge.

Therefore, the development of smart villages in the sub-district or village needs to be carried out so that good relations are established between the village government, environment and the Resident. As a sub-district under the auspices of the Bandung. Sumur Bandung sub-district is located in the center of the Bandung city government, and it also has a very important strategic role in supporting the administration of Bandung. Sumur Bandung sub-district also adopted the Bandung vision namely "Terwujudnya Kota Bandung Yang Unggul, Nyaman, Sejahtera, dan Agamis". Then, for the mission from Sumur Bandung sub-district, it adopted the mission of the city of Bandung number 2, namely "Mewujudkan Tata Kelola Pemerintahan yang Efektif, Efisien dan Melayani".

As a guide in carrying out all activities in the district, Sumur Bandung District has plans and strategies for the 2018-2023 period. In the guideline, several problems in the sub-district are mentioned. In governance dimension the problem is in public service aspect, one of which is in the government service section of Sumur Bandung sub-district.

Based on a survey of satisfaction with the quality of public services in Sumur Bandung sub-district, the IKM (Indeks Kepuasan Masyarakat) achievement in 2018 is 80. IKM is measured based on Permenpan RB Number 14 of 2017 concerning guidelines for compiling a Resident satisfaction survey for public service providers.

The IKM value is calculated based on the weighted average value of each service element from a number of public service statements given to a number of respondents who visited Sumur Bandung sub-district within a certain period. The survey conducted is a survey on services to the Resident which is recapitulated with the sub-district program. These results are considered lacking because of participation from Resident institutions is not yet optimal, another problem felt by the Resident is the inaccuracy of the mechanism, timing, and cost of services which is also the reason that IKM only reach 80. Therefore,

Sumur Bandung sub-district targets the IKM value to be 83 at the end of the management period in 2023. However, the quality of public services remains the orientation of governance in Sumur Bandung sub-district. So, the management of public services needs to make changes to bureaucratic professionalism and emphasize more efficiency and effectiveness of the bureaucracy, through structuring work systems and procedures. This needs to be improved because according to mission number 2 the city of Bandung which has the goal of implementing excellent public services and increasing public satisfaction with public services.

In the second aspect in the governance dimension, namely transparency, the regional financial management system is an important part in the creation of good governance in the sub-district. This becomes important to organize budgeting and expenditure planning, understanding of accounting and government internal control systems or internal audits. The demand for reform of the financial system is intended so that financial budget management is carried out based on the concept of value for money or performance indicators of a public sector that provides information on the budget spent producing a certain value for the Resident, thus creating public accountability. So, those were some of the problems that occurred in Sumur Bandung sub-district.

For this reason, to support smart villages implementation in Sumur Bandung sub-district, it requires enterprise architecture blueprint. Enterprise architecture describes a plan to develop a system or a set of systems (Osvalds, 2001). Enterprise

architecture is the discipline that deals with the enterprise's resources, it is a conceptual blueprint that specifies an organization's structure and operations. It also necessary to design information architecture that includes four domains consisting of business, data, applications, and technology or enterprise architecture design.

Based on previous research the enterprise architecture blueprint, it can solve problems that occur in Sumur Bandung sub-district, especially in the government section. The design of enterprise architecture is made to be the basis for implementing all ICT (Information and CommunicationTechnology) business processes, knowing business needs and organizational information, supporting the migration of system updates, facilitating migration in future conditions, and supporting business goals.

There are several studies on smart villages, one of which is entitled "Developing the Smart Village Concept for Indonesian Villages" The reason the research was conducted is because there is no one understanding about the elements of a smart village, giving rise to different interpretations of the smart village concept. The results of the research say that smart village construction is based on 3 (three) main elements consisting of smart government, smart Resident and smart environment. These three elements are used as the base and means of "tools" to achieve the "goals" of developing smart villages.

There is also a journal about enterprise architecture design with the title "District Government Enterprise Architecture Design using Zachman Framework" the reason the research uses enterprise architecture is because of the use of information systems and technology that runs in Dayeuhkolot sub-district cannot be utilized optimally. The result of this research is an enterprise architecture design document that can be used as a basis for designing/implementing/developing systems in companies based on non-profit Resident services.

Several studies also use the TOGAF (The Open Group Architecture Framework) framework to design entreprise architecture, one of which is a study at Sekolah Tinggi Desain (STD) Bali entitled "Design of Enterprise Information System with

TOGAF Framework". The reason this research uses the TOGAF framework because it can produce an enterprise system architecture design that will be implemented in STD Bali well and is able to meet the needs of business processes and user needs at STD Bali. So in this study the author will design an enterprise architecture in Sumur Bandung sub-district using the TOGAF framework. Furthermore, expectations with the creation of enterprise architecture is can improve performance in providing services at Sumur Bandung sub-district.

I.2   Problem statement

Based on the background that has been made, there are problems that become material in this final project research, namely:

1. How the blueprint solution in the form of Enterprise Architecture with TOGAF ADM 9.2 on smart village concept in Government Section of Sumur Bandung sub-district
2. Analysis of the IT Roadmap as a Smart village reference in carrying out development of information technology in the function of Government Section in Smart village based with TOGAF ADM 9.2

I.3   Research objectives

This research focuses in Sumur Bandung sub-district. The purpose of this study based on the formulation of the problem is:

1. To find out and analyze the enterprise architecture design of the Government Section in Sumur Bandung sub-district
2. Producing an enterprise architecture design for the Government Section in Sumur Bandung sub-district, in order to provide recommendations in the form of a sustainable information system in the form of a roadmap.

I.4   Research scopes

The problem limitation aims to limit the scope of the research so that the research discussion focuses on the problem. The following are some of the limitations of this study:

1. The research will focus on the Government Section in Sumur Bandung sub-district

2. Enterprise architecture framework used is TOGAF ADM 9.2 (The Open Group Architecture Framework) focuses on creating artifacts in each phase, the phase used is the preliminary phase, architecture vision, business architecture and information system architecture, technology architecture, opportunities and solution, migration planning

3. Artifact creation refers to the TOGAF architecture content framework. In the core Business Architecture that is not made is the Product Lifecycle Diagram, and the extensions made are Goal/Objective/Service Diagrams and Process Flow Diagrams. For Data Architecture all core diagrams are created. While the Application Architecture, the core diagram that is not made is the Application and User Location Diagram. For Technology Architecture all core diagrams are made, as well as for Opportunities and Solutions all core diagrams are made.

I.5   Research benefits

This research is structured with the hope that it can provide some theoretical and practical benefits as follows:

1. Can provide implementation of smart village in Sumur Bandung subdistrict to overcome the strategic issues in Sub District by designing enterprise architecture blueprint. In an effort to increase the value of the Resident Satisfaction Index (IKM). and increasing the percentage of excellence kelurahan according to sub district goals.

2. It can be a reference and essential information for other researchers when analyzing and designing an Enterprise Architecture in different organizations.