CHAPTER 1

INTRODUCTION

1.1 Background

Information Technology (IT) has been significantly improved in the world. IT is a technology that manages information that uses data, computer software and computer hardware. IT helps to improve the performance of all organization including education, business, and government. In organization, IT acts as an enabler to business. With the help of IT, human tasks will be easier and the organization performance will be more effective and efficient. Furthermore the impacts of IT in businesses are also increasing productivity, automating activity, improving coordination and control, and transformation of behavior. For example, mobile devices help people to work outside their workplace and also increase the responsiveness. Because of mobile devices, people change from work-life balance to work-life integration. Another example of IT impacts to companies are companies likes Google, IBM, Microsoft, and Amazon are succeed with the help of IT. Industries like CITI Group, American Express, Motorola, Sony, Walt Disney, Wal-Mart and Nordstrom are industry that IT has drastically transformed [1]. IT likes the Internet gives a lower barrier to entry for example Amazon sells book using a website without having a physical store so IT gives a new opportunity in doing businesses. The great impact of IT leads Binus to open a computer course.

At October 21st, 1974 a modern computer course is established that provides short course computer learning. As time goes by the name of it changed to AMIK BINA NUSANTARA at 1985 and then at 1986 AMIK BINA NUSANTARA achieved the best of computer academy. At 1998 name of AMIK BINA NUSANTARA changed to Binus University after the government acknowledge it. Becoming one of the best computer

universities in Indonesia, Binus becomes the top of mind in terms of university, if Indonesian people think of computer study in Indonesia. Currently Binus University has a huge amount of students, to manage all of the students without the help of IT is impossible. In order to maintain to be the best computer university, Binus not only improve their teaching and course material to equip their students in the working life but also improving their business system operation with the help of IT is a must. Therefore Binus develops their system from manual to IT and solving the business problem with the help of IT. The IT is having a more and more IT project because IT has been proven can solve the business problem.

IT project is never end like what Moore law said that transistor chip in every two year will be double so it means that IT is rapidly growing. IT project is not only changing the manual system to an automated system but also update software can be an IT project also. Many IT projects have been done in Binus to improve their system for example enrollment system, library, parking, attendance, SAP, and finance. There is a cost to develop a new system so developing an IT system, Binus needs money to invest and it is not cheap to develop a new system. More IT system means more money to invest.

Therefore planning of IT system development in Binus needs to be aligned with Binus strategy. The reason for this also is looking to the fact that Binus organization year by year the students are increasing. In 2011 Binus have more than 25,000 students from Binus School, Binus JWC and Binus Anggrek and more than 2000 staffs. In Binus JWC, new study major is introduced almost in every year and it increases the number of students who study. It made at 2011 the students number in Binus JWC is full of capacity. In result, Binus have to change their lecture schedule. Before there is a

universal lunch between 11.30 to 13.00, now such a thing does not exist. It is to enable Binus to manage the class better. In order Binus to have a capability to manage their staff and students, it is needed for them to improve their IT to help them operate with align to Binus strategy. Therefore looking to the continuity of improving IT system in Binus, it is needed for them to have a Business architecture so Binus can control, monitor and maintain IT and can carefully choosing the to be system for helping Binus in managing their staff, students and their business development in order to align with the strategy.

1.2 Scope

This thesis will use IASA ITABOK as an appropriate guideline to equip the architect when develop the architecture. Based on IASA ITABOK this research thesis will focus on Business Architecture in Binus International. There are 5 components of business architecture in IASA ITABOK. From the 5 components, this thesis only focuses to the 4 component that are strategic business plan, strategic IT plan, value stream, and IT architecture. The body of knowledge will be used by the architect as a foundation of knowledge for the business architecture. The analysis is focused on the IT which is on the Binus Systems Infrastructure in the value chain.

The framework that will be used for this thesis is TOGAF Architecture Development Method (ADM). ADM is the main component in TOGAF. This thesis focuses on the first 3 phases of TOGAF ADM because it is considered adequate to do analysis of IT in Binus International Business Architecture. The 3 phases are architecture vision, business architecture, information systems architecture (application architecture). The analysis in

the chapter 5 will do benchmarking to find out what system that Binus International does not have or has not planned. The system that Binus does not have will not explain in detail how to implement it. The software architecture, information architecture and infrastructure architecture are out of scope of this thesis.

The data to support this research will be gathered using qualitative approach which is interview. The people that will be interviewed are the key staff in Binus International who knows about business and IT.

1.3 Benefit

At the end of this thesis, Binus International will have an analysis of their business architecture. Binus International will know how to improve their business architecture based on the gap analysis of their current business architecture. The result of the gap analysis will enable Binus International know what is needed to improve.

1.4 Structures

This section will explain about the general description of the entire six chapters that contains in this research thesis.

Chapter 1 – Introduction

This is the first chapter of the thesis. It describes about the background of the research to know the current situation of IT architecture in organization. The scope of this thesis is also included to keep the topic consistent. It also contains the benefit of conducting this thesis. Then the hypothesis will be described also

base on the framework that will be discussed in chapter 2. Furthermore, structure provides a description of each chapter.

Chapter 2 – Theoretical Foundation

This chapter will discuss about the major elements of IT architecture using IASA ITABOK. It also will discuss about the framework that will support as a basis to the IT architecture which will be discussed each of its element. The three chosen frameworks in IT architecture will be discussed in here.

Chapter 3 – Research Methodology

This research methodology chapter will describe how the research will be conducted. It also describes the data gathering technique to achieve the data needed to complete the research. The target setting also will be discussed in this chapter.

Chapter 4 – Research Findings and Discussions

This chapter will discuss about the findings data that have already been gathered. The data is gathered using a method as describe in research methodology chapter. This chapter discusses the current business architecture using the chosen component of business architecture in the IASA ITABOK.

Chapter 5 – Analysis

This chapter will analyze the business architecture in the chapter 4. The analysis will use 3 phases of TOGAF ADM that are the architecture vision, business architecture, and information systems architecture (application architecture).

Chapter 6 – Conclusion and Recommendations

This is the last chapter of the thesis, it discusses about the conclusion of the thesis including a summary based on the finding and analysis chapter. The recommendation for Binus International will be included and also for further study.