THE ALIGNMENT OF BUSINESS PROCESS IN EVENT ORGANIZER AND ENTERPRISE ARCHITECTURE USING TOGAF

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ABSTRAK

Event organizer adalah perusahaan yang bergerak di bidang pengadaan event, PR (Public Relation), dan periklanan. Untuk dapat menyesuaikan diri dengan perkembangan zaman saat ini serta meningkatkan kualitas pelayanan, diperlukan sistem informasi yang sesuai dengan kebutuhan perusahaan. Sistem informasi berperan penting dalam rangka mendukung kinerja serta proses bisnis di dalam perusahaan. Salah satu jenis penerapan sistem informasi yang telah banyak digunakan di perusahaan yaitu arsitektur enterprise. Saat ini, arsitektur enterprise telah digunakan oleh berbagai perusahaan enterprise untuk dapat menghubungkan antara perencanaan dan implementasi teknologi terhadap bisnis yang ada di perusahaan. Enterprise Architecture Planning (EAP) adalah suatu metode di dalam arsitektur enterprise yang dapat memberikan keselarasan antara bisnis dan teknologi informasi dengan mendefinisikan kebutuhan perusahaan. Komponen utama yang ada dalam EAP terdiri dari arsitektur data, aplikasi, dan teknologi. Framework yang digunakan dalam pengembangan EAP pada penelitian ini adalah TOGAF ADM dengan fase yang dimulai dari preliminary phase, requirements management, architecture vision, business architecture, information systems architectures, technology architecture, opportunities & solutions, dan migration planning. Hasil yang akan didapat dari penelitian ini adalah berupa rancangan suatu model arsitektur enterprise yang dapat digunakan event organizer dalam meningkatkan kinerja dan daya saing perusahaan. Rancangan ini berisi keadaan sistem informasi saat ini dan sistem informasi ideal yang direncanakan oleh penulis.

***Kata Kunci**: Enterprise Architecture Planning, Event organizer, TOGAF ADM*

ABSTRACT

Event organizer is a company which engaged in event organizing, PR (Public Relation), and advertising. A suitable information systems that fit company's business needs are required in order to adapt with current globalization era. Information systems had an important role in order to support the company's business process and its performance. An example of applied information systems that have been widely used by companies is enterprise architecture. Currently, enterprise architecture has been used by many enterprises as connection between the planning and the technology implementation to the current business in the company. Enterprise Architecture Planning (EAP) is a method in enterprise architecture which provides alignment between business and information technology by defining company's needs. Main components of EAP are data architecture, applications, and technology. The framework that will be used to develop EAP on this research is TOGAF ADM with phases starting from preliminary phase, requirements management, architecture vision, business architecture, information systems architectures, technology architecture, opportunities & solutions, and migration planning. Result on this research will be a blueprint of enterprise architecture model for respective event organizer and will be used to supporting its business. The blueprint contains current used information systems and ideal information systems planned by the authors.

***Keywords**: Enterprise Architecture Planning, Event organizer, TOGAF ADM*

I. INTRODUCTION

TECHNOLOGY is becoming an essential thing in life. Technology is not a trend anymore, but it has become something common used by various people in society and used in almost every aspects in life. Technology can help things work better and easier. If technology is used correctly, it can increase productivity and could make a better quality of life. Various technologies are used to complete specific goals in lives. Therefore, it becomes inseparable from daily life as well as business in a company.

Usage of technology within the company has become commonplace and helps the company's performance. IS (Information System)/IT (Information Technology) is a part of technology that can't be detached. The components within IS/IT contained a set of useful information for the company's goals. It can be software, hardware, data, and human resources. IS/IT planning is required for technology implementation according to company needs. A well thought-out IS/IT planning will give maximum results and positive impacts for the company. IS/IT strategic planning contains a guideline to support the usage and implementation of IT. Company's strategic plan should be analyzed first in order to know which parts of the organization that can be implemented with IT so they can improve more.

Current IT development is growing rapidly and has significance influence to the never-ending business competition between companies. IT has important roles on business activities. It can simplifies business process to increase productivity and profit. Because of that, many companies want to use better technology for their business and as a base to compete with other competitors. The better the technology used, the company can increase their competiveness and achieve their goals. It also able to improve services in customer care, production, and innovation in business.

Most of the companies, acknowledge management on its needs considering IT as a "strategic player of the company". Company's strategy changes over time, and IT must be able to adapt for changes as well.[1], [2]. It can speeds up performance within the company so the work will become more effective and efficient.

Currently there is an increasing tendency (growing trend) towards the execution of training and also an increasing of need for (growing trend) of the company's customers training center. Information technology (IT) have a bigger impact on a revenue in companies, making lots of impact on their evolution function. Information Systems (IS) become a serious investment ahead of world market agility and rapid changing; this is also an asset on which companies rely to achieve their business aim [3], [4].

There is a positive relation among technological ability and company performance. The more the investment made in technological ability, the company's economic performance will be better [5]. The integration of information systems are important therefore the business processes within the company can be interconnected and misinformation can be avoided. Enterprise architecture integrates and implement a technology to every aspects of business processes in order to connect them together and become centralized system. In general, enterprise architecture combines between strategy planning and implementation [6]. Enterprise architecture contains a logical, comprehensive, and holistic approach to design and implement system and its components simultaneously [7], [8].

Event organizer is a company that creates event based on client's request. The company will get a call from a client to receive request to create an event. Then, company's marketing team will send a marketing team to do a concept briefing with the client. After the client deal with the budgeting and concept, the company will meet vendors and decide what kind of event concept will be used. The company aims to become a bigger and better company, adding IT to their organizational structure will help improve their business processes. A model for enterprise architecture is needed to merge different elements into one that will expand and handle enterprise architecture in an improved way [9], [10]. The aim of this research is to develop an enterprise architecture planning (EAP) blueprint that will help the event organizer to aligns its business process needs with IT/IS strategy in order to achieve the company's goals.

II. LITERATURE REVIEW

A. Enterprise Architecture

Enterprise architecture (EA) is a blueprint that will help company to create a system that will sustain the technological needs within the company. A blueprint will be created based on organization's needs, objectives, and also their vision & mission. It can help in decision making within the company. Enterprise architecture contains collection of principles, methods, and models that are used to design and objectify an enterprise organizational structure, business processes, information systems and its infrastructure. Enterprise architecture has four main components/domains: business architecture, information architecture, technology architecture, and application architecture [11]. Enterprise architecture directs information systems' alignment, processes within the organization, and strategies used by companies can be defined as an organizing logic for IT infrastructure and business processes within the company [12], [13]. EA is a set of documents portraying an enterprise from an integrated business and perspective of IT so it will become a bridge for the communication gap between business and IT stakeholders to boost the alignment of business and IT. EA is a "city plan" that helps company evolve, manage change, simplify IT landscapes, discover best solutions for solving business issues, and drive wide-ranging business transformations [14].

To develop an EA, a framework is used as a guide to comprehend the EA which serves as a logical structure for classifying complex information. There are some criteria that can be used as consideration when choosing a framework, namely:

1. Completeness of taxonomy, refers to how well the framework can be used to classify the application architecture
2. Process completeness, refers to how a framework offers a step-by-step instruction to develop an EA.
3. Practice guidance refers to how much a mindset framework can help the user (easy to use) within the organization to understand the EA's development.
4. Maturity models, referring to how much a framework offers directions for assessment of the organizations that using an EA.

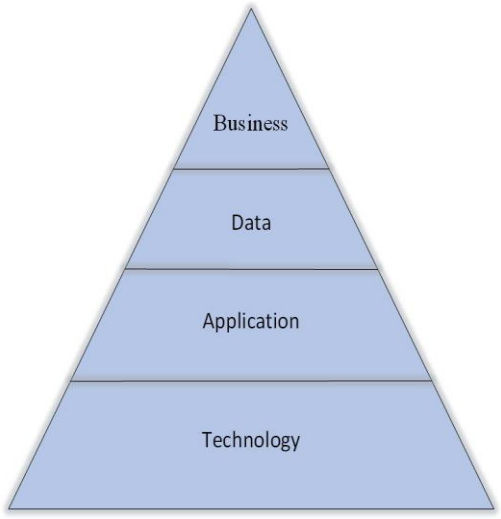

Fig. 1. Enterprise Architecture

5. Governance guidance, refers to how much influence the framework can help provide understanding and create an effective governance model for EA.
6. Partitioning guidance, referring to how successful a framework will guide the effective autonomy partitions on the organization so it will become a vital approach to handling complexity.
7. Vendor neutrality, refers to how much the probability of EA depending on a specialized consulting organization when using the framework.
8. Information availability, refers on framework's capability to make the quantity and quality of data.
9. Value of time, based on how long the framework takes to create solutions that bring business value [15].

Fig. 1 Enterprise Architecture shows different levels of the enterprise architecture using a pyramid model.

B. TOGAF

TOGAF (The Open Group Architecture Framework) is an architectural framework that provides methods and tools to assist in enterprise architecture in terms of acceptance, production, use, and maintenance. There are four categories in TOGAF: i) Business architecture defines the company's business method to reach its goals and also provides a representation of various division of the organization and the relationship between them. ii) Data architecture explains methods of data storage and how to retrieve them. iii) Application architecture engages with various application's development and the interaction happened between them. iv) Technical architecture describes how different applications got supported by software and hardware infrastructure and the relationships among them [16]. Using TOGAF as an architectural framework will make the architecture be more consistent, reflect stakeholder needs, use best practices, and take into account both current business needs and future business needs [17]. TOGAF focused on mission-critical business applications that use open systems building blocks. TOGAF has a key element called Architecture Development Method (ADM) that specifies a process for developing enterprise architecture [18], [19]. There are 9 phases in TOGAF ADM, namely: preliminary phase, architecture vision, business architecture, information systems architecture, technology architecture, opportunities & solutions, migration plan, implementation governance, and architecture change management. All of these TOGAF components deliver a result in form of a diagram, flowchart, structure, definition, and other artifacts [20], [21]. Based on Fig. 2 TOGAF ADM, here are the description for each phase in TOGAF ADM:

1. *Preliminary Phase*
   This is the first step of developing enterprise architecture planning.
2. *Requirements Management*
   This phase includes the process of managing the architecture needs across the whole TOGAF ADM phase.
3. *Phase A: Architecture Vision*
   This phase describes the first step of architecture development cycle.
4. *Phase B: Business Architecture*
   This phase describes the company and its components (products/services strategy, business processes, etc.).
5. *Phase C: Information Systems Architecture*

This phase develops company's application architecture that allows business architecture and architectural vision.

6. *Phase D: Technology Architecture*
   This phase creates a whole architecture which will be applied in the next step.
7. *Phase E: Opportunities & Solutions*
   This phase concentrates on how to deliver the architecture, also decides how to apply the architecture which described in phase D.
8. *Phase F: Migration Planning*
   This phase ensures the Implementation and Migration Plan is collaborated with the company's approach to manage and implement changes in the company's modified portfolio.
9. *Phase G: Implementation Governance*
   This phase implements the project as a work plan program and should be processed in order to achieve a desired architecture.
10. *Phase H: Architecture Change Management*
    In this phase, there will be a description on how to manage the changes in architecture, from a simple maintenance to a redesign of the architecture.

C. Porter's Value Chain Analysis

This value chain describes the company's activities to create a product/service that will be valued by customer. There are two types of activities:

1) Primary Activities
   Primary activities are activities that related to the main business of the company, namely: creating a product, selling a product, and after-sales service.
   a) Inbound Logistics
      This include activities that related to input activities, namely: receiving raw materials, storing inputs, and creating a product.
   b) Operations
      This activity include processes that converts or transforms inputs into outputs. This process is important because this will determine how value can be added so customer would buy/use the product/service.
   c) Outbound Logistics
      This include activities that related to output activities, namely: distributing products, selling products, and delivering products.
   d) Marketing and Sales
      This activity related to products/services promotions and how to persuade customers so they would buy

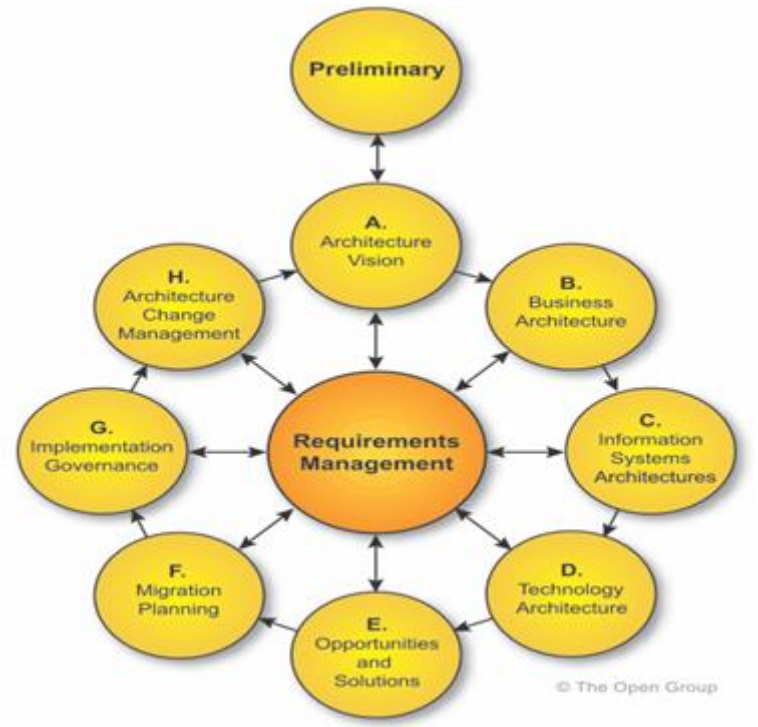

Fig. 2. TOGAF ADM

the products/services.

e) Service
This activity related to activities that will provide high quality after-sales service to make sure the customer can keep using the products/services.

2) Support Activities
Support activities are activities that supporting the primary activities. These activities can add values to a main product/service provided by the company.
   a) Firm Infrastructure
   Firm infrastructure is company's main support systems that helps maintaining company's daily operations.
   b) Human Resource Management
   This part consists of all activities related to employee management (recruitment, training, encouragement, rewarding, even termination of employment).
   c) Technology Development
   This part related to every technology that used to transform inputs into outputs. Technology can help reduce costs needed as small as possible.
   d) Procurement
   Also known as purchasing, this part consists finding source for supplying raw materials and negotiating until got the right price.

III. Research Method

Research method used by authors is a descriptive method that involves a study case in a well-known event organizer in South Jakarta. This method involves collecting data by doing an identification of the problem within the company and by interviewing each division within the company. For this study case, authors only use 8 phases of TOGAF ADM for developing an enterprise architecture planning blueprint (preliminary phase, requirements management, phase A: architecture vision, phase B: business architecture, phase C: information systems architecture, phase D: technology architecture, phase E: opportunities and solutions, and phase F: migration planning). This research is limited on only making a blueprint, not implementing them. Therefore, authors didn't use all phases in TOGAF ADM. The first step of research method is by doing a literature study to learn about related studies used in this research and collect related information to this research, e.g.: enterprise architecture, TOGAF, etc. Then, choose a framework (in this case, author using TOGAF) that is suitable to the study case. TOGAF is an enterprise architecture framework used to create an organization's enterprise architecture. Next, the authors will collect various data that will be used in the research. Collecting data can be done by doing an observation to the business activities within the organization. After that, authors conduct an interview with the company's owner or the company's management to get valid data. Conducting an interview

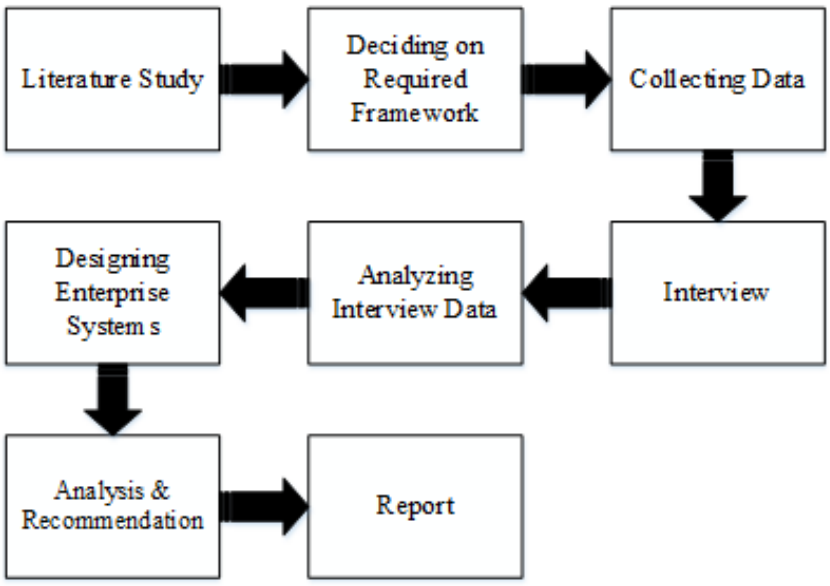

Fig. 3. Research Method

can be done with someone who knew well about organization's business process flow. It can be a general manager or the organization's owner itself. Then, the authors analyze the interview data to be able making a design of enterprise systems. The authors will provide an analysis & recommendation to the organization based on the design of enterprise systems that has been made. Finally, the last step is making a report to be given to the company, all the method, see Fig. 3 Research Method.

IV. RESULTS AND DISCUSSION

A. Porter's Value Chain Model Analysis

The event organizer's functional business model can be portrayed with Porter's value chain model analysis. Value chain can be used to analyze internal organization activities to create value and competitive advantage. Value chain contains business processes in main business function that related to the primary functions of business and supporting business function within an event organizer. Main activities consist five activities that are necessary in adding value and to create a competitive advantage. Supporting activities can increase the efficiency of main activities in a value chain. Fig. 4. Porter's Value Chain Model Analysis included main &

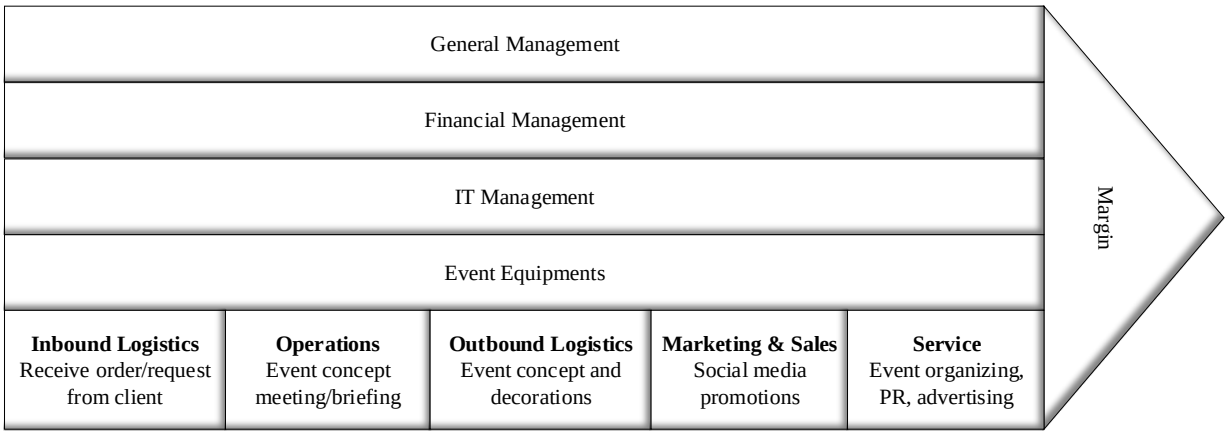

Fig. 4. Porter's Value Chain Model Analysis

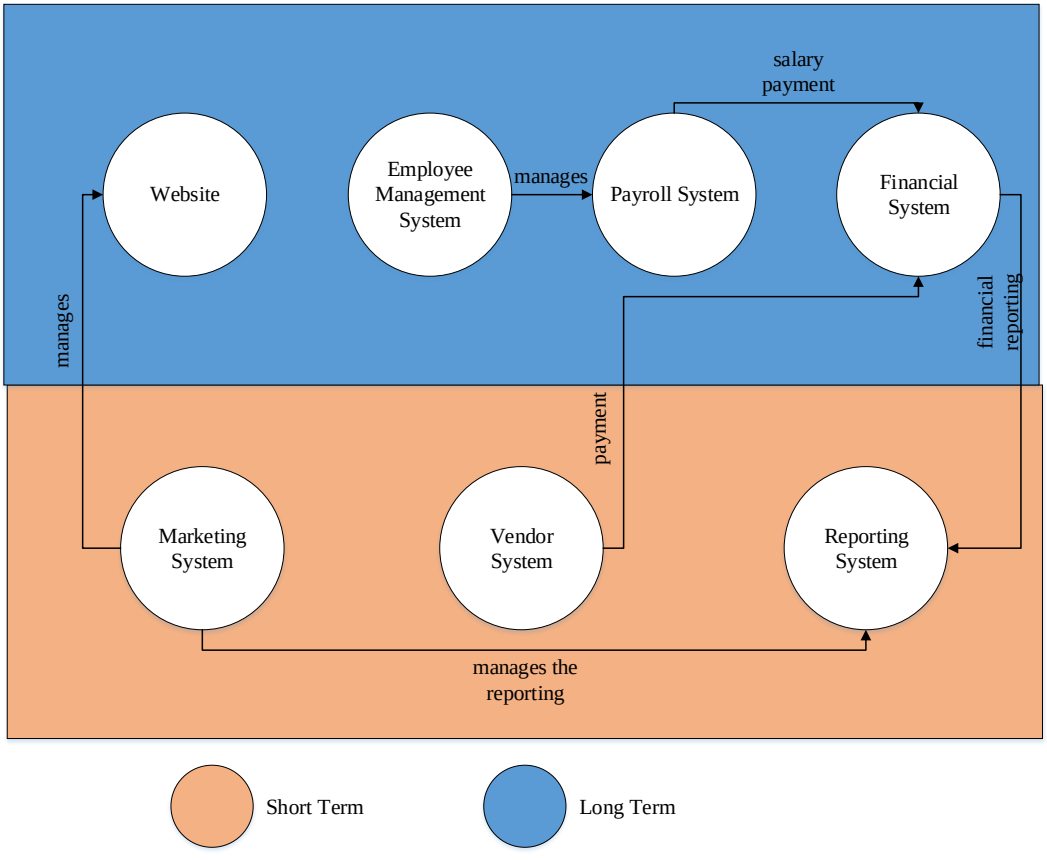

Fig. 5. Enterprise Planning Model Interaction

supporting activities.
Main activities:

i) Inbound logistics, the company receive client's order/request to make an event planning.
ii) Operations, the company's representative do an event concept briefing with the client.
iii) Outbound logistics, the results are event concept and its decorations.
iv) Marketing & sales, the company uses social media promotion to promote themselves more so they will get a new client.
v) Services, business provided by the company are event organizing, PR, advertising

Supporting activities:

i) General management
ii) Financial management
iii) Marketing & PR

B. Enterprise Planning Model Interaction

Enterprise Planning Model Interaction refers from phase E of TOGAF ADM, Opportunities and Solution. Enterprise Planning Model Interaction intended to identify and map all business functions in the company. There will be seven systems that will be implemented, namely: employee management system, payroll system, financial system, website system, marketing system, vendor system, and reporting system. This implementation consists of two types of term, short term and long-term implementation. Short term implementation intended to an urgent application and needed to be implemented in a short time. Long term implementation intended to an application that is not really urgent but the application designing needs more time because of its complexity. In short term section, there are marketing system that will help in promotions and later on the clients can do an online booking in the company's website, vendor system that will help manage vendors and reporting system that will help in making routine reports. In long term section, there is website system that will help the company to promote themselves more and get more clients. There are also employee management system, payroll system, and financial system that interconnected each other. We can see Fig. 5 Enterprise Planning Model Interaction.

C. Relationship Matrix

Relationship matrix refers from phase B of TOGAF ADM, Business Architecture. Relationship matrix aims for identifying business functions which will be supported by applications. The applications are designed in accordance with the company needs. There are three class data used in this model, namely: General management, financial management, and marketing & PR. In the application system, thesre will be seven application that will be implemented, namely: employee management system, payroll system, financial system, website system, marketing system, vendor system, and reporting system. Based on Fig. 6. Enterprise Planning Model Interaction, mapping application and stakeholders.

APPLICATION / CLASS DATA	General Management			Financial Management									Marketing & PR			
	manage employee's performance	review company's performance	manage cashflow finance	budget preparation	budgeting	budget approval	budget revision	budget monitoring	financial reporting	staff payroll	income statement	balance reporting	website management	press release	promotion management	vendor management
Employee Management System	x															
Financial System				x	x	x	x	x	x		x	x				
Marketing System															x	
Payroll System										x						
Reporting System	x	x	x	x	x	x	x	x	x		x	x		x		
Vendor System																x
Website System													x		x	

Fig. 6. Enterprise Planning Model Interaction

TABLE I
GAP ANALYSIS OF BUSINESS ARCHITECTURE

Current Business Architecture	Analysis	Target Business Architecture
The only IT used in the company are Internet and Server and there's no standard IT system used yet.	Upgrading IT system based on company needs	Standardized IT system and better performance in IT activities
IT used only as supporting, not used as company's main priority	IT procurement in business activities that requires IT as the main job	Every business activities using IT as their main priorities
The company only hire a freelance IT to do IT activities, there's no IT in the organizational structure yet.	Adding IT into the company's organizational structure	IT has been added to the company's organizational structure
There are only few employees who understand about IT	Held an IT training to boost employee's knowledge about IT	Employee's knowledge management in IT has increased and be able to use IT effectively

D. Gap Analysis of Business Architecture

Gap analysis of business architecture refers from first phase of TOGAF ADM, Preliminary Phase (see Table 1). Gap Analysis of Business Architecture). This section will explain about the gap analysis between current business architecture which has existed within the company and target business architecture for company's future planning. Current business architecture explained what kind of IT used in the company right now and how much it affects the company. Target business architecture explained IT planning and which IT should be implemented in the future. This gap analysis intended to analyze current condition in the company and build business architecture planning to be implemented in the future. This planning can help the company to build a better business architecture planning and the company can use IT more effectively and efficiently.

V. CONCLUSION AND FUTURE WORK

The conclusions and future work based on the result and discussion:

1) In this research, authors are using TOGAF to develop enterprise architecture blueprint.
2) There are eight steps to design an enterprise architecture blueprint in this research, namely: preliminary phase, requirements management, architecture vision, business architecture, information systems architectures, technology architecture, opportunities & solutions, and migration planning.
3) There's a gap analysis between current business architecture and target business architecture.
4) The main business modeling which described with a value chain have two activities, namely: main activities and supporting activities. In this research, the main activities are:
   vi) Inbound logistics: receive client's order/request
   vii) Operations: event concept briefing
   viii) Outbound logistics: event concept and decorations
   ix) Marketing & sales: social media promotion
   x) Services: event organizing, PR, advertising

   Meanwhile, the supporting activities are:
   iv) General management
   v) Financial management
   vi) Marketing & PR
5) The enterprise architecture model in this research can be used as a guide for event organizer in their enterprise architecture development.

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