Modelling and Mapping University Business Process: As Is, Level 0

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Abstract

The rapidly growing era of globalization has created challenges, barriers and competition for every organization, it is demonstrated with increasingly higher market demand in many aspects. To answer the challenges the organization must be able to manage the business process well, the existing business process should be able to respond quickly responding to changes in existing conditions and can provide value (creates value) for customers. Business Process Management is a comprehensive framework of business process management that can help organizations manage their business well, and systematically to improve the effectiveness and efficiency of every process and system at each level of the organization. Business Process Mapping at University in Indonesia using SIPOC at level 0 consists of 3 (three) core processes namely the process of education, research and community service, 4 (four) directing processes namely strategic planning process, quality management & quality assurance, performance management and KPI as well as organizational and business development and 5 (five) supporting processes namely HR management, ICT management, general affair management, financial and accounting management and marketing and the community relationship management.

Keywords: Business Process, Business Process Management, Value Chain, SIPOC Diagram

Introduction

The improvement of the corporate processes has long been known as a source of increased operational efficiency. Since 1931 discussions about the process have been widely published in scientific journals (Nordsieck, 1931) and the organizational structure has been linked to process in the early 1960s (Chapple et al, 1961). Business processes have become a dominant and popular topic in various literature (Davenport, 1993), but organizational resistance to change is often miscalculated which is the cause of reengineering failures of the program (Davenport, 1995). As a consequence, each time talking about the process, it is always analogies with reengineering and streamlining the organization (Rumler, 2004). Recently, our ability to measure and improve process performance has increased greatly as a result of increased utilization of information systems in the management of processes within the organization. Process management strategy will help organizations optimize benefits from implementing the system. In this rapidly expanding era of globalization, it has created a business environment full of competitions, challenges, barriers, which are demonstrated with increasingly higher market demands, global trade, technological developments and rapidly increasing information and stricter regulations. To deal with these things, organizations need to look back on their business processes, whether the businesses processes present in the organization are still relevant and can help answer market and customer needs when and who will come and respond to existing business challenges. The organizational success in answering business challenges depends on how the organization manages its business process. Therefore, there needs to be an instrument that can assist the organization in managing its business effectively and efficiently so that the organization can quickly respond to changes in existing business.

Business Process Management is a holistic management approach that organizations can use to help organizations manage their business processes by improving the efficiency and effectiveness of their processes/system to show systematically integrated and measured at each level of the organization.
The University is one of the higher education institutions that are growing rapidly today. In realizing its vision and mission the University is required to continue to improve its quality in various aspects of graduates, lecturers, research, and overall organizational performance improvement as well as ensuring organizational sustainability. Since 1997, most of university in Indonesia have implemented Quality Management SYSTEM ISO 9001. This quality management system has helped university determine the standards of quality that must be met. The processes are formed into Standard Operating Procedure (SOP). However, these procedures do not yet have a primary process (parent). This results in a partial improvement because the process is not considered as an integrated process that deliver values to end customers. Therefore, the university needs to implement integrated business process management (business process management). This research will focus on mapping and modelling the as is business process of university level zero. The results of this mapping will be continued as the basis of business process mapping for the next level until the Standard Operating Procedure (SOP) and instructions for work.

**Literature Review**

Business and organizational processes can be viewed as two sides of the currency within a company. Although traditionally the company is more represented in the organizational form, it can be said that the reason the establishment of the organization is not to represent the interests of the stakeholder, but rather because to manage the business process to meet customer needs. A key factor in determining the quality of a business process is effectiveness, efficiency, and adaptability. All three are generally known to the success of the company in winning competition. In short it can be said that the effectiveness related to the output of a process, in this case is the accuracy in meeting the needs and expectations. Efficiency relates to savings in resource consumption using appropriate methods. Finally, a process should be prepared to face changes in external and internal factors.

![Fig. 1. Business Process Size](image-url)
Accuracy in meeting customer needs (effectiveness) can be seen as the most urgent factor in addition to efficiency and adaptability. By way of this kind of view it is not surprising when there are many works that all out without having to arrange the process adequately to anticipate the challenges of medium and long term.

Efficiency in the sense of resource use through appropriate working methods will be able to save costs that eventually can lead the company to become a price leader in its class. Moreover, the use of time resources that are not purchased, in addition to having an impact on costs, more important is the speed gained in responding to the needs and services to customers. In certain competition situations, where the speed is demanded by the customer then this factor is almost indispensable. The last factor is the adaptability of a process. If there is a change of both external and internal factors of the company then the design of the original process is probably still able to handle it, but to still achieve high effectiveness and efficiency then the working method needs to be adjusted. The ability to transform themselves quickly (efficiently) will eventually lead to the effectiveness of the fulfillment of consumer needs. Life cycle of a business process starting from the initial draft that later in its application will be encountered many lessons to make improvements in both small and large scale which then back to the beginning of the process is the redesign. Through this cycle, the process will evolve to be more perfect.

![Fig 2.: Life Cycle Business Process](image)

Factors that are fundamental in the planning phase (both in the initial draft and in the next redesign) include internal and external factors. These factors can be a requirement or an enabler. Requirements come from both customers and other stakeholders. The company's commitment as stated in the vision and mission that formulated carefully based on the interests of all stakeholders that must be executed and fulfilled by the organization. More tangible requirements that must be met by a process are the needs of customers, suppliers, partners, and regulators. The vision and mission of the company will be a philosophical basis in determining the extent of a process both in its breadth and depth. The customer's needs and expectation will be where the direction output of a process is determined. Suppliers, partners and regulators determine how a process should be executed. Technology of both production technology, transportation, and especially information technology has been able to present a variety of possible more effective and efficient work methods that were unimaginable.

Business process can be divided into 2 types, namely:

**Key processes (Core processes)**
- Play a direct role in meeting the needs of external users
- Directly affects the success of the Organization (achieving vision, Mission, organizational strategy)
- Respond to requests and meet user needs

**Support processes**
- Meet the needs of internal users, perpetrators or functions in core processes
- No direct link to the value of the organizational deliver to external customer.

There are basically some approaches that can be used to analyses business processes within the organization that contribute to providing value for customers. One of the proven approaches reliability is Porter ‘s Value Chain Analysis (VCA). According to Pearce and Robinson (2000), Value Chain Analysis is an analysis that attempts to
understand how a business creates customer value by examining the contributions of different activities within the business to that value.

Fig 3: Porter’s Value Chain

To learn and understand the business process within an organization, the process needs to be setup according to its hierarchy. According to the American Productivity Quality Center (APQC) can be seen in the following illustration image:

Fig 4: Business process hierarchy (APQC)

To identify processes, process mapping and process flowcharting are necessary in an organization before improvement of process. Process mapping can be done with the help of SIPOC diagram which is a method of identifying and categorizing parts of a process into the Suppliers, Inputs, Process, Outputs, and Customers. Figure 5 below is the concept used to model and mapping the process.
In a process improvement, SIPOC is a method used to describe the input and output of the processes in the form of tables that make it easy to understand. SIPOC often used in an improvement process such as kaizen activity on the six-sigma program.

There are three types of SIPOC use:
- To give the G a high-level View Business process to those who are less accustomed to business processes.
- To familiarize yourself with those who know the business process but have begun to forget it.
- It is necessary for them to help the new business process.

The things note in SIPOC are:
- Suppliers and customers are not only external, but also internally in organizations involved in implementing the process.
- Input and external include, items, and information.
- Its focus is to identify the entire input and output of each stage of the process.

Research Methods

Based on the research objectives that have been expressed in chapter I, the research aims to identify and mapping existing business processes at the University. The process of identification is to determine which process is the core process and the support process. To identify core processes and support processes and to map process level 0, several steps are conducted, they are:

Focus Group Discussion
This process was conducted during the workshop on creating a performance excellence application document based on Baldrige Education Criteria. From this workshop, it can be identified that processes at the University overall are comprehensively explained in 7 (seven) category of Malcolm Baldrige Criteria for Performance Excellence (MBCfPE).

Interview
This process is done to get more detailed information about the processes. The interview process is conducted by asking directly to the process owner, in the academic Area and Operations and related units at University.

Observation
Direct observation to find out how the flow and interaction between processes to determine what input and output to and from each related process.
Study Documents
To analyze and evaluate the supporting documents needed in the identification and mapping business process, such as Vision and mission of the University, Quality Objectives, organizational structure of University, Job description personnel in every academic and operational area.

Analysis And Results
After data and information related to the existing business process at University are collected, the next step is to conduct analysis of the data and information that has been collected.
This stage of analysis is done in several activities, namely:

Causal analysis
It is the study of the logical relationship between each data, documents and information obtained from each method of data collection that has been done.

Process classification
To sort and analyze data and information based on Value Chain theory to distinguish which is core process and which is the supporting process.

Process modeling
Once identified core processes and supporting processes, then the next step is to model those processes into the process map assisted with SIPOC diagram, so can be clearly visible component of each process in the form of Supplier-Input-Process-Output-Customer and interaction between processes with each other. Modeling this process is done with the MS Visio application to illustrate the SIPOC diagram. The result of this process modeling is a map of Indonesia University level 0.

By collecting and analyzing data and information and of all information related to the vision, mission, objectives and objectives of the organization, regulations and legislation applicable to the Tri Darma University, it can be identified process groups as follows:

- The core process consists of the process of education, research and community service.
- The directing process consists of strategic planning, quality management & quality assurance, performance management and KPI as well as organizational and business development.
- The support process consists of HR management, ICT Management, GAL management, financial and accounting management and marketing and public relations management.

Using the SIPOC method, the Value Chain of the above process is outlined into 1 (one) business process level 0 (zero) and 12 (twelve) Business processes Level 1 (one) University as can be seen in Figure 7.
Conclusion And Recommendation

The University Business Process derived from Value Chain using SIPOC method can be presented integrated in the form level 0.

The business process of the University level 0 consists of:
- 3 (three) core processes consisting of education, research and community service.
- 4 (four) steering process consisting of strategic planning process, quality management & quality assurance, performance management and KPI as well as organizational and business development.
- 5 (five) supporting process consisting of HR management, ICT Management, GAL management, financial and accounting management and marketing and public relations management.

Each process in level 0 presented with SIPOC method also become each business process as many as 12 (twelve) level 1 business process to be studied further.

The mapping as is business process University level 0 has been achieved, but to be able to perform business process management optimally necessary research and the description of further these processes to the next level until standard operating procedures (SOP).
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