

Measurement maturity level of business Alignment and it (case study: University of Kartini Surabaya)

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Abstract. Information Technology (IT) and business is one that we can use to get more profit from the system that is running. Information and business technology has also been utilized in education. Therefore, the authors aim to measure the maturity level of alignment of information technology and business that exist in Kartini University Surabaya to know the deeper conditions about the implementation of business alignment and information technology. The method used is Luftman method by conducting interviews with units and IT business Based on 6 criteria of maturity and alignment of IT and business. Based on the assessment of the completeness of alignment between IT with business Kartini University Surabaya is at level 2 of the Committed Process. It describes the commitment by organizations to achieve harmony between business and IT. Therefore, training needs to be improved so that the proposed strategy can be applied optimally so as to realize the harmony between top management's desire in achieving business objectives and understanding of business units and IT in order to realize business objectives

Keywords: Preprocessing, Face Recognition, Symmetrical Face, Regression Classification

1. INTRODUCTION

Another perspective put forward by Brokers (2003) in Wachid (2004) colleges is classified into the quasi-commercial industry, meaning besides providing educational services to the public, the universities also apply commercial industry management principles to obtain funding as a supporter of their livelihood. Various characteristics of universities as mentioned above, making Information Technology is very important [1].

Referring to the role of IT in the world of education is so complex of course at this time not only as support, but also as an enabler for the running of the business wheel of the organization. Many organizations that have not been able to utilize IT, some are already utilizing but not well targeted and not in line with the organization's existing business strategy. The failure of the Implementation of Information Technology (IT) in the Business Process of higher education is not due to technical factors but rather to non-technical issues (human factors, processes and work organization.

Defines business processes as measurable and structured activities to produce certain outputs for particular customers. There is a strong emphasis on "how" the work is run in an organization, unlike the focus of a product that focuses on the "what" aspect. A process is therefore a specific sequence of work activities across time and space, with a prefix and suffix, and clearly defining inputs and outputs. The definition of [2] can be considered a derivative of the Davenport definition. They define a business process as a collection of activities that require one or more inputs and produce a useful / valuable output for the customer. [3]

SAMM (Strategic Alignment Maturity Model) is the right model to measure the success of alignment between Business and IT. The SAMM model was first introduced by Luftman since 2000 focusing on companies. This model has been adopted to measure violence or is often cited in Google's search engine [4]

This alignment model is recognized by scholars and practitioners as are becoming models that continue to be developed in their research by considering the various dimensions of business-IT maturity i.e. Communication, Competence / Value Measurement, Governance, Relationship, Scope and Architecture, and Skills that are scalable into 38 criteria items. [5] [6] [7] [8] [9]

Currently, University of Kartini IT development is in a passive state, and also there has been no significant development from before. As an example of IT systems that support web profile and academic information system (SIAMIK) which currently cannot be used and still in the development process that resulted in information from the campus for now cannot be accessed online by students, from the business side until now also still in the same conditions as before that there has been no significant development.

This study aims to determine the deeper conditions about the application of business alignment and information technology and some things that become level-level factors also along with other supporting factors at the University of Kartini this afterwards can increase the level of information technology alignment and business strategy for better at the University of Kartini by using Luftman method.

2. METHODOLOGY

Alignment of Strategy

The alignment of strategy between business and IT strategy is demonstrated through a mutually supportive two-way relationship. The alignment between business strategy and IT will lead the organization to realize the benefits of IT investment in order to create a sustainable business competitive advantage. As a note, in the context of this research, on the topic of alignment of business and IT strategies, the terms SI (Information Systems) and IT (Information Technology) will be considered the same, albeit essentially different.

Luftman Method

The Luftman method is a model of aligning the IT strategy with the business strategy, this model is a model of the alignment of the two strategies whose results can be proved true and accountable scientifically. To achieve the best way to achieve harmonization in accordance with the organization's business objectives requires the right strategy.

The importance of measurement is done so that after the maturity level is known top management can improve the alignment of IT and business to the next level. For example, when measured by the Luftman model it is known that the level of business-IT maturity maturity of a higher education institution is worth 2, then the institution will be able to increase the level of business-IT alignment maturity to level 3 with reference to the components of small value that must fixed. Luftman's IT-Business Alignment Maturity provides a maturity alignment measurement framework between business strategy and IT strategy. Luftman's business and IT alignment model focuses on corporate activities to achieve cohesive goals through IT managing units as a technical unit and business unit as a functional enterprise.

SAM (Strategic Alignment Model)

The concept of the Strategic Alignment Model has the basis of two assumptions. The first assumption of economic performance is directly related to management's ability to create strategic fit between the company's position in the competitive market and the design of a fixed administrative structure, to support the decisions taken. The second assumption is that the fit of strategy (strategic fit) in reality is always dynamic.

Strategic Alignment Model (SAM) consists of four domains. Each domain consists of three components. Total SAM has 12 components that work together to determine the extent to which the level of IT strategy alignment with business strategy. The alignment model is divided into two areas, business and IT. Each area has two quadrants that define that part of the business.

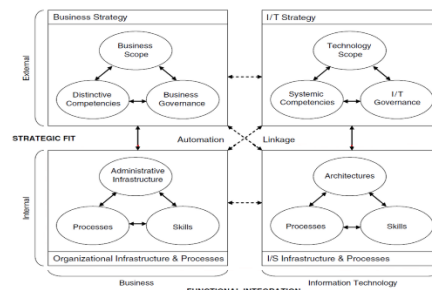


Fig. 1 SAM Model

For governance of the IT component it explains about building the authority, resources, risks and responsibilities undertaken to business partners, IT management and service providers. The process of selecting and prioritizing IT projects in business is part of this component [10].

IT- Business Alignment Maturity Criteria

The development of the Strategic Alignment Model (SAM) is the Strategic Alignment Maturity Model (SAMM) is a work framework for measuring the maturity level of business and IT alignment. It revealed the criteria of maturity of a harmony consisting of 6 criteria as in the following figure [11] [12]. :



Fig.2 Alignment Maturity IT / IS

Maturity Criteria for Business and IT Alignment Maturity

MIS alignment and IT alignment maturity research model includes 5 levels of strategic alignment maturity, i.e. initial / ad hoc process, committed process, established focused process, improved / manage process, and optimized process.

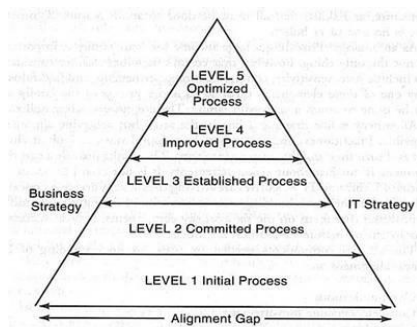


Fig 3. Alignment Maturity level IT/IS

Factors inhibiting and determining success of alignment IT / IS

Factors inhibiting alignment can be due to poor communication between business units and IT, then the absence of a decision from the organization to retain talented personnel within the company. The absence of exchanges between business staff and IT staff is also one cause of non-optimal alignment between business and IT.

Factor Enabler and Faktor Inhibitors (Luftman,1999)

Table 1 Enabler Factor and Inhibitors Factor

<i>Enablers</i>	<i>Inhibitors</i>
<ul style="list-style-type: none"> • Senior executive support for IT • IT involved in strategy development • IT understands the business • Business-IT partnership • Well-prioritized IT projects • IT demonstrates leadership 	<ul style="list-style-type: none"> • IT/business lacks close relationships • IT does not prioritize well • IT fails to meet commitments • IT does not understand business • Senior executives do not support IT • IT management lacks leadership

Measurement of Maturity Level of Business Alignment and IT

Measurement of the maturity of alignment between IT strategy and business strategy by using Luftman method is done by spreading some queries which have been formulated by Luftman himself. This questionnaire will produce the data that will be analyzed by using Luftman method. Each answer of question in the questionnaire has value or point that is used to calculate the level of maturity of alignment between IT strategy and business strategy. Each answer has points from 1 to 5 which will be added and recorded.

In this chapter will be explained about the process of data collection and interview based on Luftman method which refers to the alignment of business and IT in University of Kartini Surabaya.

3. RESULTS AND DISCUSSION

IT / IS alignment measurement maturity step 1

At this stage, a questionnaire was collected which consisted of 6 criteria: communication maturity, competency / value measurement maturity, governance maturity, partnership maturity, scope and architecture maturity and skills maturity.

Questionnaires were filled based on questions asked to resource persons. After the filling then given the endorsement of the signature from the source. The first stage is completed then proceed with the second stage of writing a score for each answer of the questions posed through the questionnaire.

IT / IS alignment measurement maturity step 2

The next step is to write the score / value for each answer questionnaire given to each respondent / resource persons in tables 1 and 2 for each criterion in 2 resource persons.

Average calculation activity of each category

Based on the answers of questions given to 2 resource persons on each criterion of maturity of business and IT alignment, then the measurement results obtained for each criteria of maturity of business and IT alignment.

The results of these measurements can be seen in the following table:

Table 2 Maturity level of business and IT alignment for each criterion

No	Criteria	Alignment Maturity Level
	<i>Communication</i>	2
2	<i>Competency/Value</i>	2
3	<i>Governance Maturity</i>	2
4	<i>Partnership Maturity</i>	2
5	<i>Scope and Architecture</i>	2
6	<i>Skills Maturity</i>	2

The above data is the result based on the measurement of maturity based on each Luftman criterion, it has been explained previously that the data obtained by asking the questioners answer the question in the questionnaire by choosing the right choice in accordance with existing conditions at the University of Kartini Surabaya.

The maturity of business and IT alignment

After obtaining the maturity of each criterion, the next step is to determine the maturity of the general alignment to determine the level of maturity owned by the University of Kartini. This measurement is done by finding the average value of the overall value of each criterion by using the calculation as below:

$$\text{Maturity Level} = \frac{\text{Level of maturity of each criterion}}{6}$$

Based on the above equation it can be determined the level of maturity of the alignment of information technology strategy to business strategy of Kartini University where the calculation as follows:

$$\begin{aligned} \text{Maturity Level} &= \frac{\text{Level of maturity of each criterion}}{6} \\ &= \frac{2+2+2+2+2+2}{6} \\ &= \frac{12}{6} \\ &= 2 \end{aligned}$$

To measure the maturity level of business maturity and alignment and IT, the value of each criterion is summed, once the value is added then divided by the number of resource persons. Each value that appears to be a decimal number is rounded down, this is done to define the conditions in the organization in accordance with the reality for the proposed strategy to increase the maturity of business and IT alignment effectively. If the decimal value is not rounded the proposed strategy can not overcome the shortcomings in the organization as a whole. Once the value is rounded down it is known

3. CONCLUSION

The results of the assessment of the maturity of alignment between IT strategy to business strategy of University of Kartini Surabaya is at level 2 of Committed Process. According to Luftman,

Committed Process describes the commitment by organizations to achieve harmony between business and IT. The process actually has a pattern followed by all who do it, but there is no formal training and standard formulation procedures, and the implementation obligations are left to each section and rely heavily on the knowledge of each section / unit so that the consistency is low. From the result of maturity alignment analysis in the previous chapter it is proposed an improvement strategy to assist University of Kartini in improving the maturity of alignment of business strategy and IT to the next level of Established Focusses Process, Improved / Manage Process and Optimal Process. The strategy is formulated for the components

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