Analysis of investment IT planning on logistic company using COBIT 5

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Abstract. IT investment planning to review goals business strategy development needs to support IT governance. Planning its investments will be assessed with a framework is issued by ISACA that COBIT 5 focus on domain EDM, APO, BAI, and MEA. Mapping from framework COBIT 5 with Val IT lead nine domain consisting of EDM01, EDM02, APO01, APO02, APO05, APO06, APO07, BAI01, and MEA01. Article search google using RACI diagram generating mapping organisation telecoms and authority structures for the review identify respondents from any domain. Under selected area be used to review counting process capability level, and for a discussion of development, priorities make recommendations shall perform in accordance process needs PT.XYZ logistics company. The translating process capability level determined by the company prior currently at on level 4. The capability level domain process in the EDM is level 4, while at domain APO, BAI, and MEA are on level 3 and gap on APO, BAI, and MEA. The company recommendation domain subscription APO, BAI, and MEA to increase the capabilities of the rate review process to achieve the targets that have can determine the company.

1. Introduction
Information Technology (IT) is a need for all companies and business process like hospital[1] and mining company[2]. The study conducted 92 percent of respondents support the activities of logistics companies with a real system [3]. Logistics Company PT. XYZ is one company that utilises the role of information technology to support all business processes run by the company to be active and efficient. Business Focus of PT.XYZ Logistics Company emphasises on creating the value of logistics business through the consolidation and comprehensive integration of multimodal freight forwarding services which include land, sea, air and warehousing services. The strategic is planning of PT.XYZ logistics company through the acquisition of the internal and external company by considering strategic risk (according to PT Pos Indonesia, 2013). Figure 1 is the structure of the company’s business processes (PT Pos Indonesia, 2014).
To run the entire business focuses on the company requires significant resources, one of them is the one that focuses on planning IT investment by the organisation for information technology needs. The support the IT investment planning, a good IT governance must include in the company. This logistics company, PT. XYZ has already got excellent resource support either in financial or inadequate infrastructure. Planning the IT investment should be tailored to the strategic logistics of PT. XYZ. The following are the activities and financing plans for 2013 to 2016 used to perform the realisation phase of the transition phase of the IT investment planning process, as follows (PT Pos Indonesia, 2013).

Table 1 stated that the realisation of revenue has not been achieved and has not met the RKAP (according to PT Pos Indonesia, 2014) PT. XYZ Logistics Company created a planned budget on RJP document (Long Term Plan) with an allocated budget from 400 billion to 1 Trillion. We can conclude that the budget was massive, and would need supervision and evaluation of all activities related to IT investment planning, whether or not it ran accordingly (by the company’s business strategy), or vice versa. Kemper [4] defined oversight as determining what has been, that is, to evaluate work performance and, where appropriate, to apply corrective actions so that the outcome of the work is by the established plan.

Table 1. Revenue from business services activities.

| Component      | 2009       | 2010       | 2011       | 2012       | 2013       | Revenue | Growth |
|----------------|------------|------------|------------|------------|------------|---------|--------|
| RJP            | 1,081,432  | 1,297,719  | 1,490,588  | 1,063,446  | 1,480,200  | 1,282,677 | 11.3%  |
| RKAP           | 721,770    | 874,924    | 916,580    | 1,063,446  | 1,480,200  | 1,011,384 | 20.3%  |
| REALIZATION    | 682,242    | 830,335    | 966,279    | 1,112,298  | 1,551,340  | 1,028,499 | 23.2%  |

The process of IT investment planning used the existing SOP (Standard Operational Procedure). Because there were several internal problems, such as the lack of evaluation and control of the management toward the IT Investment planning itself. A newspaper mentioned the result was not at level best. The Organization is one of the foundations to determine some existing policies and decisions that exist, and one of them implemented in the company activities of IT investment planning. Decision-making is the act of election of one or more possibilities[5], but this is hardly an election between right and wrong but is often the choice between the almost right and the wrong. Decision-making is the general responsibility of all executives, regardless of their functional area or management level. Managers are required, every day, to make decisions that create the future of their organisations as well as their futures[6]. Factors that often occurred in the field were that there was a mismatch process of IT investment planning resulting in ignorance and the absence of periodic
evaluation. No wonder if the business focus did not work correctly, a large number of budgets was not well controlled, the decision made by business units was overlapping. Then the researchers can conclude there will be problems and adverse effects on the survival of the company for a while.

The researcher will look for solutions to the problems that have been described above by emphasising the approach of evaluation and control. One way of doing evaluation and control can be to use the COBIT framework 5. The focus of the framework is expected to answer and clarify the company’s IT investment planning. COBIT 5 [7]. Incorporates COBIT 4.1, Val IT 2.0 and IT Risks as well as concepts from the Information Business Model for a detailed framework for effective business governance and IT governance. COBIT 5 [8] adopts the ISO 38500 view of the need for IT governance and IT management and uses the Evaluate, Direct and Monitor model of ISO 38500. Val IT and COBIT 5 are strictly related frameworks one another. Because of the function of the Val IT framework focuses on IT investments, researchers use them to serve as a reference in determining and mapping existing domain processes to COBIT 5.

Proper IT invasibility management should also have the ability to accommodate business unit involvement in every decision maker[9]. The IT Governance Institute[10] Organizations are increasingly recognising the importance of alignment between corporate business strategies and IT services. Revealed that one of the causes of failure in IT investment is the lack of business unit involvement in IT Investments[11]. Good IT investment is one of the cornerstones of IT governance[12]. IT management is needed to manage IT services in the company and synergise the IT services with every non-IT business unit (working unit) activity. Therefore, any improvements made to IT investment management will have an impact on corporate IT governance. This research is:

a) Analyze corporate information technology governance in planning IT investment to interact with corporate business strategy by mapping IT goals using the framework COBIT 5 focusing on EDM, APO, BAI and MEA domains.

b) Analyze the planning IT investment in companies and other business units that match the task and responsibility by RACI mapping diagram using COBIT Framework 5 focusing on EDM, APO, BAI and MEA domains.

c) The Top provides suggestions and recommendations to the company from the results of analysis and assessment of current and next level of IT maturity with the achievement of capability level focus on EDM, APO, BAI and MEA domains.

2. Methods
The methodology used in this thesis research is by the COBIT 5 framework focusing on EDM, APO, BAI and MEA domains. This method used as a reference in the assessment of IT investment planning by mapping the company strategy, mapping authority and responsibility of the organisation and provides recommendations for improvement of the current planning by measuring the capability level in the company. In assessing IT investment planning, Base Practices (BP) and Work Product (WP) were used to generate a capability level that focused on EDM, APO, BAI and MEA domains.

2.1. RACI Chart
IT Governance Institute [13] RACI stands for Responsible, Accountable, Consulted, Informed. COBIT 4.1 explains that the RACI chart serves to show the role and responsibility of a function in the organisation of specific activity in the IT control objective. Roles and responsibilities are two things that are strictly related to the decision-making process. A decision can make by the parties who do have authority as decision makers. RACI is applied to every activity within the IT control objective to support the success of IT processes across all four domains. The purpose of giving these roles and responsibilities is to clarify the activity, as well as the means to determine the role and other functions of a particular activity. The RACI chart defines what and to whom to delegate, consisting of R (Responsible), A(Accountable), C(Consulted), I(Informed).
2.2. Capability Level

\[ \text{Capability Level} = (0 \times y_0) + (1 \times y_1) + ... + (5 \times y_5) \]  
(1)

The equation 1 is formula calculation process for capability level. Description of the one formula is \( Y_n(Y_0...Y_5) \) the number of processes at n. Z is some evaluated processes.

3. Experiment and Result

The result and discussion in doing the mapping and assessment of capability level along with its recommendation.

3.1. Mapping of the Val IT Framework with COBIT 5

a) Evaluate, Direct, and Monitor (EDM) consist of
   - EDM01 consists of EDM01.01, EDM01.02
   - EDM02 consists of EDM02.02, EDM02.03

b) Align, Plan, and Organize (APO) consists of
   - APO01 consists of APO01.02, APO01.07
   - APO02 consists of APO02.01
   - APO05 consists of APO05.01, APO05.02, APO05.03, APO05.04, APO05.05
   - APO06 consists of APO06.01, APO06.03
   - APO07 consists of APO07.01, APO07.05

c) Build, Acquire, and Implement (BAI) consists of
   - BAI01 consists of BAI01.02, BAI01.03, BAI01.04, BAI01.05, BAI01.14

d) Monitor, Evaluate, and Assess (MEA) are from
   - MEA01 consists of MEA01.01, MEA01.02, MEA01.03, MEA01.04, MEA01.05

The mapping of the framework revised with IT VAL then it was continued by doing strategic mapping of the company’s business to IT Related Goals. The strategic company is as follows:

a) PT. XYZ, Logistics Company as a Public Company, i.e. the company will sell some of its shares the public through Initial Public Offering. Through some considerations, the Board of Directors decides that the IPO conducted through a subsidiary (X1).

b) Repositioning from Postal Company to Trusted Postal Services. (X2)

c) Revitalizing the existing services coupled with two new business lines, namely retail business and property business (X3)

d) Developing the company from a single company to multi companies. (X4)

3.2. Mapping IT Related Goals

The process of mapping at this stage is concerned about looking at the relationship between strategic goals with Enterprise Goals that exist in COBIT 5. Then establish a connection between strategic targets with the Enterprise Goals are substantial, it does give a P or a mean Primary, and the relationship of the relationship between the real imperative with Enterprise Goals is not dominant. Results from Enterprise Goals mapping strengthened Financial Indicators, Customers, Internals, Learning& Growth from corporate strategic targets rather powerful on average (P).

3.3. Mapping of Questions and Assessment

The process the questions based on the criteria of the Process Assessment Model (PAM) of COBIT 5 will be designed. The COBIT 5 serves to measure the capability level that has been determined by the company with the capability level contained in COBIT 5 and will adjust to the COBIT 5 domain used in this study. The results of the question and assessment mappings are enabled to support alignment and continuity as well as a clear linkage to all domains used in assessing the capability levels. Furthermore, RACI mapping diagram of the organisational structure, roles and responsibilities then matched with nine selected domains.
3.4. RACI Mapping Diagrams

![RACI Chart]

Figure 2. Company business structure.

Then the results of RACI mapping Diagram in figure 2 is also used to assist in the process of questionnaires and interviews, as it becomes more evident and reduces the errors in determining the questions that deserve to be given and gives the assessment of being effective and efficient.

3.5. Capacity Level Capitulation

The stages of this recapitulation stem from the assessment obtained from the questionnaire tabulation data that already has validity and reliability, and focuses on the tested domain then mapped so that it has the value of each question and generates the best practices level and work products as follows in figure 3.

![Figure 3. Rekapitulasi capability gap.]

4. Conclusions

Results are IT-related mapping Target dominant to P (Primary). In the RACI diagram results in a close relationship between the organisational structure with the EDM, APO, BAI and MEA domains. Value
of Capability Level domain EDM is level 4, level APO 3, Level 3 BAI, MEA level 3 and GAP 1. Improvement recommendation that must expose 101 activity from best practice and work product. The results of best practices and work products recommendations should be made periodically to minimise GAP. This study added the business case for IT investment planning more complete.

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