Emphasis on Capabilities Level Auditing Project Planning Tool

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ABSTRACT

There are several problems in project planning such as data loading time, display loading time, data duplication, project status on the system. Therefore, it is necessary to audit the corporate information technology governance. The audit is carried out by measuring the level of capability and looking for problems that occur in business processes. Increasing the level of system capability is integrated between company management and stakeholder needs and maintains data integrity. The method used in this research is the COBIT 5 framework. The research emphasizes Domain Deliver, Service, and Support (DSS) with the process subdomains DSS01, DSS02, DSS03, DSS04, DSS05, and DSS06. The domain was chosen because it was in accordance with the conditions of IT governance and project planning tools. The average result of the capability level on the project planning tools is 2,965 which is at level three (Established Process). This means that processes are documented and communicated for organizational efficiency.

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1. INTRODUCTION

Several companies are engaged in information technology services and are currently using Project planning tools to support company activities. In general, this tool is used for recording project schedules, archiving project-related documents, organizing projects carried out, and reporting on project conditions being carried out to company leaders. Based on the observations made, the researcher found several problems or obstacles. The problem is like it often occurs when loading project data takes a long time. At the time of loading the user display is often long when opened. data duplication often occurs which causes the data to become unreliable, the project status on the Project system is rarely updated by employees. Most of the medium-sized companies do not carry out governance audits on the project planning tools that are currently being run. Information system is a valuable asset for the company. Companies are required to maintain data integrity. Therefore, it is necessary to audit the corporate information technology governance. Audits are emphasized to measure the level of capability and look for problems that occur in business processes[1]. It is also to increase the level of system capability to match the expectations of the company's management and to meet the needs of stakeholders[2]–[4].

One method that can be done for an Information System audit is to use the COBIT 5 (Control objectives for information and related technology) framework. The COBIT 5 framework was chosen because it provides a framework for detailed control objectives for business process owners, management, auditors and users. The audit pays attention to various aspects related to IT governance starting from the skills, people, competitions, services, applications and infrastructure. These aspects are part of everything that can help achieve the goals of overall IT governance[5]–[7]. Thus, the value provided by IT can be achieved optimally[8], [9]. The COBIT 5 framework is appropriate and helps in auditing IT governance were looking at resources does not only focus on the technical aspects of technology[10], [11]. The DSS (Deliver, Service, and Support) domain was chosen because it is in accordance with the use of project planning tools that have been planned, have been built and

are currently running. This study aims to determine the level of capability in the DSS domain with the result that the average level of capability obtained is level 4 and recommendations for IT governance.

2. RESEARCH METHOD

2.1. Project planning

Project planning is a process step in managing a project where the necessary documentation is carried out to ensure a successful project solution. Documentation contains all the steps needed to define, prepare, integrate and coordinate additional plans. The project plan clearly defines how the project is carried out, monitored, inspected, and closed. A project is carried out to plan schedules and activities to produce a product. Projects are temporary which means they have a definite beginning and end, the end of a project is reached when the need or purpose for the project no longer exists. Project planning is the application of skills, knowledge, tools, techniques to fulfill project activities, and project requirements. The application of this knowledge requires effective project planning in the integration of the processes, interactions, and objectives of the planned project.

2.2. Project Planning Tools

Project planning tool is an application used to help project management. Utilization of computer technology as a means of managing information that can cover data on skills, knowledge, tools, and workers. The application supports project activities and project requirements in the management process.

Information System Audit

An information system audit is a process of gathering information and evaluating evidence to decide on a computer system. This is intended to protect data integrity and secure assets. Audit encourages the achievement of the goals of an organization by utilizing the organization's resources efficiently and effectively.

2.3. Cobit

COBIT 5 is a reference model that continues its predecessor COBIT version 4.1. COBIT 5 is used to carry out the audit process by complementing the features in its predecessor version. This version introduces acceptance principles relating to the selection and evaluation of enabling IT investments in businesses. The audit provides value from the investment and realizes the benefits. This version contains a clear division of the area between the governance area and the management area. Regarding COBIT, good business decisions must be based on knowledge derived from relevant information. In addition, it is timely and produces useful information for company owners. COBIT 5 balances 5 principles that enable organizations to build an effective governance and management framework[12]. Figure 2.1 shows the 5 principles of COBIT 5[13].

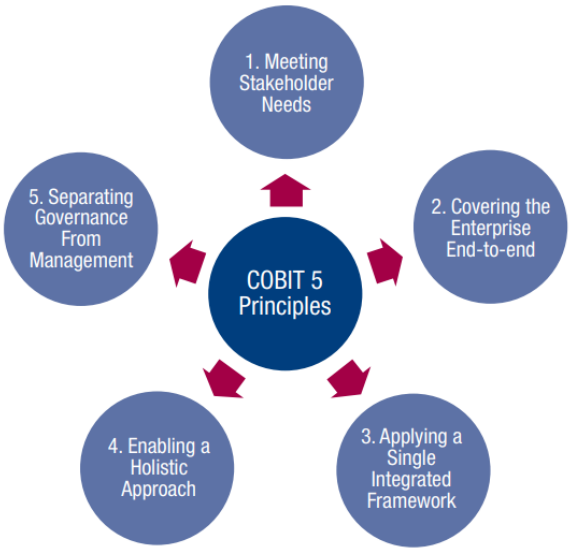

Figure 2.1 The 5 principles of COBIT 5.

The method of calculating the capability level is the same as the Maturity Model[14]–[16]. The following is the capability level equation in the Capability Model[17]–[20]. Index A is the level of capability with a range from 0 to 5. The equation for the number of compliance values (index B) is shown:

$$index\ B = \sum index\ C \quad (1)$$

index c represents the number of statements per level. The ratio equation of the maturity level (Index D) is shown:

$$index\ D = \frac{index\ B}{index\ C} \quad (2)$$

The normalization equation for the propriety value (Index E) is shown:

$$index\ E = \frac{index\ D}{\sum index\ D} \quad (3)$$

Finally, the capability level equation (index f) is shown:

$$index\ F = index\ E * index\ A \quad (4)$$

Gap analysis

Gap analysis is used to obtain the difference between the current capability level and the desired capability level[21]. The gap level analysis is intended to seek and find solutions in the form of recommendations for improvement that must be carried out by the management department[22]. This is intended so that the level of capability to be achieved can be realized. Thus, it will have an impact on increasing the quality of work[23], [24]. While the way to obtain the value of the gap can be obtained by subtracting the value of the level of capability to be achieved (X) with the value of the current level of capability (Y).

$$Gap = X - Y \quad (5)$$

3. RESULTS AND ANALYSIS

3.1. Capability Level

After analysing the results of the questionnaire, the scores for each process DSS01 to DSS06 were obtained. Table 1 shows the results of the calculation of the capability level for each DSS01 to DSS06 domain.

Table 1. Capability Level Recapitulation

Domain	Average	Rounding
DSS01 Manage Operations	2,96	3
DSS02 Manage Service Requests and Manage Incidents	3,08	3
DSS03 Managing Problems	3,00	3
DSS04 Managing Sustainability	2,96	3
DSS05 Manage Security Services	3,02	3
DSS06 Manage Business Process Control	2,77	3

3.2. Gap Analysis

Based on the analysis of the results of the capability level in DSS01 to DSS06, the results of the capability level values in each process are obtained. The next step is to calculate the gap in each process. Targets are determined based on the results of observations and discussions with related parties. Table 2 shows the value of the target to be achieved and the gap in the DSS. The results of the current capability values in the project planning tool are shown:

Table 2. Recapitulation of gap results

Domain	Current value	Target	GAP
DSS01 Manage Operations	2,96	4	1,04
DSS02 Manage Service Requests and Manage Incidents	3,08	4	0,92
DSS03 Managing Problems	3,00	4	1,00
DSS04 Managing Sustainability	2,96	4	1,04
DSS05 Manage Security Services	3,02	4	0,98
DSS06 Manage Business Process Control	2,77	4	1,23

Based on the results of the recapitulation of the gap value in the project planning tool, it can be seen in the following figure:

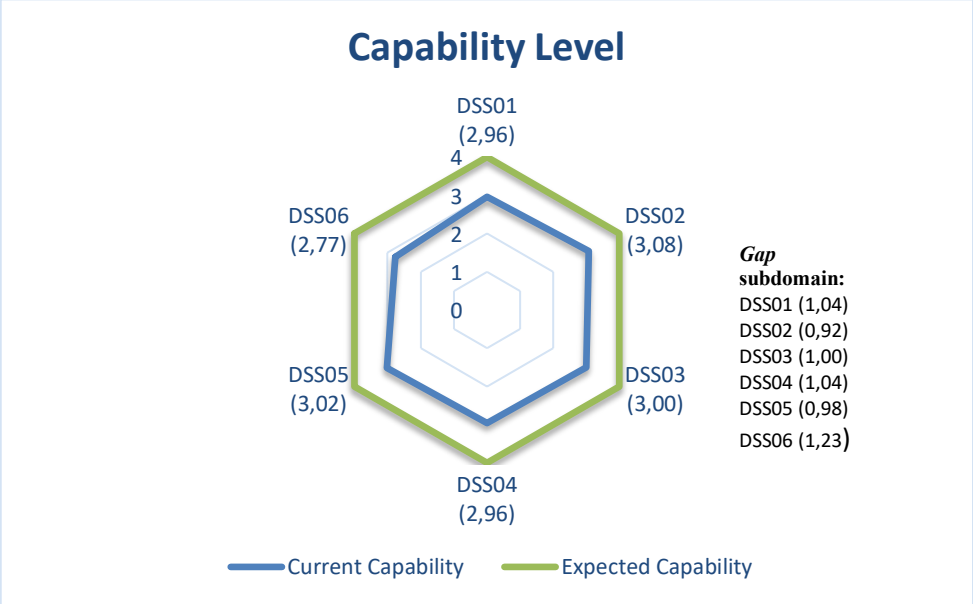

Figure 1. Capability Level and GAP Results

Based on the results of the analysis of the capability level and the gap value analysis, recommendations are made for each DSS domain process:

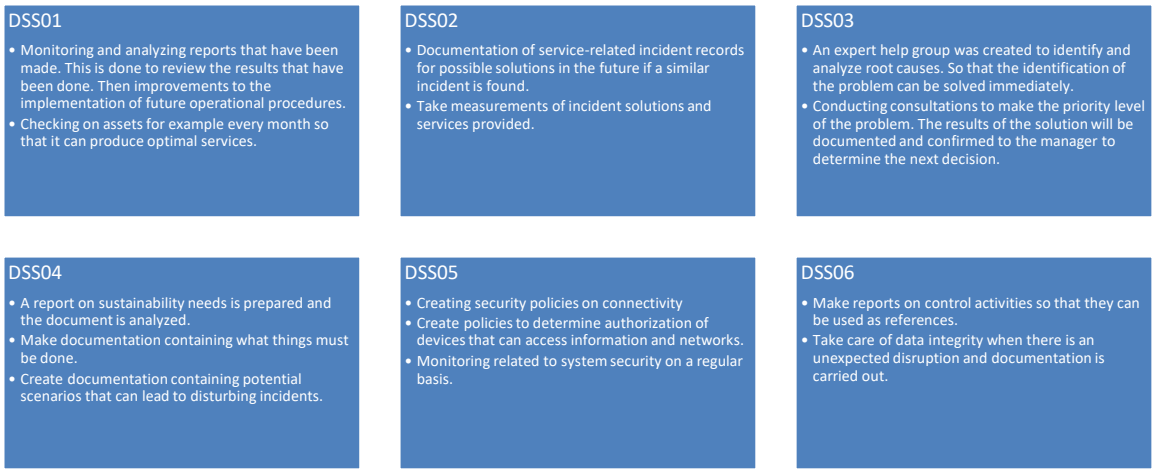

Figure 3. Recommendations of DSS

4. CONCLUSION

Based on the audit results on the project planning tool using the COBIT 5 framework, several points can be concluded. The audit uses the COBIT 5 framework, the capability level based on the results of the audit on the DSS01 to DSS06 process is obtained at level 3. It means established where the process is documented and communicated for organizational efficiency. The audit recommendation as a system improvement

according to the level to be achieved becomes level 4. It is predictable which means it is monitored, measured, and predicted to achieve results.

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