
Enhancing Banking Sector Performance: Assessing IT Capabilities with COBIT 2019 Framework Analysis

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Abstract

The growth of Information Technology within companies has been following its advancements. However, the unattained objectives stem from inefficient transitional systems within the company, leading to inaccurate data and project delays, consequently hindering the fulfillment of corporate expectations. This study aims to offer developmental recommendations through the assessment of IT governance capabilities. The measured capabilities reveal that objectives within processes BAI03, BAI05, and APO03 are stagnant at level 2. The findings from these processes highlight areas for improvement that can be rectified by the company. The proposed enhancements align with recommendations focusing on transitional system development and monitoring to enhance data transition efficiency, thus establishing a monitoring system to mitigate errors resulting from inefficient data transitions.

A. Introduction

With the development of information technology capabilities, companies need to strive and improve their information technology capabilities to be able to compete and increase development from time to time. COBIT Framework 2019 is an aid that can be used to improve information technology in information technology governance because it can be input for managing the information technology management framework. [1] The research aims to apply the COBIT 2019 Framework as a means of designing an information technology framework for technology management so that useful information is obtained to support research with ongoing governance. The growing use of technology in Indonesia every day makes information technology increasingly needed in a company to be able to compete in today's modern world [2].

Information technology is a special technology used to manage data and information, including describing, storing, retrieving, analysing and storing data in various ways to produce high quality information [3]. The most effective way for businesses to develop their business and learn more about some of the effective systems they use is to use the COBIT 2019 Framework [4].

COBIT 2019 is a framework that is recognized and accepted globally. Considering that the influence of globalization has greatly influenced industrial development in Indonesia, every company must develop and modify the systems used so as not to be left behind by current developments [5][6]. The influence of globalization on a company is very large because it can affect a company's workflow, save time and costs, and make the system more efficient, especially in banking companies [7]

The influence of globalization also affects the companies. The companies operate in the banking sector and has its own IT division. The company has around 100 people in its IT division, where they are divided into several teams to work on projects assigned by the company. The IT Division aims to develop innovative corporate Digital Banking maximally and effectively in accordance with people's financial needs.

In the COBIT 2019 framework, these problems can be identified through the "Evaluate, Direct, and Monitor (EDM)" process [8]. Part of the evaluation includes assessing the capabilities of the existing system and developing a timely update plan. The inability to carry out system updates quickly can hinder an organization from achieving the expected goals and performance, in accordance with the principles and objectives of the COBIT framework [9][10].

It is important for companies to adopt effective processes in change management and IT project management in accordance with the COBIT 2019 principles [11][12]. This involves careful assessment of system update needs, careful planning, timely implementation, and efficient monitoring and control of the entire system update process. This allows companies to avoid problems caused by time-consuming system updates and improves project processing efficiency and productivity [13].

Considering the time-consuming system updates and their impact on the company's project implementation efficiency, the research plan also includes a gap analysis using the COBIT 2019 framework [14]. Gap analysis based on COBIT 2019 allows you to compare the current state of IT management and control in companies

with the standards proposed by COBIT[15]. Using COBIT 2019 as a guide, the gap analysis identifies focus areas for improvement, sets improvement priorities, improves system management, increases efficiency, and supports the smooth implementation of the company's overall projects [16].

Previous research on the impact of time-consuming system updates on the efficiency of company project implementation shows that delays in system updates can lead to a decrease in overall company performance and productivity [17]. Furthermore, research shows that implementing the COBIT 2019 framework can be an important solution to overcome these challenges[18]. This allows better assessment of system update needs, more structured planning, timely implementation, and improved monitoring and control [19]. Integrating COBIT 2019 into enterprise systems can be a strategic solution to avoid negative impacts on enterprise project progress and improve overall operational efficiency[20][21].

B. Research Method

The methodology used to measure the company's IT governance capabilities relies on the structured and comprehensive approach provided by the COBIT 2019 framework, enabling a thorough evaluation of its IT processes and standards.

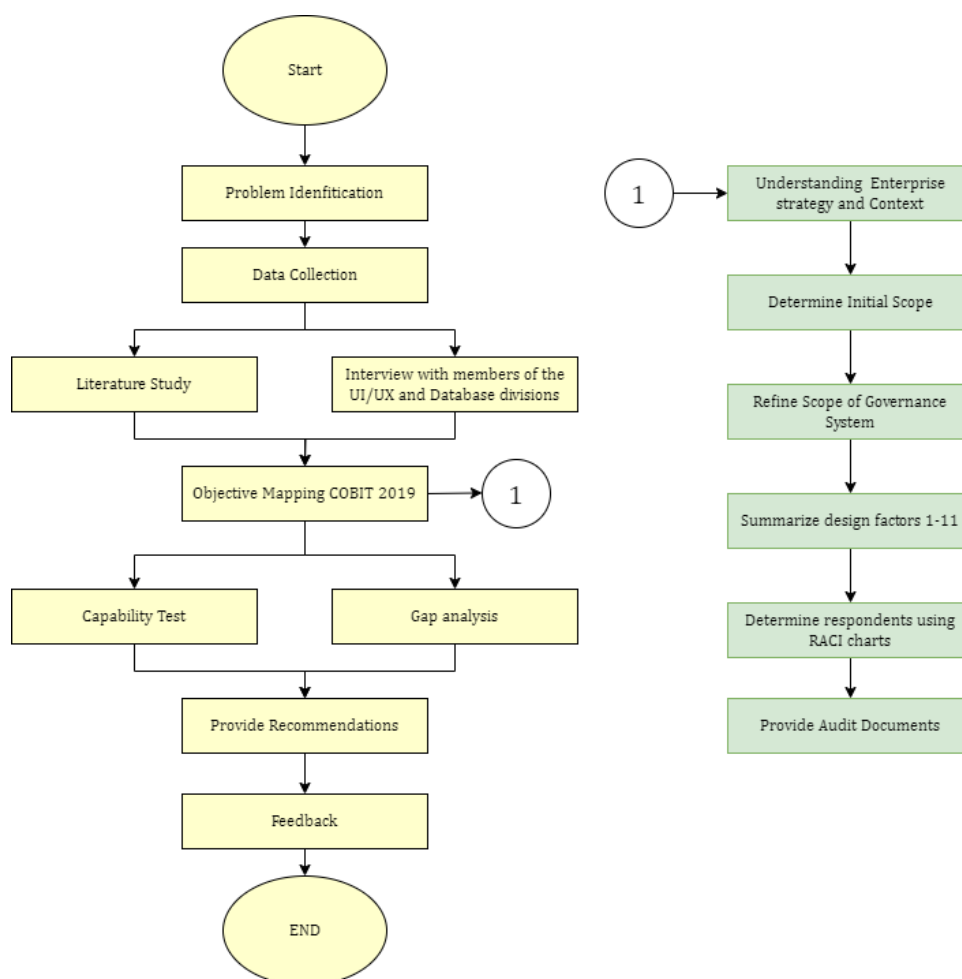


Figure 1. Research Method

In the context of measuring the level of IT capability within the company, Figure 1 illustrates the structured methodology employed to evaluate and measure this capability level [22].

1. Problem Identifications

The beginning of research is to identify the problem or problem that will be solved in the research. This involves recognizing and understanding the specific problem you wish to investigate. A clear identification of the problem will be the basis for all research.

2. Collecting Data

After identifying the problem, the next step will be to collect relevant data needed to answer the research question or solve the problem that has been identified. Data collection was taken from the interview process with members of the IT division.

3. Objective Mapping COBIT 2019

The process of aligning a company's business objectives with the COBIT 2019 framework involves identifying IT aspects directly supporting those goals. COBIT offers a structured set of objectives across multiple IT management areas, connecting business goals with specific IT components. The explanation of this mapping process is depicted in Figure 2, illustrating the four processes utilized for COBIT 2019 objective alignment.

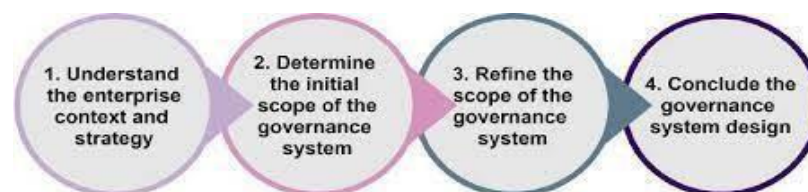


Figure 2. Mapping Process

4. Capability Test:

A capability test is a stage where you assess or measure various variables or elements that are relevant to your problem or research question. This may include testing or evaluating various capabilities, technologies, or factors related to your research.

5. Gap Analysis:

Gap analysis is the stage where you compare the results of data collection and capability tests with the goals or standards you set. This aims to identify the gap between the current situation and the expected situation or set standards. Gap analysis helps you understand where problems or deficiencies may occur.

6. Recommendation Provision:

After identifying the gap between the current situation and the expected one, the final step is to provide recommendations. This is the part of the research where you propose solutions or actions that can be taken to address the problem or reduce the gap. Recommendations should be based on research findings and previously established objectives.

Data Analysis techniques

1. Capability Levels Measurements

The capability level is divided into several rating ranges, including not which means the capability level achieved is less than 15%, partially achieved between 15% to 50%, achieved between 50% up to 85%, and fully achieved is more than 85%.

2. Gap Analysis

Gap analysis is the process of comparing or evaluating the differences between the actual state (current state) and the desired state (desired state) of an organization, product, or process[23]. The main goal is to identify the gap or "gap" between the current level and the expected or desired level. This analysis helps determine where the organization or company's product is, where it should be and what improvements are needed to reach the desired level. Gap analysis helps plan the corrective steps and actions required to close the gap through skills development, process improvements, technology investments, or other strategies to achieve the desired goals [24].

3. Rating Scale

measurement of capability level which is divided into several ranking ranges, including not achieved which means the level of capability achieved is less than 15%, partially achieved between 15% to 50%, Largely achieved between 50% to 85%, and fully achieved 85%-100%.

Table 1. Rating Scale

Category	Percentage
N (Not Achieved)	0%-15%
P (Partially Achieved)	>15%-50%
L (Largely Achieved)	>50%-85%
F (Fully Achieved)	>85%-100%

Table 1 provides an explanation of the rating scale used to determine the level of company capability.

C. Results and Discussion

Problem Identification

After identifying the problem, a literature search was carried out on 4 ISACA books regarding COBIT 2019, journals and research articles related to COBIT 2019 to provide useful references for research. Through a literature review, an overview of the COBIT 2019 framework and steps for assessing the level of IT governance capabilities of an organization was obtained. Through literature research carried out, an overview of the COBIT 2019 framework and the steps used to measure the level of IT governance capability of a company were found.

Objective Mapping COBIT 2019

To measure IT governance, then the COBIT 2019 framework is used to reduce the capability level of the IT division. Mapping was carried out using the COBIT 2019 Design toolkit framework tools. By using COBIT 2019, measurements will be taken of the level of influence and relevant design factors.

1. Understanding Enterprise strategy and Context

This phase is the basis for understanding and defining the company's business strategy, company goals, risk profile, and issues that arise in the company based on the design elements established by COBIT 2019.

2. Determine Initial Scope

In this step, the scope of the corporate governance system is determined using COBIT 2019 design toolkit factors 1-4.

3. Refine Scope of Governance System

In this step, we determine improvements to the scope of the corporate governance system using COBIT 2019 design factor toolkit 5-11

4. Summarize Design Factors

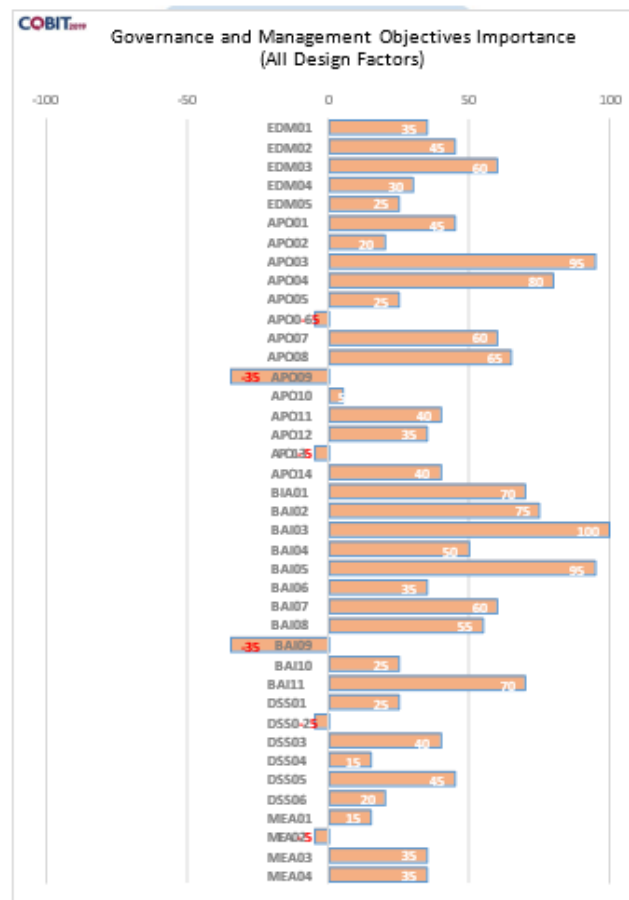


Figure 3. Results of Design Factors

Based on the late conclusions determined in Figure 3, process objectives that have a value of 75 or more must be made the main priority. The objective assessment is assessed from -100 to 100, where 100 is the most important value and -100 is the least important. A score above 75 is a level 4 capability level. 50 or more has a level 3 capability level, a score of 25 or more has a level 2 capability level. In this research, the objectives are the priority and will be selected based on processes that have a significant and relevant impact to problems that arise in the company. The selected process will only use 3 processes that have the highest crucial level due to limited resources and time. based on figure 3 objectives which are Companies priorities is

BAI03 (Managed Solutions Identification & Build), BAI05 (Managed Organizational Change), and APO03 (Managed Enterprise Architecture).

RACI Chart

The RACI chart is a management tool that describes the roles and responsibilities of individuals or teams in a project or activity using four abbreviations: Responsible (responsible), Accountable (responsible for the final result), Consulted (consulted), and Informed (informed) [25]. These diagrams clearly show who is responsible for performing a particular task, who is ultimately responsible for the results, who needs to be consulted, and who simply needs to be informed, resulting in better coordination and better expectations of management and increase efficiency.

Table 3. RACI BAI03

Objective Process	Head of IT	Head of Team Project	Project Team Members
BAI03.01	A/C	R	I

Table 3 shows that in the BAI03 (Managed Solutions Identification and Build) process the head of the IT division takes the roles A (Accountable) and C (Consulted), Head of the project team R (Responsible), and Project team member I (Informed).

Table 4. RACI BAI05

Objective Process	Head of IT	Head of Team Project	Project Team Members
BAI03.01	A/C	R	I

Table 4 shows that in the BAI05 (Managed Organizational Change) process the head of the IT division takes the roles A (Accountable) and C (Consulted), Head of the project team R (Responsible), and Project team member I (Informed).

Table 5. RACI APO03

Objective Process	Head of IT	Head of Team Project	Project Team Members
BAI03.01	A/C	R	I

Table 5 shows that in the APO 03 (Managed Enterprise Architecture) process the head of the IT division takes the roles A (Accountable) and R (Responsible), Head of the project team R (Responsible), and Project team member I (Informed).

Capability level analysis using COBIT 2019

Capability level analysis using Capability level analysis was carried out by conducting interviews. The questions asked during the interview refer to the BAI03, BAI05, and APO03.COBIT 2019 processes.

Table 6. Capability Level

Objective Process	Percentage	Category	Capability Level
BAI03	60.91%	Largely Achieved	2
BAI05	67.9%	Largely Achieved	2
AP003	63.125%	Largely Achieved	2

Table 6 shows the results of measuring the level of capability achieved from objectives BAI03, BAI05, and AP003 along with their levels. BAI03's objective is to reach level 2 capability level with a score of 60.91%, and is included in the L (Largely Achieved) category. BAI05's objective is to achieve level 2 capability level with a score of 67.9%, and is included in the L (Largely Achieved) category. The AP003 objective reaches level 2 capability level with a score of 63.125%, and is included in the L (Largely Achieved) category.

Gap Analysis

Gap analysis is carried out by comparing the results of the company's capability level with the expectations of the level of capability that the company wants to achieve.

Table 7. Gap Analysis

Objective Process	Expected Capability Level	Capability Level	Gap
BAI03	4	2	2
BAI05	4	2	2
AP003	4	2	2

Table 7 shows the gap analysis of the company with the results of the gap analysis, recommendations will be determined which are expected to provide solutions to the company to make improvements and increase the level of capability in accordance with the company's expectations.

Findings and Impact

Findings and impacts were obtained through measuring capability levels. The assessment is carried out using audit documents as a guide for providing the assessment. This assessment is intended to find activities that have a value equal to or less than 50% to become priority improvements.

Table 8. Findings and Impacts

Objective Process	Findings	Impacts
BAI03	The company's inability to identify obstacles that occur can cause delays and reduce company efficiency.	There are obstacles in accessing information needed by other IT divisions.
BAI05	lack of supervision and ability to monitor performance effectively, resulting in delays and errors that often occur when the project is running.	Impairs the organization's ability to track increases or decreases in implementation. The company becomes unable to achieve specified expectations.

AP003	Problems that occur are due to unstructured data and lack of efficiency from IT members.	Causing a lack of operational efficiency which slows down company efficiency.
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Table 8 explains the findings and impacts that has been found on the corresponding objective. The findings are about the company’s inability to identify obstacles that occur, the lack of supervision and the unstructured data that has cause impacts to the company’s business flow.

Recommendation

Based on the test results, recommendations can be determined that can be given to the companies. The recommendations will be divided into recommendations for improvement and recommendations for increasing capability levels in accordance with the 2019 COBIT governance guidelines.

Table 9. Recommendation

Objective Process	Recommendation
1	Improve more detailed transition planning for each stage of change that occurs.
2	Conduct a detailed evaluation of the company's readiness regarding capabilities, readiness, as well as strengths and weaknesses that need to be improved to support planned changes.
3	Conduct consultations with company officials to determine needs in order to gain a better understanding of the company's needs.
4	Create metrics that cover relevant aspects and can be clearly measured, thereby providing a more accurate picture of the company's needs.
5	Implement an effective monitoring system to provide a better understanding of the extent to which the system is implemented and provide notification if any deviations occur.

Table 9. Provide recommendations that companies can make to improve and increase their capabilities. The improvements are recommended so the company can make improvements in theirs current systems and creating a metrics to help their IT division.

D. Conclusion

From the comprehensive study conducted utilizing the COBIT 2019 framework for assessing IT governance capabilities within a company's IT division, several significant conclusions have been drawn. The evaluation revealed that crucial objectives in BAI03, BAI05, and APO03 are currently at a capability level of 2, falling notably short of the targeted level 4, highlighting a substantial 2-level gap. Recommendations derived from this assessment concentrate on fortifying transition planning and implementing robust monitoring mechanisms to augment data transition efficiency, consequently reducing errors and enhancing the overall capability level in accordance with COBIT 2019 guidelines. The research's findings, encompassing gap analysis, capability level assessments, and subsequent recommendations, underscore the pivotal role of integrating COBIT 2019 to fortify IT governance and advance operational efficiency within the company's IT division.

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