

Analysis of Delivery, Service, and Support (DSS) in Information Technology Governance (IT Governance) Using the COBIT 5 Framework (Case Study : PT. Indonesia Gadai Oke)

Muhammad Iqbal Faiz^{1*}, Martiano²

¹Information System, Muhammadiyah University of North Sumatera, Indonesia

²Data Science, Muhammadiyah University of North Sumatera, Indonesia

Iqbalfaiz530@gmail.com^{1*}

Abstract

PT. Indonesia Gadai Oke's information technology governance in the Delivery, Service, and Support (DSS) area is examined in this study utilizing the COBIT 5 framework. With a score of 2.9, the analysis shows that the existing DSS capability is at Level 3 (Established Process), which is in line with the anticipated level of 3.4. Even after attaining level alignment, there is still a score disparity, necessitating adjustments to get to the ideal Level 3. In order to conform the standard operating procedures (SOPs) and associated paperwork, this improvement entails heightened control of operational duties, responsibilities, and performance. Limited staff, out-of-date hardware and software maintenance schedules brought on by expanding IT facilities, and an inadequate operational knowledge base are some of the company's problems. In order to guarantee that all IT assets are covered, recommendations center on enhancing staff capabilities for system performance reporting and proactive, recurring modifications to maintenance schedules, with the ultimate goal of predictable and optimal operating procedures.

Keywords: IT Governance; COBIT 5; Delivery Service and Support (DSS); Capability Level; GAP Analysis; Recommendations

1. Introduction

The rapid development of information technology (IT) has made it a crucial aspect in meeting today's business needs. Companies have realized that IT can provide solutions for various business processes. Therefore, IT governance is essential to facilitate the evaluation and monitoring of information systems. In IT governance, routine monitoring and assessment are crucial procedures. Businesses can comprehend how well their IT services are performing and pinpoint areas for development by evaluating and monitoring them, which will ultimately raise the overall quality of their services. The best possible use of business tools and resources is necessary to assist the execution of IT governance [1].

IT governance is a set of processes and procedures that aim to ascertain the extent to which IT has been implemented [4]. There are five focus areas in information technology governance: Strategic Alignment, IT Value Deliver, Resource Management, Risk Management, and Performance Management[3]. The focus area in information technology governance can control the use of information technology resources in terms of humans and the availability of information technology devices [6]. Thus, an evaluation of IT governance is needed to determine and measure the information technology implemented to help organizations meet their objectives [7].

COBIT 5 provides a comprehensive framework that assists enterprises in achieving their objectives for the governance and management of enterprise IT. Simply stated, it helps enterprises create optimal value from IT by maintaining a balance between realising benefits and optimising risk levels and resource use. COBIT 5 enables IT to be governed and managed in a holistic manner for the entire enterprise, taking in the full end-to-end business and IT functional areas of responsibility, considering the IT-related interests of internal and external stakeholders. COBIT 5 is generic and useful for enterprises of all sizes, whether commercial, not-for-profit or in the public sector. [3].

As a result, PT. Indonesia Gadai Oke's IT governance using the COBIT 5 framework requires the Delivery, Service, and Support Domain Analysis. We can evaluate the quality of information systems and ascertain whether they can accomplish preset goals by using the COBIT 5.0 framework. In the IT governance management of PT. Indonesia Gadai Oke, this framework makes use of the DSS (Deliver, Service, and Support) Domain, which is concerned with information system security and includes aspects like document completeness and appropriate business procedures. Because it offers thorough guidance for managing and identifying appropriate needs, this framework is

used as a reference for conducting analysis. The findings of this analysis will be used to plan future information system developments and improvements based on audit results that demonstrate the impact of effectiveness and achieved capability levels.

2. Literature Review

Control Objective for Information and Related Technology, or COBIT 5, is a framework for IT governance and auditing. The most recent version, published by ISACA, the global organization in charge of information technology governance, attempts to assist enterprises in managing risks, utilizing resources, and maintaining the advantages of information technology [2].

COBIT 5 has five domain scopes, namely Domain APO (Align, Plan, Organize), Domain BAI (Build, Acquire, and Implement), Domain DSS (Deliver, Service, and Support), Domain EDM (Evaluate, Direction, and Monitoring), and Domain MEA (Monitoring, Evaluate, and Asses) [8]. The domain of COBIT 5 provides several measures, indicators, and processes to improve the performance of an organization in managing information technology governance [8].

In its use, COBIT 5 can measure the level of achievement of a process and activity that has been implemented and assess the capability level of the selected domain and process [9]. Thus, the use of COBIT can be used by a company or organization as a framework to assist in the management of information technology governance that has been implemented in a company in a comprehensive and integrated manner [7]. The pawn company is the object of this study to evaluate information technology governance.

A comprehensive review of numerous sources, including scholarly literature and pertinent documents, was necessary to finish this investigation. Furthermore, the COBIT 5 ISACA (2012) rules and the COBIT 2019 Framework Governance and Management Objective 25 ISACA (2019) served as the foundation for evaluating the study's primary IT management competencies.

3. Research Methodology

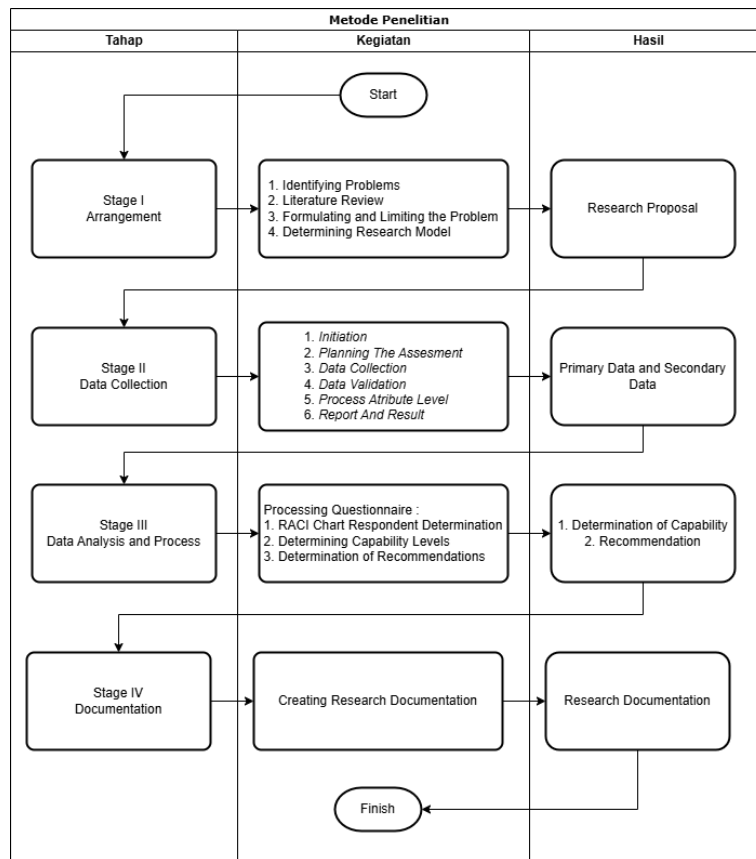


Fig. 1: Flowchart Design

3.1. Type of Research

When one wishes to comprehend the history of an issue, the interactions of individuals within a social unit, or a group of individuals in depth, thoroughly, holistically, intensively, and naturally, case studies are the method of choice when compared to other forms of qualitative research. A comprehensive and in-depth image of a situation or thing can be obtained from this investigation. A single individual, a family, an occasion, or any other group that is sufficiently small to enable the researcher to observe, comprehend, and feel how the object behaves or works in its natural setting might serve as the case to be examined.

3.2. Data Collection

In this study, researchers determine the required interview outcomes for every action that has to be made at PT. Indonesia Gadai Oke. They concentrate on objective measurements to evaluate the scope of the process and validate the degree of competence attained within the specified process domains.

3.3. Data Analysis Technique

The information gathered from the next survey will be examined and processed in this step. In this case, the research will entail assessing the level of ability (capability level) and using a gap analysis to compare it with the expected level of ability. The results of the questionnaire will then be evaluated by PT Indonesia Gadai Oke's IT staff using the following evaluation criteria.

Table 1 : Respondent Answer Value Criteria

No	Level	Criteria Description
1	0	Actions not achieved and failed attempts
2	1	Have successfully achieved the desired results through the steps taken.
3	2	Implemented through a structured management framework (Planned, Monitored, and Improved)
4	3	Implemented through predetermined steps with the ability to achieve the desired output.
5	4	It is currently operating according to established parameters to achieve the desired results in the process.
6	5	Continuously improving to achieve business goals that are relevant to current developments and focused.

3.3.1. Questionnaire Response Summary Calculation

Questionnaire response calculation with :

$$S = \frac{R}{Q} \times 100\% \tag{1}$$

S = Summary, R = Number of Respondent, Q = Questions Quantity.

3.3.2. Score and Capability Level Measurement

Calculation of Score and Capability Level with :

$$CS = \frac{(CC \times CL)0 + (CC \times CL)1 + (CC \times CL)2 + (CC \times CL)3 + (CC \times CL)4 + (CC \times CL)5}{100} \tag{2}$$

CS = Capability Score, CC = Current Condition, CL = Capability Level.

Table 2 : Answers, Values, and Capability Levels Mapping

Value Ratings	Capability Score	Capability Level
0	0	(0) Incomplete Process
0,51 – 1,50	1	(1) Performed Process
1,51 – 2,50	2	(2) Managed Process
2,51 – 3,50	3	(3) Established Process
3,51 – 4,50	4	(4) Predictable Process
4,51 – 5,00	5	(5) Optimising Process

4. Results and Discussion

4.1. Planning The Assesment

Researchers identified individuals who would be included in the evaluation process in order to construct the steps in this phase. Participants were chosen using a purposive selection technique, with the main objective being to retrieve pertinent RACI charts. Each person's explicit accountability for duties within the chosen key management practices in the DSS area was the fundamental need for this study.

Table 3 : RACI Chart DSS Process Mapping for Organizational Structures

RACI Chart	Organization Structure		
	DSS01	DSS02	DSS03
Senior IT Staff	Technician Operational Outlet	PIC Call / Call Center	Technician Operational Outlet

4.2. Data Collection

In order to manage service quality and support, track the development of service provision, assess operational performance, and verify the degree of procedure compliance, researchers are currently investigating and identifying methods to gather data required in the DSS (Deliver, Service, and Support) process. The objective is for researchers to investigate pertinent discoveries in PT Indonesia Gadai Oke's

utilization of operational activities, which may be utilized as assessment evidence in a variety of process activities they do. In this instance, researchers concentrate on identifying the output requirements that the business must fulfill through its operational activities.

Table 4 : Process DSS Outputs

Key Management Practice	Output
DSS1 : Deliver I&T operational product and service outcomes as planned.	Establish precise SOPs for the day-to-day management of IT systems and infrastructure. The effectiveness of IT infrastructure (network, servers, databases) is actively monitored. Regular preventive maintenance activities (e.g., patching, backups) Plans are followed while managing operational schedules, including backups and batch processing. Reporting on the overall operational performance of IT.
DSS2 : Achieve increased productivity and minimize disruptions through quick resolution of user queries and incidents. Assess the impact of changes and deal with service incidents. Resolve user requests and restore service in response to incidents.	Users have a clear point of contact. Service requests and incident logging. Regular updates on the status of incidents are provided to users. If an issue cannot be fixed permanently, users are given a temporary fix. After compliance is verified, incidents and issues are formally closed.
DSS3 : Increase availability, improve service levels, reduce costs, improve customer convenience and satisfaction by reducing the number of operational problems, and identify root causes as part of problem resolution.	Have a well-defined procedure for determining reoccurring problems. Perform a methodical root cause analysis. Analyze each problem's remedy to avoid reoccurring issues. Updates should be made to address the issue. Documentation of problem histories is kept in a knowledge base.

4.3. Data Validation

During this stage, the investigator effectively gathered information through measurement techniques and acquired knowledge to evaluate the Capability Level. The researcher then assessed the information from the survey that was given to the participants in compliance with the RACI governance framework. The level of operational achievement (IT services and support) at PT Indonesia Gadai Oke was then determined by the researcher after analyzing the comprehensive questionnaire replies, which are shown in the table below.

Table 5 : Recapitulation Results DSS01.01

No	Activities	Status	Answer Distributions					
			0(%)	1(%)	2(%)	3(%)	4(%)	5(%)
1	There are well-defined standard operating procedures (SOPs) for the day-to-day functioning of IT systems and infrastructure.	<i>As is</i>	0.00	50	0.00	0.00	50	0.00
		<i>To be</i>	0.00	0.00	0.00	100	0.00	0.00
2	IT operations personnel are aware of and regularly adhere to specified SOPs.	<i>As is</i>	0.00	0.00	50	0.00	50	0.00
		<i>To be</i>	0.00	0.00	0.00	100	0.00	0.00
3	Operational SOPs undergo frequent reviews and updates to stay current with evolving procedures or technology.	<i>As is</i>	0.00	50	0.00	0.00	50	0.00
		<i>To be</i>	0.00	0.00	50	50	0.00	0.00
4	Procedures are in place to guarantee that employees follow operating SOPs.	<i>As is</i>	0.00	50	0.00	50	0.00	0.00
		<i>To be</i>	0.00	0.00	50	50	0.00	0.00
5	Operational method implementation is auditable and thoroughly documented.	<i>As is</i>	0.00	50	50	0.00	0.00	0.00
		<i>To be</i>	0.00	0.00	50	0.00	50	0.00
	Current Condition		0.00	40	20	10	30	0.00
	Expected Condition		0.00	0.00	30	60	10	0.00

Table 6 : Recapitulation Results DSS02.01

No	Activities	Status	Answer Distributions					
			0(%)	1(%)	2(%)	3(%)	4(%)	5(%)
1	Users can report incidents through a clear and convenient point of contact (such as a help desk or ticket site).	<i>As is</i>	0.00	0.00	0.00	50	0.00	50
		<i>To be</i>	0.00	0.00	0.00	0.00	0.00	100
2	The ticket management system has accurate records of every incident and service request..	<i>As is</i>	50	0.00	0.00	0.00	50	0.00
		<i>To be</i>	0.00	0.00	0.00	50	50	0.00
3	Users quickly receive confirmation of their report, either manually or automatically.	<i>As is</i>	0.00	0.00	0.00	100	0.00	0.00
		<i>To be</i>	0.00	0.00	0.00	100	0.00	0.00
4	The employees who get the report are knowledgeable enough to obtain pertinent preliminary data..	<i>As is</i>	0.00	0.00	50	50	0.00	0.00
		<i>To be</i>	0.00	0.00	0.00	100	0.00	0.00
5		<i>As is</i>	0.00	50	0.00	50	0.00	0.00

Established Service Level Agreements (SLAs) are followed in the initial reaction time to event reports.	<i>To be</i>	0.00	0.00	0.00	100	0.00	0.00
Current Condition		10	10	10	50	10	10
Expected Condition		0.00	0.00	0.00	70	10	20

Table 7 : Recapitulation Results DSS03.01

No	Activities	Status	Answer Distributions					
			0(%)	1(%)	2(%)	3(%)	4(%)	5(%)
1	Recurring issues or significant incidents that can point to underlying root causes can be found using a well-defined procedure.	<i>As is</i>	0.00	0.00	0.00	100	0.00	0.00
		<i>To be</i>	0.00	0.00	0.00	50	50	0.00
2	Incident data, such as historical incident data, is a useful source of information for identifying problems.	<i>As is</i>	0.00	0.00	0.00	50	50	0.00
		<i>To be</i>	0.00	0.00	0.00	50	50	0.00
3	Problems are categorized and ranked according to their frequency of occurrence and possible impact.	<i>As is</i>	0.00	0.00	50	50	0.00	0.00
		<i>To be</i>	0.00	0.00	0.00	50	50	0.00
4	The accountable group is capable of seeing possible issues.	<i>As is</i>	0.00	0.00	0.00	100	0.00	0.00
		<i>To be</i>	0.00	0.00	0.00	100	0.00	0.00
5	Potential issues that are brought to light by a variety of sources are noted and methodically examined.	<i>As is</i>	0.00	0.00	50	50	0.00	0.00
		<i>To be</i>	0.00	0.00	0.00	100	0.00	0.00
	Current Condition		0.00	0.00	20	70	10	0.00
	Expected Condition		0.00	0.00	0.00	70	30	0.00

4.4. Process Attribute Level

At this point, the researcher will use the assessment method described in Point 3.3.1 to provide suitable ratings for each sub-process. The researcher determines the resulting scores and skill levels for the variance analysis in the following section based on the results of the questionnaire computations in the previous step.

Table 8 : Overall Capability Level DSSXX.01

No	Sub Proses	Nilai Kapabilitas		Nilai Kematangan	
		<i>As is</i>	<i>To be</i>	<i>As is</i>	<i>To be</i>
1	DSS01.01	2.3	2.8	2	3
2	DSS02.01	2.7	3.5	3	4
3	DSS03.01	2.9	3.3	3	3
	Sub Total	2.6	3.2	3	3

4.5. Reporting The Result and GAP Analysis

The management team of PT Indonesia Gadai Oke estimated the current findings based on survey data that was given to several respondents. The evaluators used the COBIT 5 evaluation scale to verify achievement at different levels.

The maturity level of process management for customer contacts, technical support, and service delivery at PT. Indonesia Gadai Oke is referred to in this study as the Capability Level of the Deliver, Service, and Support (DSS) domain of COBIT 5. The COBIT 5 Process Assessment Model (PAM), which evaluates how successfully these processes are designed, carried out, managed, measured, and optimized to meet corporate goals, will serve as the foundation for this evaluation.

Table 9 : GAP Analysis

Domain Sub-Process	Maturity Level		
	Expected Capability Level	Current Capability Level	GAP
DSS01.01	3	2	1
DSS02.01	3	4	1
DSS03.01	3	3	0
	Average Pts.		0.6

As it shown, two of the three DSS domain sub-processes examined in this study displayed a one-point difference, and one sub-process showed no change at all. The evaluation's findings suggest that the DSS sub-process domain has a minor gap. This suggests that PT. Indonesia Gadai Oke's operational information technology management still has some work to do in order to fulfill the company's requirements in every DSS area that was assessed.

5. Conclusion

According to the study's findings, PT. Indonesia Gadai Oke's DSS (Deliver, Service, and Support) sub-process domain evaluation indicates a little weakness in operational IT governance. The results demonstrate that one sub-process did not change, while two of the three sub-processes that were analyzed exhibited a one-point difference. These findings suggest that in order to guarantee that all DSS functions fully satisfy business needs, the company's operational information technology management must make modifications and improvements. In each evaluated DSS sub-process area, these enhancements are essential for raising maturity and guaranteeing alignment between IT management procedures and the business's strategic objectives.

Increased supervision of the duties, responsibilities, and performance of every operational component is necessary to completely conform to standard operating procedures (SOPs) and associated paperwork. Even if operational procedures are already suitable, these measures are essential to guarantee that they are not only predictable but also reach the required degree of optimization.

6. Suggestions

Suggestions that can be given for further research as follows :

1. To enrich the findings of this research, future studies are encouraged to integrate organizational dimensions into the evaluation framework of the DSS Domain. This entails looking at internal elements such business process capabilities, IT governance policy compliance, and business-IT alignment. In the end, this expansion will give researchers a better understanding of the relationship between operational IT management and business performance by allowing them to discover important moderator and mediation variables.
2. Organizations are advised to maintain optimal system performance and guarantee thorough and timely maintenance of all IT assets, make proactive and frequent revisions and updates.

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