

# Information System Audit on Employee Claim Application System Using COBIT 5 Framework

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## Abstract

PT ABC President Indonesia is a manufacturing company engaged in consumer goods, producing instant noodle and beverages packaged in ready-to-drink bottles with green tea and milk tea as the main ingredients. Sales promotions tailored to customer needs are expected to help achieve the company's goal of obtaining the best profits. Sales promotions such as giving rewards or discounts to customers with applicable terms and conditions. In the business process, the company has implemented information systems, one of which is the employee claim application menu advance, a system used for submitting payment claims for reward purchases. In implementation, advance submission from the user department is connected to the accounting and treasury departments. However, there are still shortcomings in the submission input process because supporting documents are still sent manually outside the system. There are no definite provisions regarding the completeness of the required documents to expedite the advance submission process, and there is no report menu that can be generated from the system. Based on this, an information system audit of the employee claim application system is needed using the COBIT 5 framework as the compatible method. Based on the results of the research, the current capability process values are as follows: DSS01 at 3.53, which is at level 4; DSS02 at 3.58, which is at level 4; MEA01 at 3.76, which is at level 4; and MEA02 at 3.40, which is at level 3. Therefore, the researcher provides recommendations for the selected processes so that the vision, mission, and objectives can be achieved according to the expected capability levels.

**Keywords:** COBIT 5, Information System Audit, Capability level, Employee Claim Application, Advance

## 1. Introduction

Good IT governance ensures that technology is used effectively to achieve organizational goals, minimize risks, and maximize value. The COBIT 5 framework, developed by ISACA, is a useful tool for evaluating and improving IT governance. Focusing on the DSS (Deliver, Service, and Support) domain, COBIT 5 provides comprehensive guidance for evaluating IT service management processes [1][2]. In general, businesses utilize information technology to support every operational activity within the company to ensure optimal performance. Additionally, this is done to enable tasks to be completed quickly and efficiently, ultimately contributing to improved productivity and performance of employees within the organization. IT evaluation utilizes several standards for research, including the COBIT 5 framework, which is a comprehensive standard that helps organizations achieve their goals and deliver value through effective IT governance and management [3][4]. Fast Moving Consumer Goods (FMCG) companies produce daily essential items at affordable prices, such as snacks, beverages, cosmetics, and household goods. This sector has grown rapidly over the years, especially in Indonesia, where the large population presents a vast market opportunity. To remain competitive, businesses must have well-structured strategies to address challenges, identify opportunities, and enhance profitability. An audit is a process of objectively obtaining and evaluating evidence related to the assessment of various activities and economic events to ensure the level of conformity between the assessment and the established criteria, as well as to communicate the results to stakeholders involved in the company.

An audit involves gathering and evaluating evidence about information to determine and report the degree of alignment between the information and the established categories [5][6]. COBIT 5 has been widely used and offers advantages over other methods because the COBIT 5 framework has a broader scope and governance goals that greatly assist companies. Its comprehensive framework effectively helps in managing technology. The COBIT 5 framework provides detailed **control objectives** for each management aspect, highlighting various elements of IT governance such as human resources, expertise, competencies, services, infrastructure, and implementation for effective IT governance[7][8]. Marketing plays a vital role in connecting products with customers to meet their needs and desires. Effective strategies, such as offering rewards for sales targets, are often used to boost revenue. However, managing these processes requires robust information systems to ensure efficiency and accuracy. PT ABC President Indonesia, an FMCG company, uses multiple systems for handling purchase requisitions, orders, and employee claims related to reward procurement. Despite these systems, manual document submissions and incomplete data often hinder the workflow, delaying processes such as payments and monthly report closures. To address these issues, evaluating the existing information systems is essential. The COBIT 5 framework, a comprehensive standard for IT

governance and management, is suitable for this purpose. By focusing on specific domains like DSS and MEA, this study aims to audit the Employee Claim Application System, assess its capability level, and provide recommendations for improvement [9][10].

## 2. Research Method

### 1. Identification of Issues

At this stage, the researcher identifies the issues to be discussed as the research subject according to the research flow. Problem identification is carried out by analyzing the results of the questionnaire and supplemented by a Q&A session related to the process flow of the Employee Claim Application information system, specifically in the advance menu for submitting payment requests for reward purchases. After identifying the problems, several issues were found in the information system for submitting advance payments for reward purchases at PT ABC President Indonesia, which include the evaluation of the information technology system as follows:

- a) Lack of consistency in information regarding the required information and documents when inputting advances.
- b) Absence of a reminder button to notify approvers regarding the approval of submissions.
- c) Absence of an upload menu for documents, resulting in the manual submission of supporting documents to the accounting team for review.
- d) Absence of a reporting menu that can generate system reports in Microsoft Excel format as material for evaluating submissions.

This problem identification will serve as the foundation for further analysis and recommendations for improvements aimed at increasing the effectiveness and efficiency of the system.

### 2. Determining the Domain

Based on the theoretical study regarding the evaluation of information technology, in this research, the researcher uses the COBIT 5 framework with a focus on the following subdomains:

- a) DSS01 - Manage Operations: This subdomain focuses on the management of operational information systems, including monitoring and maintaining systems to ensure that information technology services operate effectively and efficiently.
- b) DSS02 - Manage Service Requests and Incidents: This subdomain includes the management of service requests and incidents, such as handling claims, user requests, and resolving issues related to information systems.
- c) MEA01 - Monitor, Evaluate, and Assess Performance and Conformance: This subdomain focuses on monitoring, evaluating, and assessing system performance and compliance with policies and procedures that have been established.
- d) MEA02 - Monitor, Evaluate, and Assess Compliance with External Requirements: This subdomain involves monitoring, evaluating, and assessing the compliance of information systems with external requirements such as applicable regulations and standards.

The use of these subdomains aims to evaluate and analyze the effectiveness, efficiency, and compliance of the Employee Claim Application information system at PT ABC President Indonesia.

### 3. Data Collection

- a) This research utilizes data obtained from questionnaires distributed to research samples at **PT ABC President Indonesia**, specifically in the sales department of the trade marketing division, to acquire information and data relevant to the needs. The questionnaire was distributed to respondents through the online platform **Google Forms**, while the researcher also conducted direct inquiries regarding on-site activities.
- b) The research focuses on four criteria: DSS01, DSS02, MEA01, and MEA02, with questions tailored to the framework, domain, and objectives of the information system audit conducted by the researcher. The evaluation uses a Likert scale, where each statement is rated from 1 (strongly disagree/SD) to 5 (strongly agree/SA). The questionnaire data were then processed using **Microsoft Excel** to calculate the average values.
- c) These average values reflect the audit process of the **Employee Claim Application** information system, particularly in the **advance menu** used for submitting payment claims for purchasing reward goods, which supports sales activities at PT ABC President Indonesia. The assessment is based on evaluations from each category as well as the respondents' perspectives on the subject matter.
- d) The list of questions used in the data collection method was designed based on an understanding of the subject being studied in this research. Some statements used in the questionnaire include the following:

**Table 1:** DSS01 Subdomain Questionnaire

Domain	DSS01 - Manage Operations
Subdomain	DSS01.01 - Perform Operational Procedures
Audit Objective	Perform operational procedures to ensure that operational activities run smoothly and efficiently.
	Questions
	During the system login process, are there any errors in user login data, and can they be resolved by restarting the system?
	Does the system require captcha confirmation during login?
	Does the user provide the required documents according to the system's requests?
	Can the user monitor the ongoing testing process?
Subdomain	DSS01.03 Monitor Infrastructure
Audit Objective:	Perform IT infrastructure monitoring to detect and address issues that may affect the continuity and quality of the system.
	Question
	Has the system provided information regarding the tracking of approval for advance requests?
	Does the system provide information if an advance request is not approved?
	Has the system presented all the information you need for continuous reporting?

	Do you feel assisted by the speed and accuracy of the system in the distribution of data and information?
	Has the system been reliable in validating the submission of payments for the same reward purchase?

**Table 2: DSS02 Subdomain Questionnaire**

<b>Domain</b>	<b>DSS02 Manage Service Requests and Incidents</b>
<b>Subdomain</b>	<b>DSS02.02 Register and Classify Service Requests and Incidents</b>
<b>Audit Objective</b>	To record and classify operational requests correctly to enable effective and efficient handling.
	<b>Questions</b>
	Does the system record and classify all advance requests for reward purchases correctly?
	Does the system provide notifications or clear information if an advance request is not approved?
<b>Subdomain</b>	<b>DSS02.03 Resolve and Recover from Incident</b>
<b>Audit Objective:</b>	Ensure that system issues are handled quickly and efficiently to minimize negative impacts on business operations.
	<b>Question</b>
	Does the system handle and resolve incidents quickly and efficiently?
	Is the system able to resolve issues promptly and accurately to reduce the negative impact on business operations?
	Is the system effective in handling and recovering from incidents that occur?
<b>Subdomain</b>	<b>DSS02.07 Track Status and Produce Reports</b>
<b>Audit Objective:</b>	Ensure that the status of requests and issues is systematically monitored.
	<b>Question</b>
	Does the system provide tracking features that allow users to view the history of advance request statuses?
	Does the system effectively monitor the status of requests and produce reports that help improve the efficiency of the request and approval process?

**Table 3: MEA01 Subdomain Questionnaire**

<b>Domain</b>	<b>MEA01 Monitor, Evaluate, and Assess Performance and Conformance</b>
<b>Subdomain</b>	<b>MEA01.01 Establish a Monitoring Approach</b>
<b>Audit Objective</b>	Monitor system performance and evaluate it against applicable policies, procedures, and regulations.
	<b>Questions</b>
	Does the system provide an automated reporting mechanism for disruptions or issues encountered?
	Does the system provide a feature for reporting issues directly to IT staff via the application?
	Is the system equipped with an active real-time security monitoring feature to detect threats or violations?
<b>Subdomain</b>	<b>MEA01.02 Monitor, Measure, and Report Performance</b>
<b>Audit Objective:</b>	Ensure the relevance of data reported to stakeholders to support decision-making.
	<b>Question</b>
	Does the IT team send communications or updates to all users regarding steps to prevent recurring issues?
	Does the IT team provide early notifications to users if there are indications of issues that could affect the system?
<b>Subdomain</b>	<b>MEA01.04 Review the Performance and Conformance of Objectives and Processes</b>
<b>Audit Objective:</b>	Ensure the system supports business objectives effectively and complies with applicable policies and regulations.
	<b>Question</b>
	Does the IT team routinely inform users about policies prohibiting the installation of unauthorized software on company devices?
	Does the system record and store logs of security-related activities and enable analysis for real-time monitoring?

**Table 4: MEA02 Subdomain Questionnaire**

<b>Domain</b>	<b>MEA02 Monitor, Evaluate, and Assess the System of Internal Control</b>
<b>Subdomain</b>	<b>MEA02.01 Monitor and Review the Internal Control Environment</b>
<b>Audit Objective</b>	Evaluate internal controls to ensure the system's effectiveness in supporting business objectives and managing risks appropriately.
	<b>Questions</b>
	Does the system provide a help request section in case of disruptions/issues?
	Has the system improved efficiency and accuracy in managing funds and rewards in your department?
	Does the system have strong data backup capabilities?
<b>Subdomain</b>	<b>MEA02.03 Ensure Regulatory Compliance</b>
<b>Audit Objective:</b>	Ensure compliance with applicable laws and regulations, including policies, procedures, and operational practices.
	<b>Question</b>

	Does the login menu include Captcha confirmation?
	Does the system provide an effective search feature to find information required in accordance with applicable regulations and policies?
	Does the system provide accurate and precise information according to user needs?

This study uses the saturated sampling method, also known as total sampling. This method is applied because the population size of respondents is less than 100 people, allowing the entire population to be used as a sample. Thus, all members of the population can provide comprehensive and accurate data. The use of total sampling ensures that the information obtained covers the full spectrum of perspectives and experiences of each member of the population, so the research results can reflect the actual conditions. The sample in this study consists of the following categories: managers, specialists, supervisors, staff, and non-staff.

### 3. Result and Discussion

The audit of the Employee Claim Application system at PT ABC President Indonesia was conducted using the COBIT 5 framework, focusing on the DSS (Deliver, Service, and Support) and MEA (Monitor, Evaluate, and Assess) domains. The findings and analysis are presented as follows:

#### 3.1. Information System Audit Analysis and Design

At this stage, the process is carried out to obtain the capability level assessment results of the previously defined processes. This involves collecting data through questionnaires formulated and developed based on the COBIT 5 standards, focusing on DSS and MEA processes.

The questionnaires used in this stage utilize a Likert scale. For DSS and MEA processes, the following key governance practices were analyzed:

1. DSS01 (Manage Operation)
2. DSS02 (Manage Service Requests and Incidents)
3. MEA01 (Monitor, Evaluate, and Assess Performance and Conformance)
4. MEA02 (Monitor, Evaluate, and Assess the System of Internal Control)

Before discussing the design and analysis, the following is an overview of the Employee Claim Application information system on the Advance menu for submitting payment claims for reward purchases, as used by the Sales Department at PT ABC President Indonesia.

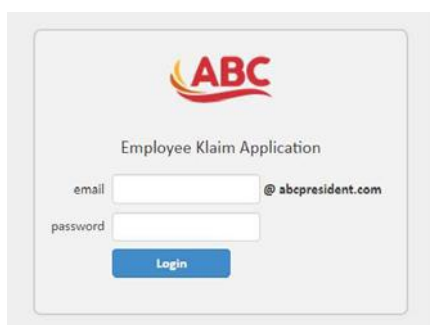


Fig. 1: Login Page View of PT ABC President Indonesia (2024)

In Figure IV.I, the login screen of the Employee Claim Application system is displayed. Users can input their email and password correctly and completely to access the system and submit advance requests for reward purchase payments. If there is a mismatch between the email and password, the system will issue a warning indicating an error in the input data. This warning will appear as shown in the image below.

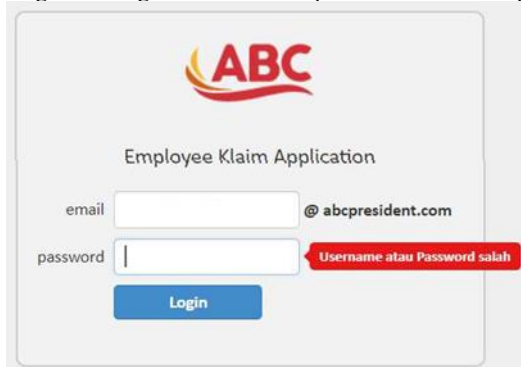


Fig. 2: Warning display when username and password are incorrect

In Figure IV.3, the advance request page within the system is shown. This page displays information about the registered system user and their immediate supervisor, who acts as the approver. Users can select the appropriate currency based on the payment request requirements. They are required to fill in the request details in the available fields, including the description of the need, the required amount, and the due

date for payment to the vendor. Once all the information is entered, the user must click the "Done" button to process the advance request for approval. The system also displays information regarding the approval request status.

Fig. 3: Advance Submission Page View

In Figure IV.4, the advance submission approval rules are shown, which involve several parties: first, the submission from the user is sent to the department head for approval. After that, the submission will be reviewed by the accounting and treasury departments, which are responsible for transferring funds to the selected vendor. This bar chart also shows the date and time information related to the submission position, providing an indication of the approval status and waiting for action from each PIC. This information aims to help users in checking and following up on the status of their submission.

History	No.	Tgl / Jam	User	Aktifitas	Status Advance
	1.	7 Mar 2024, 14:13		Membuat advance baru	Draft
	2.	7 Mar 2024, 14:13		Permintaan Approval by system via email kepada	Waiting for Approval
	3.	7 Mar 2024, 14:21		Approve Advance	Approved
	4.	2 Apr 2024, 10:23	Accounting	Mengupdate tgl terima menjadi: 02-04-2024	Accounting Received
	5.	2 Apr 2024, 10:23	Accounting	Mengupdate status advance menjadi: Accounting Approve	Accounting Approve
	6.	2 Apr 2024, 12:35	Treasury	Mengupdate tgl terima menjadi: 02-04-2024	Advance Received
	7.	2 Apr 2024, 12:35	Treasury	Mengupdate tgl pembayaran menjadi: 02-04-2024	Paid

Fig. 4: Advance Submission Approval History Display

Figure IV.5. shows the approved advance submission form. This form is used as an attachment in the advance submission to the accounting department for review and further processing. After approval, the form is sent manually by the user to the accounting department along with other supporting documents. After the accounting department receives and processes the form, the submission is forwarded to the treasury team to process the payment.

Fig. 5: Approved Advance Application Form View

### 3.2. Process Summary

The data obtained from questionnaires distributed to 15 respondents were processed through several steps. First, the collected questionnaire results were analyzed using Microsoft Excel to calculate average scores and determine the scores for each question. Subsequently, the data underwent validation to ensure its accuracy and consistency with the evaluation objectives. The scores were then analyzed to assess the

maturity level of processes based on the COBIT 5 framework, with a particular focus on the DSS and MEA domains. This analysis included calculating maturity indices and identifying gaps between actual and expected performance. Finally, the findings were interpreted to identify areas requiring improvement and to provide recommendations for enhancing the information system.

**Table 5: Questionnaire Recapitulation**

No. Item	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15	Total
P1	3	4	4	5	4	4	4	4	2	2	1	2	1	5	2	47
P2	3	3	5	4	5	5	1	1	1	2	1	1	1	5	2	40
P3	4	5	5	5	4	5	5	4	4	2	1	2	1	4	2	53
P4	4	5	5	5	4	5	5	4	5	4	3	4	4	4	4	65
P5	4	5	3	3	3	4	1	2	2	2	2	1	1	4	2	39
P6	5	5	4	5	3	4	5	4	2	3	3	4	3	4	3	57
P7	4	5	3	5	5	5	5	4	4	4	3	4	4	5	4	64
P8	4	5	4	4	4	4	1	3	4	3	2	2	3	2	2	47
P9	4	5	4	5	4	4	5	5	3	2	1	1	1	5	2	51
P10	5	4	4	5	3	5	5	4	4	3	3	3	3	4	3	58
P11	4	4	3	5	4	4	5	4	5	2	3	2	3	4	3	55
P12	4	4	3	5	4	4	3	4	5	2	3	3	3	4	3	54
P13	4	4	4	5	5	4	5	4	4	1	3	2	3	4	3	55
P14	4	4	4	5	4	4	5	4	4	3	3	2	3	4	3	56
P15	4	4	4	4	4	4	4	3	2	2	3	2	2	4	3	49
P16	3	3	5	5	5	4	1	2	3	2	2	2	3	4	2	46
P17	4	3	5	5	4	5	3	3	5	2	3	2	3	4	3	54
P18	4	4	4	5	4	5	4	4	4	2	3	4	3	4	3	57
P19	4	4	4	5	5	5	4	4	5	3	4	4	4	4	4	63
P20	5	5	5	5	5	5	5	4	5	5	4	3	5	5	4	70
P21	4	4	5	5	4	4	3	4	4	3	3	3	3	4	3	56
P22	4	5	4	5	4	5	3	3	4	3	3	3	3	4	3	56
Total	88	94	91	105	91	98	82	78	81	57	57	56	60	91	63	

The validity test was conducted using questionnaire data collected from 15 respondents. The steps included determining the significance level, where a 5% significance level was used, resulting in an r-table value of 0.514 (based on the statistical r-distribution table).

The validity criteria stated that data is considered valid if the r-calculated (correlation between item scores and total scores) exceeds 0.514. The testing process involved calculating the r-calculated for each questionnaire item using Pearson correlation, comparing the r-calculated values to the r-table value (0.514), and determining validity. Items with r-calculated > 0.514 were declared valid. This calculation was repeated for all questionnaire items.

**Table 6: Validity Test Results**

No. Item	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15	r-table	r-hitung	Keterangan
P1	3	4	4		4	4	4	4	2	2		2			2	0,871	0,514	VALID
P2	3	3	5	4						2					2	0,738	0,514	VALID
P3	4		5		4			4	4	2		2		4	2	0,919	0,514	VALID
P4	4	5	5		4			4		4	3	4	4	4	4	0,670	0,514	VALID
P5	4	5	3	3	3	4		2	2	2	2	1	1	4	2	0,723	0,514	VALID
P6	5		4		3	4		4	2	3	3	4	3	4	3	0,534	0,514	VALID
P7	4	5	3					4	4	4	3	4	4		4	0,579	0,514	VALID
P8	4		4	4	4	4		3	4	3	2	2	3	2	2	0,578	0,514	VALID
P9	4	5	4	5	4	4	5	5	3	2					2	0,873	0,514	VALID
P10	5	4	4	5	3			4	4	3	3	3	3	4	3	0,759	0,514	VALID
P11	4	4	3		4	4	5	4		2	3	2	3	4	3	0,738	0,514	VALID
P12	4	4	3		4	4	3	4		2	3	3	3	4	3	0,723	0,514	VALID
P13	4	4	4			4		4	4		3	2	3	4	3	0,817	0,514	VALID
P14	4	4	4	5	4	4		4	4	3	3	2	3	4	3	0,835	0,514	VALID
P15	4	4	4	4	4	4	4	3	2	2	3	2	2	4	3	0,814	0,514	VALID
P16	3	3				4	1	2	3	2	2	2	3	4	2	0,697	0,514	VALID
P17	4	3	5	5	4		3	3		2	3	2	3	4	3	0,778	0,514	VALID
P18	4	4	4		4		4	4	4	2	3	4	3	4	3	0,814	0,514	VALID
P19	4	4	4	5			4	4		3	4	4	4	4	4	0,608	0,514	VALID
P20	5	5	5	5	5	5	5	4			4	3	5	5	4	0,606	0,514	VALID
P21	4	4			4	4	3	4	4	3	3	3	3	4	3	0,845	0,514	VALID
P22	4	5	4		4		3	3	4	3	3	3	3	4	3	0,867	0,514	VALID
Total	88	94	91	105	91	98	82	78	81	57	57	56	60	91	63			

The reliability test in this study employed the Cronbach's Alpha coefficient method. This coefficient evaluates the consistency of items within the questionnaire to determine whether the items correlate with one another in measuring the same construct.

The decision-making criteria using Cronbach's Alpha are as follows:

- If the Cronbach's Alpha value is greater than 0.70, the questionnaire data is considered reliable.
- If the Cronbach's Alpha value is less than 0.70, the questionnaire data is considered unreliable.

The Cronbach's Alpha calculation result was 1.03. Since this value exceeds the threshold of 0.70, it can be concluded that the questionnaire data is reliable.

**Table 7: Reliability Test Results**

No. Item	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15	Jumlah Varian
P1	3	4	4	5	4	4	4	4	2	2	1	2	1	5	2	1.838
P2	3	3	5	4	5	5	1	1	1	2	1	1	1	5	2	2.952
P3	4	5	5	5	4	5	5	4	4	2	1	2	1	4	2	2.267
P4	4	5	5	5	4	5	5	4	5	4	3	4	4	4	4	0,381
P5	4	5	3	3	3	4	1	2	2	2	2	1	1	4	2	1.543
P6	5	5	4	5	3	4	5	4	2	3	3	4	3	4	3	0,886
P7	4	5	3	5	5	5	5	4	4	4	3	4	4	5	4	0,495
P8	4	5	4	4	4	4	1	3	4	3	2	2	3	2	2	1.267
P9	4	5	4	5	4	4	5	5	3	2	1	1	1	5	2	2.543
P10	5	4	4	5	3	5	5	4	4	3	3	3	3	4	3	0,695
P11	4	4	3	5	4	4	5	4	5	2	3	2	3	4	3	0,952
P12	4	4	3	5	4	4	3	4	5	2	3	3	3	4	3	0,686
P13	4	4	4	5	5	4	5	4	4	1	3	2	3	4	3	1.238
P14	4	4	4	5	4	4	5	4	4	3	3	2	3	4	3	0,638
P15	4	4	4	4	4	4	4	3	2	2	3	2	2	4	3	0,781
P16	3	3	5	5	5	4	1	2	3	2	2	2	3	4	2	1.638
P17	4	3	5	5	4	5	3	3	5	2	3	2	3	4	3	1.114
P18	4	4	4	5	4	5	4	4	4	2	3	4	3	4	3	0,600
P19	4	4	4	5	5	5	4	4	5	3	4	4	4	4	4	0,314
P20	5	5	5	5	5	5	5	4	5	5	4	3	5	5	4	0,381
P21	4	4	5	5	4	4	3	4	4	3	3	3	3	4	3	0,495
P22	4	5	4	5	4	5	3	3	4	3	3	3	3	4	3	0,638
Total	88	94	91	105	91	98	82	78	81	57	57	56	60	91	63	24.343
<b>Varian Total</b>	<b>1,192</b>															

Based on the questionnaire data in Table 7, the variance sum is 24.34, and the total variance is 1.136. Then, Cronbach's Alpha is calculated as follows:

$$\begin{aligned}\alpha &= 22/21 \times (1 - 24.34 : 1.136) \\ &= 22/21 \times (1 - 0.0214) \\ &= 22/21 \times 0.9786 \\ &= 1.03\end{aligned}$$

The result of the Cronbach's Alpha calculation is 1.03. Since this value exceeds the reference value of 0.70, it can be concluded that the questionnaire data is reliable.

In the analysis, several models in COBIT 5 were used, which function to determine the maturity scale of COBIT. This maturity scale consists of 6 levels with details as presented in Table 8.

**Table 8: Index Rounding Scale**

No	Range of Values	Maturity Value	Capability Level	Capability Value
1	0.00 - 0.50	Non-Existent	Level 0	Incomplete Process
2	0.51 - 1.50	Initial/Ad Hoc	Level 1	Performed Process
3	1.51 - 2.50	Repeatable but Intuitive	Level 2	Managed Process
4	2.51 - 3.50	Defined	Level 3	Established Process
5	3.51 - 4.50	Managed and Measurable	Level 4	Predictable Process
6	4.51 - 5.00	Optimized	Level 5	Optimizing Process

Based on the results of the maturity level calculations, the achievement scale can then be determined. This achievement scale has four levels, as detailed in the following table:

**Table 9: Achievement Scale**

Notation	Description	% Achievement
N	Not Achieved	0-15%
P	Partially Achieved	>15% up to 50%
L	Largely Achieved	>50% up to 85%
F	Fully Achieved	>85% up to 100%

In this context, the researcher conducted several analyses to obtain results and findings regarding the use of the Employee Claim Application system, specifically in the Advance Submission menu for Reward Item Payments.

### 3.3. Analysis of Findings

#### 1) Questionnaire Calculation for DSS01 Domain

The process of questionnaire analysis in the DSS01 domain involves the following steps:

- Identifying Issues:** Preparing and identifying the issues that arise based on the respondents' answers to the questionnaire.
- Classifying Issues and Causes:** Grouping the identified issues and determining their underlying causes.
- Providing Solutions:** Proposing appropriate solutions to prevent similar incidents in the future.

**Table 10:** Results of Questionnaire Calculation for DSS01 Domain

Subdomain	Respondents	Index	Maturity Level
DSS01.01	3 4 4 5 4 4 4 4 2 2 1 2 1 5 2	3.13	3.42
DSS01.01	3 3 5 4 5 5 1 1 1 2 1 1 1 5 2 2	2.67	
DSS01.01	4 5 5 5 5 5 4 4 2 1 2 1 1 4 2 3	3.53	
DSS01.01	4 5 5 5 4 5 5 4 5 4 5 4 4 4 4 4	4.33	
DSS01.03	4 5 3 5 5 5 5 4 4 4 3 4 4 4 4 3	4.27	3.64
DSS01.03	4 4 5 4 4 4 5 5 3 2 1 1 1 5 2 3	3.40	
DSS01.03	4 4 3 5 4 4 5 4 5 2 3 2 2 3 3 3	3.67	
DSS01.03	4 4 3 5 4 4 4 3 4 5 2 3 3 3 3 3	3.60	
DSS01.03	4 4 4 4 4 4 4 4 3 2 2 3 2 2 3	3.27	

From Table 10, the maturity level for subdomain DSS01.01 is determined to be 3.42, while for subdomain DSS01.03, it is 3.64.

#### 2) Questionnaire Calculation for DSS02 Domain

The process of questionnaire analysis in the DSS02 domain involves the following steps:

- Identifying Issues:** Preparing and identifying the issues that arise based on the respondents' answers to the questionnaire.
- Classifying Issues and Causes:** Grouping the identified issues and determining their underlying causes.
- Providing Solutions:** Proposing appropriate solutions to prevent similar incidents in the future.

**Table 11:** Results of Questionnaire Calculation for DSS02 Domain

Subdomain	Responden															Index	Maturity Level
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		
DSS02.02	4	5	4	4	4	4	1	3	4	3	2	2	3	2	2	3,13	3,27
DSS02.02	4	5	4	5	4	4	5	5	3	2	1	1	1	5	2	3,40	
DSS02.03	4	4	3	5	4	4	5	4	5	2	3	2	3	4	3	3,67	3,51
DSS02.03	4	4	3	5	4	4	3	4	5	2	3	3	3	4	3	3,60	
DSS02.03	4	4	4	4	4	4	4	3	2	2	3	2	2	4	3	3,27	
DSS02.07	4	5	3	5	5	5	5	4	4	4	3	4	4	5	4	4,27	3,97
DSS02.07	4	4	4	5	5	4	5	4	4	1	3	2	3	4	3	3,67	

From Table 11, the maturity level scores obtained are **3.27** for subdomain DSS02.02, **3.51** for subdomain DSS02.03, and **3.97** for subdomain DSS02.07.

#### 3) Questionnaire Calculation Results in Domain MEA01

The process of analyzing the questionnaire in domain MEA01 involves the following steps:

- Identifying Problems:** Compiling and identifying issues that arise based on respondents' answers to the questionnaire.
- Classifying Problems and Their Causes:** Grouping identified issues and determining their root causes.
- Providing Solutions:** Proposing solutions to prevent similar incidents from occurring in the future.

**Table 12:** Results of Calculation Results in Domain MEA01

Subdomain	Responden															Index	Maturity Level
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		
MEA01.01	4	5	3	3	3	4	1	2	2	2	2	1	1	4	2	2,60	3,09
MEA01.01	3	3	5	5	5	4	1	2	3	2	2	2	3	4	2	3,07	
MEA01.01	4	3	5	5	4	5	3	3	5	2	3	2	3	4	3	3,60	
MEA01.02	4	4	4	5	4	5	4	4	4	2	3	4	3	4	3	3,80	4,00
MEA01.02	4	4	4	5	5	5	4	4	5	3	4	4	4	4	4	4,20	
MEA01.04	5	5	5	5	5	5	5	4	5	5	4	3	5	5	4	4,67	4,20
MEA01.04	4	4	5	5	4	4	3	4	4	3	3	3	3	4	3	3,73	

From Table 12, the maturity level values obtained for subdomain MEA01.01 is 3.09, for subdomain MEA01.02 is 4.00, and for subdomain MEA01.04 is 4.20.

#### 4) Questionnaire Analysis Results in Domain MEA02

The process of analyzing questionnaires in domain MEA02 involves the following steps:

- a) **Identifying Problems:** Compiling and identifying problems that arise based on respondents' answers in the questionnaire.
- b) **Classifying Problems and Their Causes:** Grouping the identified problems and determining their root causes.
- c) **Providing Solutions:** Proposing solutions to prevent similar incidents from occurring in the future.

**Table 13:** Results of Questionnaire Analysis Results in Domain MEA02

Subdomain	Responden															Index	Maturity Level
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		
MEA02.01	4	5	3	3	3	4	1	2	2	2	2	1	1	4	2	2,60	3,36
MEA02.01	4	4	4	5	4	4	5	4	4	3	3	2	3	4	3	3,73	
MEA02.01	4	5	4	5	4	5	3	3	4	3	3	3	3	4	3	3,73	
MEA02.03	3	3	5	4	5	5	1	1	1	2	1	1	1	5	2	2,67	3,44
MEA02.03	5	5	4	5	3	4	5	4	2	3	3	4	3	4	3	3,80	
MEA02.03	5	4	4	5	3	5	5	4	4	3	3	3	3	4	3	3,87	

From Table 13, the maturity level values obtained for subdomain MEA02.01 is 3.36 and for subdomain MEA02.03 is 3.44.

##### 5) Recapitulation of Calculation Results for Domains DSS01, DSS03, MEA01 & MEA02

The measurement of questionnaire results is conducted by calculating the average score for each category. The objective is to gather information on the extent to which the company implements and considers the following aspects:

- a) Risk Management in Information (DSS01)
- b) Request and Service Management (DSS02)
- c) Monitoring, Evaluation, and Assessment of Evaluation (MEA01)
- d) Monitoring and Internal Evaluation (MEA02)

**Table 14:** Recapitulation of Calculation Results for Domains DSS01, DSS03, MEA01 & MEA02

Subdomain	Maturity Level	Capability Level	Rata-Rata Nilai Kapabilitas
DSS01.01	3,42	3,53	3,57
DSS01.03	3,64		
DSS02.02	3,27	3,58	
DSS02.03	3,51		
DSS02.07	3,97		
MEA01.01	3,09	3,76	
MEA01.02	4,00		
MEA01.04	4,20		
MEA02.01	3,36	3,40	
MEA02.03	3,44		

Based on Table 14, the recapitulation of questionnaire calculations shows an average capability score of 3.57. The company is considered in a stable phase with an improvement margin of 5%. The target capability is obtained by adding the average capability score with the improvement margin. The detailed calculation is as follows:

Average Capability Score = 3.57

Improvement Margin (5%) =  $3.57 \times 5\% = 0.18$

Capability Target =  $3.57 + 0.18 = 3.75$

Based on the calculation, the capability target value is 3.75. After rounding, the target value is set to 4.

**Table 15:** Recapitulation of Questionnaire Results Based on Domain, Target, and Capability Level Achievement

No	Subdomain	Maturity Level	Capability Target	GAP	Achievement Percentage	Maturity Value	Achievement Value
1	DSS01	3.53	4	0.47	88%	Predictable Process	Full Achieved
2	DSS02	3.58	4	0.42	90%	Predictable Process	Full Achieved
3	MEA01	3.76	4	0.24	94%	Predictable Process	Full Achieved
4	MEA02	3.40	4	0.60	85%	Established Process	Large Achievement

The table above presents the capability calculation results for each subdomain, including the current maturity score, capability target, GAP (the difference between the maturity score and the target), and achievement percentage. The table also shows the maturity and achievement levels based on the calculation results. Explanation:

1. Maturity Level: The current maturity value for each subdomain.
2. Capability Target: The capability target expected for each subdomain.
3. GAP: The difference between the current maturity value and the capability target.
4. Achievement Percentage: The percentage of the capability target that has been achieved.
5. Maturity Value: The process category based on the achieved maturity level.
6. Achievement Value: The category of target capability achievement.

Table IV.11 provides an overview of how close the current maturity value is to the expected target and how these achievements are assessed in the context of the established processes. The distribution of current capabilities compared to the expected capabilities is as follows:



Fig. 6: Comparison Chart Current Capabilities and Expected Capabilities

Based on the results of the information system audit on the use of the Employee Claim Application information system, specifically in the *Advance Payment Submission for Reward Item Purchases* menu at PT ABC President Indonesia, using COBIT 5.0, the following results were obtained:

1. **Domain DSS01:** Capability level score of 3.53 with an unmet GAP of 0.47.
2. **Domain DSS02:** Capability level score of 3.58 with a GAP of 0.42.
3. **Domain MEA01:** Capability level score of 3.76 with a GAP of 0.24.
4. **Domain MEA02:** Capability level score of 3.40 with a GAP of 0.60.

### 3.4. Analysis of Findings and Recommendations

#### 1. Analysis of Domain DSS01

In the DSS01 domain, the analysis results indicate the following:

- 1) **Subdomain DSS01.01 (Implementation of Operational Procedures):**
  - a. Maturity index score: 3.42
  - b. Achievement GAP: 0.58
  - c. Analysis: This maturity score indicates deficiencies in the implementation of operational procedures. Although these deficiencies are quite significant, the achievement is still considered adequate.
- 2) **Subdomain DSS01.03 (Storage and Management of Operational Information):**
  - a. Maturity index score: 3.64
  - b. Achievement GAP: 0.36
  - c. Analysis: This score indicates minor deficiencies in the governance of operational information storage and management.

Overall, in the DSS01 domain, the achieved capability level is 3.53, with a capability target of 4. This results in a GAP of 0.47. The percentage of achievement is 88%, with a shortfall of 12%. This level of achievement falls within the 85%–100% range, indicating a rating of F (Full Achieved).

#### 2. Analysis of Domain DSS02

In the DSS02 domain, the analysis results indicate the following:

- 1) **Subdomain DSS02.02 (Recording, Classification & Prioritization of Requests):**
  - a. Maturity index score: 3.27
  - b. Achievement GAP: 0.73
  - c. Analysis: This score indicates deficiencies in the recording, classification, and prioritization of requests. Despite these deficiencies, the achievement is still considered adequate.
- 2) **Subdomain DSS02.03 (Verification, Approval, and Fulfillment of Requests):**
  - a. Maturity index score: 3.51
  - b. Achievement GAP: 0.49
  - c. Analysis: This score indicates deficiencies in the governance of request verification, approval, and fulfillment, although these deficiencies are relatively minor.
- 3) **Subdomain DSS02.07 (Status Tracking and Procedure Reporting):**
  - a. Maturity index score: 3.97
  - b. Achievement GAP: 0.03
  - c. Analysis: This score indicates that the governance of status tracking and procedure reporting has almost reached the target expected by the company.

Overall, in the DSS02 domain, the achieved capability level is 3.58, with a capability target of 4. This results in a GAP of 0.42. The percentage of achievement is 90%, with a shortfall of 10%. This level of achievement falls within the 85%–100% range, indicating a rating of F (Full Achieved).

#### 3. Analysis of Domain DSS02 MEA01

In the MEA01 domain, the analysis results indicate the following:

- 1) **Subdomain MEA01.01 (Monitoring and Evaluation of Information Systems to Achieve Business Goals)**
  - a. Maturity index score: 3.09
  - b. Achievement GAP: 0.91
  - c. Analysis: This score indicates a significant deficiency in system monitoring and evaluation. The performance in this subdomain is the lowest compared to other subdomains, requiring special attention.
- 2) **Subdomain MEA01.02 (Verification, Approval, and Fulfillment of Requests)**
  - a. Maturity index score: 4.00

- b. Achievement GAP: 0.00
- c. Analysis: This score indicates that the governance of verification, approval, and request fulfillment has been fully achieved according to the target.
- 3) **Subdomain MEA01.04 (Management and Supervision of Governance Assurance)**
  - a. Maturity index score: 4.20
  - b. Achievement GAP: 0.00
  - c. Analysis: This score exceeds the desired target, indicating that the management and supervision of governance assurance are at an excellent level. This subdomain has the highest maturity score among all subdomains.

Overall, in the MEA01 domain, the capability level achieved is 3.76 against a target capability of 4. Thus, there is a shortfall of 0.24. The percentage of achievement is 94%, with a deficiency of 6%. The overall performance falls within the 85%-100% range, indicating a rating of F (Full Achieved).

#### 4. Analysis of Domain DSS02 MEA02

In the MEA02 domain, the analysis results indicate the following:

- 1) **Subdomain MEA02.01 (Asset Protection, Information Integrity, and System Security Maintenance)**
  - a. Maturity index score: 3.36
  - b. Achievement GAP: 0.64
  - c. Analysis: This score indicates a significant deficiency in the monitoring, evaluation, and control of internal systems.
- 2) **Subdomain MEA02.03 (Asset Protection, Information Accuracy, and Regulatory Compliance)**
  - a. Maturity index score: 3.44
  - b. Achievement GAP: 0.56
  - c. Analysis: This score indicates a deficiency in the governance of asset protection, information accuracy, and regulatory compliance.

Overall, in the MEA02 domain, the achieved capability level is 3.40 against a target capability of 4. Thus, there is a shortfall of 0.60. The percentage of achievement is 85%, with a deficiency of 15%. The overall performance falls within the 50%-85% range, indicating a rating of L (Largely Achieved).

## 4. Conclusion

Through an information system audit using the COBIT 5 framework, particularly in the DSS (Deliver, Service, and Support) and MEA (Monitor, Evaluate, and Assess) domains at PT ABC President Indonesia for the Employee Claim Application Menu Advance system, the following results and implications were identified:

1. Assessment of Maturity and Capability Levels:
  - a. DSS01: The current capability score is 3.53 with a GAP of 0.47 and an achievement rate of 88%, indicating that the current process is at Level 4 (Predictable Process) but still has room for improvement.
  - b. DSS02: The current capability score is 3.58 with a GAP of 0.42 and an achievement rate of 90%, showing good performance at Level 4 (Predictable Process) with some areas requiring improvement.
  - c. MEA01: The current capability score is 3.76 with a GAP of 0.24 and an achievement rate of 94%, indicating that the system is nearing Level 4 (Predictable Process) and only requires minor improvements.
  - d. MEA02: The current capability score is 3.40 with a GAP of 0.60 and an achievement rate of 85%, showing that the process is at Level 3 (Established Process) and requires significant improvement to reach Level 4 (Predictable Process).
2. Implications:
 

This audit is expected to provide a strong foundation for future process improvement considerations. By understanding the current capability position and existing GAPs, the company can plan and implement focused improvement steps to enhance the efficiency and effectiveness of its information systems.
3. Recommendations:
 

Based on the audit results, it is recommended to focus on areas with the largest GAPs and carry out the necessary improvements to achieve the desired capability level. This includes implementing better policies, improving existing procedures, and ensuring that all processes effectively support business objectives.

By adopting this approach, the information system is expected to be optimized to support sustainable business growth and enhance IT governance at PT ABC President Indonesia.

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