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Evaluating IT Governance Capability in Managing Operational Contracts under PSAK 72: A Case Study of PT. XYZ's Government Service Division

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Abstract

This research explores the evaluation of IT governance capability in managing operational contracts under PSAK 72 within PT. XYZ's Government Service Division (DGS). The study adopts the COBIT 2019 framework and the Gallegos method, focusing on three selected domains: EDM03, APO14, and DSS06. Interviews and questionnaires were used to assess current capability levels and identify areas for improvement. Results indicate that EDM03 and APO14 currently stand at level 2, while DSS06 is at level 4, falling short of their respective targets. Operational challenges in the LGS segment, such as missing contract data, affect PSAK 72 compliance and employee incentives. The study proposes recommendations to enhance documentation practices and IT risk evaluation. The usage of COBIT 2019's design factors provides a clearer focus on problem areas, making implementation more straightforward compared to COBIT 5. Addressing these challenges will optimize IT usage and ensure adherence to PSAK 72 requirements.

Keywords: *COBIT 2019, Gallegos Method, Operational Contracts*

1 Introduction

Currently, most companies and organizations across various sectors, including trade, government, and industry, heavily rely on the implementation of Information Technology (IT) to run their businesses efficiently. IT not only supports business processes but also serves as a primary source of competitive advantage [1]. The role of IT includes conducting audits to ensure the accuracy and validity of financial conditions within a company. Audits involve obtaining and objectively evaluating evidence regarding economic activities and events to assess their alignment with established criteria, with results communicated to stakeholders [2]. IT Governance, also known as the governance of IT (ITG), plays a significant role in companies and organizations by providing a connected structure for IT processes, resources, and valuable information to achieve strategic objectives. It enables organizations to leverage information effectively and enhance effectiveness and efficiency by overseeing IT governance mechanisms [3]. To assess and improve IT governance as a support to business processes, companies can utilize tools like the Control Objectives for Information and Related Technology (COBIT) framework [4]. Within PT. XYZ, the Government Service Division (DGS) manages and provides services, products, and data for government customers using PT. XYZ's products. DGS has four customer segments: Central Government Service (CGS), Military & Police Service (MPS), Local Government Service (LGS), and Government Agency Service (GAS). DGS adheres to the accounting standard PSAK, such as PSAK 72, which governs revenue recognition from contracts. The success of PSAK 72 depends on key supporting documents, including subscription contracts for connectivity and non-connectivity services between PT. XYZ and its customers. IT plays a crucial role in maintaining these documents within the system, as they are vital assets for PSAK 72 calculations. During interviews with a Revenue Assurance employee from DGS, it was found that the LGS segment faces the most operational issues, which consequently have the largest impact on PSAK 72 within DGS. One particular issue is missing or incomplete contract data, which affects the accurate calculation of revenue for DGS PT. XYZ. Continuous occurrence of such issues can impact the performance and incentives of division employees, such as promotions or salary increases. Considering these operational challenges, it becomes necessary to conduct research to evaluate the operational contract management of PSAK 72 within the DGS division of PT. XYZ. The evaluation process aims to measure the IT governance capability related to operational contract activities in

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PSAK 72, specifically the quality of contract document storage and upload processes within the company's system. The evaluation process seeks to optimize the use of IT to ensure the fulfillment of company objectives outlined in the service contracts specified by PSAK 72. Evaluation and recommendations are aligned with the COBIT 2019 framework to minimize operational issues and improve employee awareness in maintaining the quality and completeness of PSAK 72 documentation processes.

2 Literature Review

Previous research studies [5]–[20] showcase the widespread utilization of the COBIT framework, specifically COBIT 2019 and COBIT 5, to tackle diverse challenges in varied organizational settings. These studies collectively emphasize the crucial need for standardized and effective information technology (IT) processes. The COBIT framework has consistently served as a go-to resource for researchers seeking recommendations, governance structures, and solutions to enhance IT management. Despite a shared reliance on COBIT, the studies differ in their focal points, such as addressing issues in academic institutions [5], [6], employee attendance concerns in business [14], economic integration [13], NAP optimization [16], and risk management enhancements [18], [19]. These endeavors have collectively demonstrated COBIT's versatility and adaptability in improving IT processes, governance, and risk management across academic, business, and government sectors. Notably, while COBIT implementation has resulted in significant improvements in system capacity and service response, challenges persist, particularly in the documentation of Standard Operating Procedures (SOPs) for operational activities and the absence of specialized units for risk management. This literature synthesis underscores COBIT's effectiveness in offering practical solutions to multifaceted issues, contributing to the overall enhancement of IT capabilities and governance in various sectors [5]–[20].

The main difference between the current study and previous research [12] is that this study focuses on assessing the maturity level of IT governance in a company, while the previous research compared COBIT 5 and COBIT 2019 frameworks. Additionally, studies [6] and [18] differ in terms of the method used, as they employed the COBIT 5 framework. The previous research focused on the implementation of IT governance, specifically on the COBIT framework, without applying IT governance [7]. In contrast, this thesis concentrates on evaluating the maturity level of existing IT governance and providing recommendations for improvements to the company. Furthermore, this study introduces a novel aspect by discussing the implementation of supporting documentation for PSAK 72 in DGS PT. XYZ, an area that has not been explored in previous research.

3 Research Method

The research method employed in the DGS division of PT. XYZ utilizes the Gallegos method. The audit of IT services involves several stages [21]:

1) Planning: This stage involves determining the scope and objectives of the audit, communicating with relevant management, and strategizing the audit steps. In this research, the identification of issues at DGS PT. XYZ is conducted through stakeholder analysis, including interviews with the Senior Manager of PPS DGS PT. XYZ, and studying relevant materials and problem-related issues.
2) Field Work: This stage focuses on collecting information through interviews, questionnaires, or surveys with relevant parties. After understanding the strategy outlined in PSAK 72 by DGS PT. XYZ, interviews are conducted to identify and analyze problem domains using design factors to establish an initial approach for IT governance aligned with the COBIT 2019 toolkit. Once the domains are determined, questionnaires are distributed concerning the selected domains.
3) Reporting: After gathering the necessary data, the capability level is calculated. This stage involves reporting the audit findings based on interviews, questionnaire distribution, and surveys. The capability level calculation is used to compare the current level (from the questionnaires) with the target level set by DGS PT. XYZ. Reporting includes presenting the findings, the impact based on the capability level, and identifying the causes of any gap analysis.

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4) Follow Up: The final stage entails providing an audit report containing recommendations for improvement to the researched object. The responsible management is then authorized to implement the suggested actions or consider them for future improvements. In this research, the final step involves providing recommendations and suggesting an increase in the capability level to DGS PT. XYZ regarding the issues identified through the questionnaire. These recommendations are valuable for the authorized individuals responsible for managing the object to enhance the quality of IT governance for PSAK 72 contracts in DGS PT. XYZ.

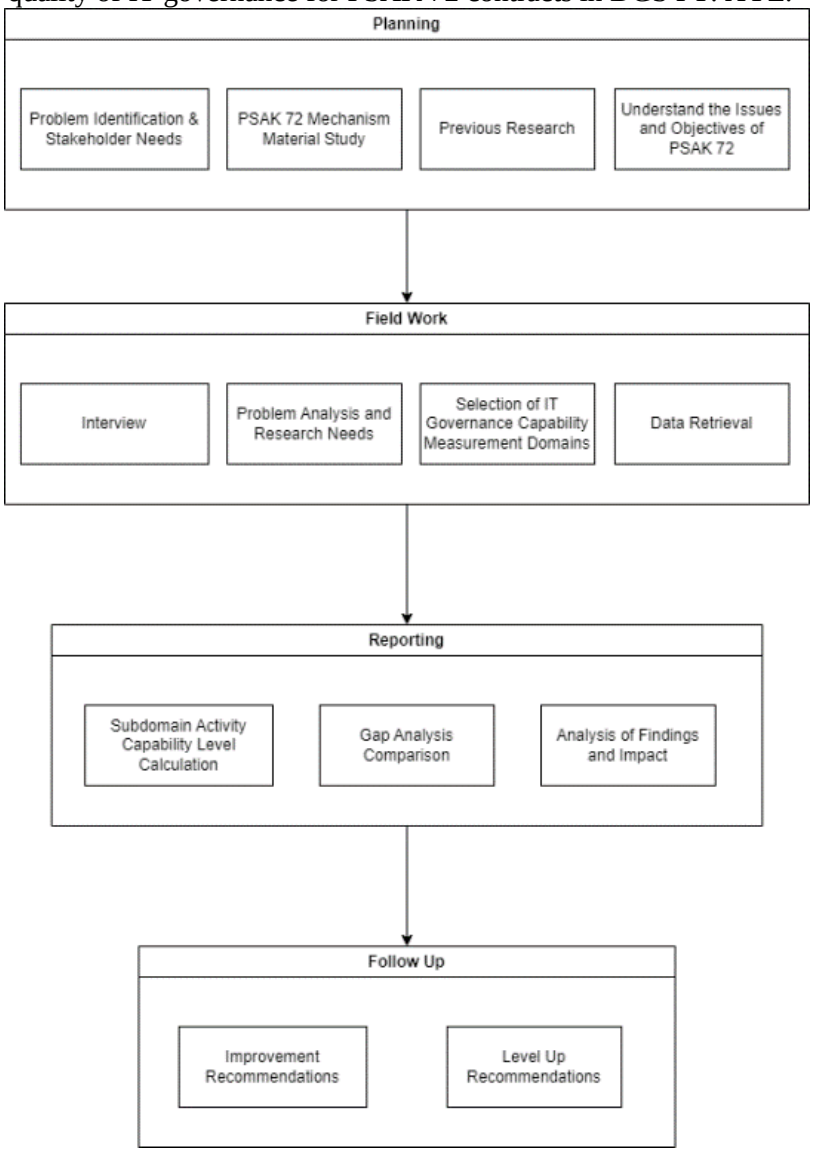

Figure 1. Research Flow

According to [22]–[24], several differences are considered when selecting the framework model for this research. Based on previous studies, COBIT is deemed more suitable for this research due to its alignment with the challenges faced by the LGS segment of DGS PT. XYZ. Furthermore, previous works suggests that COBIT 2019 is a better choice as it is the latest framework version, offering more comprehensive coverage, including the addition of three new domains: APO14 (Managed Data), BAI11 (Managed Projects), and MEA04 (Managed Assurance). COBIT 2019 also provides design factors that meet auditing needs, and there is still a lack of measurement regarding the capability level of IT governance in the company using the COBIT 2019 framework.

In the COBIT 2019 design toolkit framework, there are 11 stages of design factors. However, in this study, only design factors 1-4 were used because of the principle of tailored to enterprise needs, which means that every governance system should be customized to the company's specific requirements.

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The needs of DGS PT. XYZ were focused on identifying the causes of operational issues in the PSAK 72 contract within the LGS segment and providing solutions to minimize these issues within the company. By fulfilling these two needs, there was no need to continue with the remaining stages of the design factors. It can be concluded that the use of design factors 1-4 adequately addresses all the requirements of DGS PT. XYZ in this research.

Data Collection

Two representatives from the DGS division of PT. XYZ were interviewed online. These representatives are familiar with the process and workflow of PSAK 72 contracts at PT. XYZ. The interviewees consisted of: senior manager of PPS DGS PT. XYZ, and a member of the Revenue Assurance team at PPS DGS PT. XYZ. The questionnaire is a data collection method that involves providing a set of questions related to the research and distributing them to the relevant audience [25]. In this research, the questionnaire method utilizes the Zoho Survey platform and is conducted within the LGS segment of DGS PT. XYZ. The population for this study consists of all employees directly involved in handling PSAK 72 contracts in the LGS segment of DGS PT. XYZ. The respondents who completed the questionnaire included 3 Managers and 14 Employees/Officers.

4 Results and Analysis

In this section, we present the findings and analysis derived from the evaluation of IT governance within PT. XYZ's Government Service Division. The results, obtained through the application of COBIT 2019 and the Gallegos method, shed light on current capability levels in the targeted domains—EDM03, APO14, and DSS06. These insights offer a comprehensive understanding of the organization's IT governance landscape, paving the way for a detailed analysis and strategic recommendations to address identified challenges.

Planning

Understanding the issues and objectives of PSAK 72; When a company sells services or products to customers, a contract or agreement document between the two parties is necessary. In this case, the parties involved in the contract are PT. XYZ as the company and the customer. Each agreed-upon contract is stored and entered into the company's operational system. However, there are issues that arise when contracts are entered into the company's system, resulting in significant impacts on revenue in PSAK 72 during revenue audits conducted by the internal audit department, SSOF Task Force (SATGAS), and external consultants such as Crowe & BDO. The PSAK 72 contracts are divided into two categories: Subscription Contracts (Non-Amendment) which are the main contracts but still have the potential for changes, and Subscription Contracts (Amendment) which are contracts that include changes to the Non-Amendment Subscription Contracts. Each contract includes two services: Connectivity and Non-Connectivity.

Field Work

Selection of IT governance capability measurement domains: In determining the design factor for this research, a toolkit provided by COBIT 2019 was used to assist in identifying objective domains. These objective domains are used to measure the operational management capabilities utilized in the PSAK 72 contracts by DGS PT. XYZ, making them more focused and aligned with stakeholders' needs based on the existing issues in accordance with COBIT 2019.

1) **Design Factor 1 Enterprise Strategy:** From the interview findings, it can be observed that the Client Service/Stability value strategy is given the highest priority. Since the operational aspects of the PSAK 72 contracts are related to the internal stability of DGS PT. XYZ, this value strategy is considered the primary focus in the current operational management of the PSAK 72 contracts.
2) **Design Factor 2 Enterprise Goals:** The selected enterprise goals are EG07 (quality of management information), EG08 (optimization of internal business process functionality), and EG11 (compliance with internal policies). The reason behind choosing these three enterprise goals is that the interviewee aims to enhance the quality of management information and optimize the functionality of internal business processes, which are currently lacking due to non-compliance

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with internal policies. DGS PT. XYZ greatly emphasizes the importance of employee compliance in maximizing the operational management and execution of business processes to the fullest extent possible.

3) **Design Factor 3 Risk Profile:** The mapping of risk profiles and interviews with stakeholders using the COBIT 2019 toolkit resulted in the highest IT risk profiles identified as non-compliance and data & information management. These factors were determined to be the main contributors to the risk profile. According to the interviewee, there are still many employees who violate internal rules, which disrupts the smooth functioning of business processes. Additionally, since the supporting documents for PSAK 72 are related to data, data & information management is considered a highly relevant IT risk profile in addressing the identified issues.
4) **Design Factor 4 I&T Related Issues:** After conducting the interview, it was determined that the "regular issues with data quality and integration of data across various sources" is an I&T-related issue that falls into the serious issue category. This issue is considered serious or significant as it directly affects the operational aspects of the PSAK 72 contracts in DGS PT. XYZ due to the challenges related to data quality and sourcing.

Based on the mapping of design factors 1-4, several objective domains have been identified to measure the capabilities in addressing the challenges faced by DGS PT. XYZ, following the guidelines provided in the COBIT 2019 toolkit. The selected objective domains are:

1) **EDM03 - Ensured Risk Optimization:** This domain focuses on the company's risk tolerance towards the use of IT that is suitable for addressing the challenges of PSAK 72. It is relevant because there is a possibility that employees in the LGS segment of DGS PT. XYZ may not fully understand the risks associated with the use of IT in relation to PSAK 72 documents.
2) **APO14 - Managed Data:** This domain addresses the effective management of company data, which impacts the entire cycle. It is suitable for addressing the challenges in DGS PT. XYZ as it can help optimize the management of data related to PSAK 72, ultimately impacting the company's revenue.
3) **DSS06 - Managed Business Process Control:** This domain assists DGS PT. XYZ in maintaining control over its business processes. It ensures that all data and information related to PSAK 72 align with the intended business processes and enables the management of inputs and outputs to fulfill the company's business processes.

RACI Chart: In determining the target audience for questionnaire distribution in the LGS segment of DGS PT. XYZ, a RACI Chart was used to help identify the responsible individuals for the selected domains. Based on the created RACI Chart, the distribution of the questionnaire has been determined for the three domains listed in Table 1. The questionnaire was distributed to all the audiences because the Support, Analysis, and Government Support Unit (GSU) departments are directly involved in the PSAK 72 assessment and handle the PSAK 72 contract. The Bidding Regional team, on the other hand, is responsible for data collection and inputting the data into the system as part of the regional team. The collected data, obtained through the questionnaire, will be analyzed using COBIT 2019.

Table 1. RACI Chart

Key Management Practice	Manager Bidding Regional	Officer Bidding Regional	Manager Support LGS	Manager Analisis LGS	Officer GSU LGS
EDM03.01 Evaluate risk management.	R	R	I	R	I
EDM03.02 Direct risk management.	C	R	I	A	I
EDM03.03 Monitor risk management	A	R	R	C	R
APO14.01 Define and communicate the organization's data management strategy and roles and responsibilities.	R	I	R	R	I
APO14.02 Define and maintain a consistent business glossary.	R	R	C	A	R
APO14.03 Establish the processes and infrastructure for metadata management.	R	R	I	A	I
APO14.04 Define a data quality strategy.	I	R	I	A	R

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Key Management Practice	Manager Bidding Regional	Officer Bidding Regional	Manager Support LGS	Manager Analisis LGS	Officer GSU LGS
APO14.05 Establish data profiling methodologies, processes and tools.	R	I	R	R	I
APO14.06 Ensure a data quality assessment approach.	I	R	I	I	R
APO14.07 Define the data cleansing approach.	I	R	I	I	R
APO14.08 Manage the life cycle of data assets.	R	R	R	A	R
APO14.09 Support data archiving and retention.	R	R	A	R	R
APO14.10 Manage data backup and restore arrangements.	R	R	R	R	R
DSS06.01 Align control activities embedded in business processes with enterprise objectives.	A	R	R	R	R
DSS06.02 Control the processing of information.	I	R	I	A	R
DSS06.03 Manage roles, responsibilities, access privileges and levels of authority.	R	R	R	R	R
DSS06.04 Manage errors and exceptions.	R	R	C	R	R
DSS06.05 Ensure traceability and accountability for information events.	R	R	R	R	R
DSS06.06 Secure information assets.	R	R	R	R	R

Reporting

Calculation of capability level: In determining the design factor for this research, a toolkit provided by COBIT 2019 was used to assist in identifying objective domains. These objective domains are used to measure the operational management capabilities utilized in the PSAK 72 contracts by DGS PT. XYZ, making them more focused and aligned with stakeholders' needs based on the existing issues in accordance with COBIT 2019.

Table 2. presents the final calculation result for the capability level of the EDM03 domain, which is 74%, falling into the "**largely achieved**" category. Therefore, it can be concluded that the EDM03 domain cannot progress to level 3. Table 2. shows the calculation result for the capability level of the APO14 domain, which is 77.9%, placing it in the "**largely achieved**" category at level 2, but it has not yet reached level 3. The calculation result for the capability level of the DSS06 domain is presented in Table 2. The capability level for the DSS06 domain is at 76.1% and falls into the "**largely achieved**" category at level 2, but it has not yet reached level 3.

Gap analysis: In determining the design factor for this research, a toolkit provided by COBIT 2019 was used to assist in identifying objective domains. These objective domains are used to measure the operational management capabilities utilized in the PSAK 72 contracts by DGS PT. XYZ, making them more focused and aligned with stakeholders' needs based on the existing issues in accordance with COBIT 2019. After obtaining the calculation results for each domain and subdomain in the LGS segment of DGS PT. XYZ, the next step is to compare the expected level assessment by DGS PT. XYZ with the calculated levels from the questionnaire. This allows for a gap analysis between the two levels. The gap analysis results can be seen in Table 3. providing insights into the comparison between the target level and the actual level of DGS PT. XYZ.

Table 2. Capability level results

Domain	Control Objectives	Score	Rating Process
EDM03: Ensured Risk Optimization	EDM03.01	72.8	F
	EDM03.02	74.7	F
	EDM03.03	74.9	F
	Average	**74%**	**F**
APO14: Managed Data	APO14.01	78.1%	F
	APO14.02	74.2%	F
	APO14.03	79.1%	F
	APO14.07	79.2%	F

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	APO14.08	78.8%	F
	APO14.09	79%	F
	APO14.10	77.1%	F
	Average	**77.9%**	**F**
DSS06: Managed Business Process Controls	DSS06.01	76.6%	F
	DSS06.02	77.2%	F
	DSS06.03	75.5%	F
	DSS06.04	77.1%	F
	DSS06.05	77.1%	F
	DSS06.06	72.9%	F
	Average	**76.1%**	**F**

Table 3. Gap analysis

Domain	Target Level	Actual Level	GAP
EDM03: Ensured Risk Optimization	4	2	2
APO14: Managed Data	5	2	3
DSS06: Managed Business Process Controls	5	2	3

Follow Up

Findings impacts and recommendations: Based on the interviews conducted with DGS PT. XYZ and the results obtained for each domain, there are several findings and impacts experienced by DGS PT. XYZ as indicated by each domain and subdomain. The presented findings can be useful in identifying the impacts that pose challenges for the company in achieving the goals of DGS PT. XYZ. Table 4. provides the findings and interviews conducted at DGS PT. XYZ, resulting in impacts on the company based on the subdomains within EDM03, APO14, and DSS06. Table 5. present recommendations to enhance domains EDM03, APO14, and DSS06 to level 3.

Table 4. Findings, Impacts and Recommendation

Domain	Findings	Impacts	Recommendation
EDM03 – Ensured Risk Optimization	Lack of specific socialization and regular evaluation regarding IT risks in the LGS segment.	The lack of socialization and regular evaluation regarding IT risks in the LGS segment will result in a lack of awareness among employees, which will eventually impact the business processes. If risk determination exists but the evaluation and follow-up on IT risks are not consistently performed, the interpretation of risks among employees in the LGS segment will vary, leading to a negative risk culture. Failure to align IT risk strategy with the overall risk strategy of the company, based on risk appetite, will result in recurring mistakes and losses for the LGS segment. Even with comprehensive planning, if implementation is lacking due to insufficient socialization and evaluation, all the planning efforts will be suboptimal and result in losses for the LGS segment. It is advisable to report any issues promptly to ensure quick identification of solutions or minimize their impact before they escalate and cause greater losses to the LGS segment.	Regular socialization and evaluation should be conducted in the LGS segment regarding the relationship between data management and IT risks. Take appropriate follow-up actions when deviations or misuse of the IT system occur in the LGS segment.
	Missed controls in the LGS segment	Missed controls that often occur in the LGS segment disrupt the planning of the established tolerance and hinder future business processes.	Increased control over the inputters who input customer data is crucial as it will have an impact on the outcomes of PSAK 72 and the LGS segment in the future.

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		The impact of uneven miss control on the direction of strategy and risk management in the LGS segment is that operational activities within the segment become less integrated with each other. Delayed problem handling results in losses for the LGS segment in terms of time, resources, and finances. The presence of differences in roles and responsibilities and inadequate miss control make it difficult to identify a problem if the performed roles and responsibilities are different.	
APO14 – Managed Data	The lack of an integrated system between divisions. Example: The division DGS handles the KB and BASO documents, while the division Solution Delivery & Assurance (SDA) handles the KL and BAST Mitra documents.	If there is no integrated system, the segment or DGS will face difficulties in data retrieval, which affects data management. Due to the different systems between divisions, business standards cannot be achieved as they become more hindered. The performance of metadata management processes will decrease as there are difficulties in accessing and retrieving data. The location of data storage varies between divisions, impacting the performance and turnaround time within DGS PT. XYZ. Because of the different data storage locations, data recovery is not effectively conducted, which can result in missing or incomplete data when needed in the future.	A specialized system or application for PSAK 72 will be developed, connecting various divisions together. Despite having different interests, this system aims to facilitate employees in data retrieval as it will be within the same data scope. This ensures that data is not scattered and simplifies the process of data retrieval.
	Missed controls in the LGS segment.	If missed controls continue to occur in the LGS segment, it will result in different roles and responsibilities persisting, ultimately affecting the established governance and management. The occurrence of missed controls leads to suboptimal standards within the company implemented by the LGS segment, which in turn affects the overall business. Continued missed controls will erode the distinctions between various business terms. Missed controls in the LGS segment will result in ongoing issues with metadata documentation and subsequently impact the PSAK 72 business processes. Insufficient control affects data cleansing, leading to uncontrolled maintenance and cleaning of data in the system. The consequences of missed controls in the LGS segment disrupt customer needs and existing data, causing delays in the operational processes of DGS PT. XYZ.	Regular audits or controls are necessary to assess the performance of human resources and ensure compliance with applicable rules. Standardizing the roles of all segments is crucial to streamline the business processes.

 ISSN:2302-8149
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		Missed controls undermine the overall oversight of data management. While the established methods may function, the lack of control disrupts business requirements.	
	Segment LGS has not yet fully completed the storage or uploading of all supporting document requirements into the system.	Frequent omission of document uploads results in suboptimal metadata, properties, and standards. Incomplete essential documents may disrupt data backups, consequently affecting the outcomes of PSAK.	It is advisable to make all fields required when inputting data and uploading documents in the system to ensure that no document is left unentered while progressing to the next stage. Verification and approval processes should be carried out by higher-level authorities and be checked repeatedly to avoid errors in the uploaded documents. Do not grant verification and approval authority to the individuals responsible for data input.
	The features available in the system for document uploading are not being utilized effectively, resulting in many disorganized documents.	The documents become disorganized and pose a problem during the boot camp for revenue calculation.	An additional feature should be implemented so that when a new document is uploaded, old documents can be automatically deleted or left as they are.
DSS06 – Managed Business Process Control	Different roles and responsibilities among organizational structures and cases. For example, Document A is initially managed by Employee A, but due to certain circumstances, it is handled by the support team.	The compliance objectives of DGS PT. XYZ are not achieved, leading to disruptions in the main business processes for both strategic and operational aspects due to different roles and responsibilities being carried out differently from the established organizational structure. The variations in roles and responsibilities lead to unclear identification of key controls, resulting in potential process errors or disruptions. The ownership and key activities in the business processes of the LGS segment related to PSAK are not aligned as intended due to differences in roles and responsibilities, which may worsen the process and outcomes in the future. This situation may lead to fraudulent activities if individuals with authorization over transaction authentication delegate their authority to unauthorized personnel due to the variance in roles and responsibilities within the DGS PT. XYZ organizational structure. Inconsistencies between actual roles and responsibilities and those established by DGS PT. XYZ can cause miscommunication and incomplete documentation since responsibilities are assigned to individuals not accountable for those tasks. The disruption of business processes occurs when authority, approval, processes, and roles differ from what is intended, leading to significant errors in the outcomes.	Providing socialization on the impact of having different roles and responsibilities compared to the established organizational structure. Developing an application or system to monitor the performance of Human Resources in accordance with their designated roles and responsibilities set by DGS PT. XYZ. This is essential to minimize deviations in their work. The monitoring application or system should include evidence to minimize the delegation of responsibilities to others.

 ISSN:2302-8149
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		Errors and lack of accurate data will persist if variations in roles and responsibilities continue. If access rights are designated but not properly enforced in the LGS segment, business processes related to critical information become ambiguous as it is unclear who is responsible for specific tasks due to differing roles. When awareness and compliance have been addressed, it is essential to socialize the understanding of roles and responsibilities to prevent recurring mistakes and deviations.	
	Missed controls in the LGS segment.	Due to the lack of regular controls in segment LGS, all errors, exceptions, and deviations continue to occur, resulting in an increasing number of errors in the business processes and causing losses to the division. Follow-up actions and corrections for documents will not be identified as miss control in segment LGS has not been properly implemented, leading to the repetition of the same errors and losses.	Regular audits or controls are necessary to assess and evaluate the outcomes of the work performed, as well as to review errors, exceptions, deviations, corrections, and follow-up actions for any issues that arise.
	Keeping old documents without removing them but replacing them with new documents can lead to double documentation or having only one document that is not the most updated version.	The consequences of setting incomplete or outdated documents result in hindrance and additional time and effort needed for future improvements. Insufficient completeness of documents and records makes it challenging to prove the accuracy and validation of a document in case of errors, thus obstructing the business process.	Ensure that uploaded documents are accurate and up-to-date. Since uploaded documents cannot be deleted, if there is any doubt about a document, it should be marked as "Not Fixed Document." For updated documents, it is advisable to create multiple versions to track the changes for each uploaded document. Monitoring and direct verification by the Manager of the uploaded documents in the system.

Table 5. Recommendation to Improve Capability Level

Domain	Recommendation
EDM03 – Ensured Risk Optimization	Segment LGS proactively evaluates I&T risk factors before delayed strategic decisions and ensures that risk considerations are part of the company's strategic decision-making process. Evaluates risk management activities to ensure alignment with the company's capacity for I&T-related losses and leadership's tolerance for such risks in the LGS segment. Attracts and retains the necessary skills and personnel for IT Risk Management in the LGS segment The LGS segment identifies the main objectives and metrics of risk governance and management processes to be monitored, and approves the approach, methods, techniques, and processes for capturing and reporting measurement information. The LGS segment monitors the extent to which risk profiles are managed within risk thresholds and the company's tolerance levels.
APO14 – Managed Data	The LGS segment ensures that business and technology collaboratively develop the organization's data management strategy. They ensure that data goals, priorities, and scope reflect the company's objectives, are consistent with data management policies and regulations, and are approved by all stakeholders.

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	They establish, document, and follow processes to define, manage, use, and maintain a business glossary. For example, new initiatives must adopt standard business terms as part of the data requirement definition process to ensure language consistency. This helps achieve content comparability and facilitates data sharing across the organization in the LGS segment. They ensure that new development, data integration, and data consolidation efforts in the LGS segment apply standard business requirements as part of the data needs definition process. They integrate the business glossary into the organization's metadata repository with appropriate access permissions for the LGS segment. The LGS segment develops and uses metadata to perform impact analysis on potential data changes. They populate the existing organizational metadata repository in the LGS segment with additional metadata categories and classifications as per the phased implementation plan. Link these to the architectural layers. They validate metadata and any metadata changes against the existing architecture in the LGS segment. They ensure that the organization has developed an integrated metamodel used across all platforms. They ensure that metadata types and data definitions support consistent import, subscription, and consumption practices in the LGS segment. The LGS segment maintains data change history through cleansing activities. They determine the mapping of business processes to data. Maintain and review it periodically to ensure alignment. They follow established processes in the LGS segment for collaborative agreements related to shared data and data use in business processes. They implement complete data-to-process data flow and lifecycle maps for shared data in each major business process at the organizational level in the LGS segment. They ensure that changes to shared datasets or target datasets for specific business purposes are managed by the data governance structure, with relevant stakeholder involvement in the LGS segment. They ensure that the organization has designated data warehouse repositories that provide access to historical data to meet analytical needs supporting business processes. The LGS segment maintains designated data warehouse repositories that provide access to historical data to meet analytical needs supporting business processes.
DSS06 – Managed Business Process Control	Segment LGS implements automated controls to ensure accurate, complete, and valid transactions. Controls may include sequence, limits, ranges, validity, reasonableness, table lookups, existence, key verification, digit checks, completeness, duplicate checks, logical relationships, and timestamp edits. Validation criteria and parameters should be reviewed and confirmed regularly. Input data validation and edits or, if applicable, return for correction as close to the point of origin as possible. Without compromising the level of authorization for original transactions, correct and resubmit erroneously entered data by the LGS segment. If appropriate for reconstruction, retain the original source documents for an appropriate period. Maintain data integrity and validity throughout the processing cycle. Ensure that detection of erroneous transactions does not disrupt the processing of valid transactions within the LGS segment. Handle outputs in a lawful manner, send them to the appropriate recipients, and protect information during transmission. Verify the accuracy and completeness of outputs in the LGS segment. The LGS segment must maintain data integrity during unforeseen disruptions in business processing. Confirm data integrity after processing failures.

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	Before transmitting transaction data between internal applications and business/operational functions (within or outside the company), verify appropriate addressing, origin authenticity, and content integrity. Maintain authenticity and integrity during transmission or transportation within the LGS segment. Allocate access rights and privileges based on the minimum necessary for performing job activities, based on predefined job roles. Remove or revise access rights promptly if job roles change or staff members leave the business process area. Review periodically to ensure that access is appropriate to threats, risks, technologies, and business needs within the LGS segment. Regularly provide awareness and training on roles and responsibilities so that everyone in the LGS segment understands their responsibilities; the importance of controls; and the security, integrity, confidentiality, and privacy of company information in all forms. Ensure administrative privileges are adequately and effectively secured, tracked, and controlled to prevent misuse within the LGS segment. The LGS segment establishes and maintains procedures for assigning ownership of errors and exceptions, correcting errors, overriding errors, and addressing imbalances. Establish retention requirements based on business needs to meet operational, financial reporting, and compliance requirements within the LGS segment. Store source information, supporting evidence, and transaction records in accordance with storage policies within the LGS segment. Implement acceptable data classification and usage, security policies, and procedures within the LGS segment to protect information assets under business control. Identify and implement processes, tools, and techniques to reasonably verify compliance within the LGS segment.

Discussion

Research [12] concludes that COBIT 2019 framework has limitations due to a higher number of focus areas, which can complicate the audit and implementation process compared to COBIT 5. However, the current study suggests that the usage and implementation of COBIT 2019 are easier due to the presence of design factors and more focused areas, making problem areas in the research clearer. Meanwhile, research [7] identifies several causes of issues, including frequent miscommunication due to a lack of documentation culture in work processes. This current study also finds a similar issue, specifically the insufficient documentation system in segment LGS. To address this, socialization and regular evaluations related to IT risk can be conducted. Additionally, research [10] focuses on data management issues and response to disruptions caused by the use of IT. In contrast, the present study identifies EDM03, APO14, and BAI08 domains as the ones related to the operational management of completeness of PSAK 72 contract documentation in segment LGS.

5 Conclusion

After conducting a comprehensive series of research on evaluating the capability of IT governance in DGS PT. XYZ concerning the operational PSAK 72 contract using COBIT 2019 framework, the conclusion reveals three (3) selected domains or core processes related to the identified issues. The domain selection process involved interviews with key stakeholders directly involved in the issues, utilizing design factors. The three selected domains are EDM03 - Ensured Risk Optimization, APO14 - Managed Data, and DSS06 - Managed Business Process Controls. Following the domain selection, questionnaires were distributed, and subdomain calculations were performed. The results indicate that the current level of EDM03 - Ensured Risk Optimization is at level 2, while the target for DGS PT. XYZ is level 4. This gap is attributed to the lack of regular socialization and evaluation concerning IT risks. For the domain APO14 - Managed Data, the current level is at 2, whereas the company's target level is 5, mainly due to the absence of an integrated system between divisions and insufficient supervision over segment LGS's tasks. Similarly, the domain DSS06 -

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Managed Business Process Controls also stands at level 2, with the company's target at level 5, attributed to differences in roles and responsibilities within the established organizational structure. To achieve the desired target levels, the study recommends improvement actions and level upgrades based on the measurement of capabilities according to the needs of DGS PT. XYZ. The research provides several recommendations for improvement and level upgrades for each domain. With the implementation of these recommendations, it is hoped that DGS PT. XYZ can address existing shortcomings and enhance the capability level for processes that require improvement.

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