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Information Technology Governance Using the COBIT 2019 Framework in Manado Post Companies

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Abstrak

Technological advances have brought the world into a new era, including in the field of information. In this context, information technology can be considered useful for supporting and improving company management so that it can compete. One of the information technology management methods that is widely used is IT governance contained in COBIT (Control Objective for Information and Related Technology) 2019. Until now, no evaluation or research has been carried out on Manado Post's IT performance so it is not yet possible to know the level of maturity. application of information technology at Manado Post. This project focuses on using information systems and IT from Manado Post to manage operations and data from Manado Post. This project was carried out by conducting a literature study on COBIT 2019 factor design. Manado Post has identified priority objectives in the COBIT 2019 toolkit, especially EDM03 and APO03. Even though it has reached level 2 capability for EDM03, there are still activities that have not been realized, while for APO03, achievements have not yet reached level 2, indicating the need for improvements in identifying goals and stakeholders as well as aligning architectural goals with strategic programs. Suggestions include in-depth analysis of unrealized sub-objectives, benchmarking with similar organizations, and the development of clear follow-up plans to improve Manado Post's practices in risk management and enterprise architecture.

Keywords: Information Technology, IT Governance, COBIT 2019, Manado Post, Information Systems.

1. Introduction

In the current era of rapidly developing technology, especially in the field of information technology, it has become an important element for companies to improve performance and productivity amidst technological developments[1]. These technological advances have also resulted in a wealth of data available to companies that can be processed into very useful information. By adopting and effectively utilizing information technology, companies can optimize their operations, innovate products and services, and remain competitive in an ever-changing marketplace. However, the increasing amount of incoming data also creates the challenge of increasing data surges, making the search for the desired information more complex. Therefore, by implementing good information governance, this problem can be overcome effectively [2], [3], [4].

Information technology management is a series of actions involving leadership, organization, and procedures to ensure that the use of information technology within a company can contribute to achieving company goals [5]. This involves structured arrangements and guidance to achieve added value while maintaining a balance between the risks and benefits offered by information technology. Therefore, the integration of information technology governance starts from the planning phase and continues to the monitoring stage, to ensure the effectiveness of information technology in supporting the achievement of company goals[6], [7]. Governance is a guide that can help companies in the decision-making process [8]. Governance is also very effective and has an impact on improving the company's performance and products, thereby making the company more competitive and ensuring the company's future.

In evaluating and designing information technology governance, several frameworks can be used, one of which is the COBIT framework [9], [10], [11]. COBIT is a framework for information technology governance that includes the management and provision of information technology services to ensure the security and integrity of data and information used [12]. COBIT, which is a standard, is issued by the IT Governance Institute which is part of ISACA. The main objective of COBIT is to provide clear policy guidance and best practices in IT management, as well as provide support to senior management in understanding and controlling IT-related risks.

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With the increasing complexity and importance of information technology in business operations, the need for effective governance becomes very important [13]. Companies must have clear strategies and policies to ensure that their IT investments contribute to achieving business objectives while mitigating the associated risks. This is where frameworks like COBIT play an important role, providing a structured approach to managing IT governance and helping companies align their IT initiatives with business goals.

Effective information technology governance not only improves operational efficiency and risk management but also fosters trust and confidence among stakeholders. This ensures that IT investments are aligned with business objectives and provide measurable value to the organization. By establishing strong governance mechanisms, companies can navigate the complexities of the digital landscape with confidence and speed, positioning themselves for success in an increasingly competitive business environment [11], [14].

Information technology governance also plays an important role in reducing risks and improving data security. In an era of rapidly developing technology, companies must ensure that their data is safe and protected from unauthorized access. Information technology governance includes structured arrangements and guidelines to reduce data security risks, such as conducting continuous audits and monitoring, implementing effective security controls, and ensuring that employees follow correct security procedures. With effective information technology governance, companies can ensure that their data is safe and protected from unauthorized access, and help companies maintain trust and confidence among stakeholders[6].

Information technology governance is also very important in managing the risks and benefits offered by information technology. In an era of rapidly developing technology, companies must ensure that their investments in information technology provide benefits that outweigh the risks faced. Information technology governance includes structured arrangements and guidelines to manage risks and benefits, such as conducting risk and benefit analysis, identifying high risks, and implementing effective controls to reduce risks. With effective information technology governance, companies can ensure that their investments in information technology provide benefits that outweigh the risks faced, as well as help companies maintain trust and confidence among stakeholders.

2. Research Methodology

In this study, several research steps were carried out, according to the sequence shown in the figure:

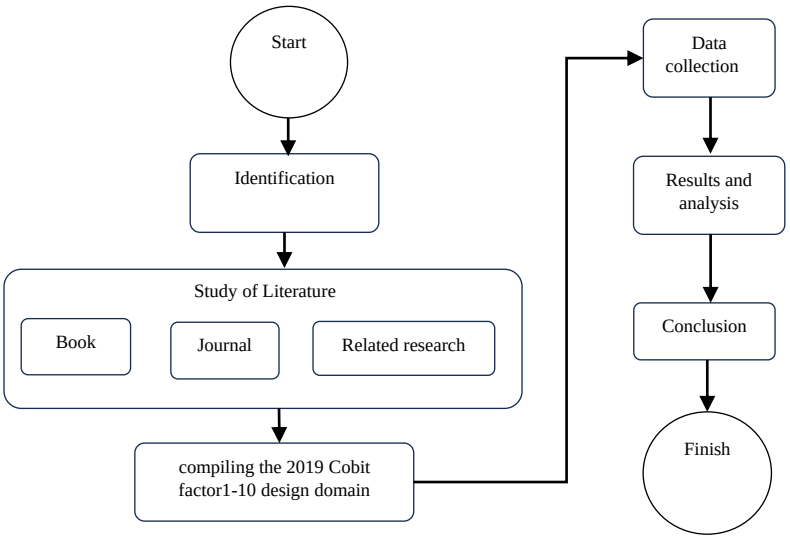

Figure 1. Research methods

Based on the picture above, namely the research flow, in the problem identification step, interviews were conducted at the company to collect information about the company profile, company goals, and the extent to which information technology is used. This process aims to identify theories that are relevant to the problem being researched, which will be used as a reference in discussing research results.
At the Literature Study stage, researchers look for reading material or references that can help them understand the problem or situation that the researcher is researching. This helps us gather additional knowledge that can support what researchers have found in this study. The researcher conducted a literature study by searching for books, journals, and related research related to information technology governance to create a strong foundation for the researcher's research.
In COBIT 2019, there are 10 key Domain Design Factors (DDF) that need to be considered. This includes alignment, value delivery, resources, risk, performance and compliance, objectives and requirements, architecture and standards, roles and responsibilities, information, and relevant processes and activities. This process helps organizations design IT governance that is in line with strategy, optimizes the use of resources, and minimizes risks. At the data collection stage, researchers collected data through interviews with Manado Post IT, by asking questions regarding Design Factor 1 to Design Factor 10.
At the Results and Analysis stage, researchers collected data and analyzed it, researchers used the guidelines in COBIT 2019 Workflow Governance System Design as a reference. Researchers carry out examinations in various areas, including examining the company's context, strategy, and business situation (this helps researchers understand the company's strategy more clearly). This helps researchers assess the extent to which technology has been implemented and what is needed to implement IT governance. Based on the results of data processing and analysis, researchers conclude the results obtained from the calculations that have been carried out.

2.1 IT Governance

Information technology has become an important part of human life and allows people to communicate and carry out activities, share information, and support various human activities. IT governance in data management is important data management for organizations. Poor governance can cause problems and weaknesses that have the potential to create threats such as loss, damage, theft, and interception of valuable data for the organization [15]. Efforts to improve information technology governance, especially in data management, are expected to reduce the risk of these threats. To improve information technology governance, organizations need to understand the extent of current information technology management and what goals will be achieved [16], [17], [18], [19].
IT governance involves making the right decisions, namely who is responsible for making the right decisions and implementing a framework that determines who is responsible for certain tasks. The aim is to ensure that every decision taken contributes to the development of the use of information technology in the organization. IT governance is the responsibility of institutional leaders and management, who are aware of their roles and responsibilities in directing the implementation of IT in the organization so that it is aligned with organizational goals[20].
Governance analysis at the Mando Post company was carried out to measure IT management against COBIT 2019 standards to assess how the company manages IT and identify areas where improvements are needed. The results of this evaluation will be used to improve IT governance and plan recommendations for the Manado Post company in the future.

2.2. COBIT 2019

COBIT (Control Objective for Information and Related Technology) is a framework published by ISACA (Information System Audit and Control Association) which is used to regulate and manage information technology in organizations. COBIT is used to control IT implementation within the company. COBIT 2019 helps measure how well information systems are working by providing guidelines, best practices, and widely accepted models to increase the trust and value of information technology in business. Apart from that, COBIT 2019 is also more flexible and can be adapted to various reference sources, making it easier for users to focus on various aspects of information technology management [18], [21].
COBIT is a tool that helps control the way information technology is used in a company. The latest version, COBIT 2019, helps assess the extent to which information systems are working by providing guidelines, best practices, and widely accepted models for increasing the trust and value of information technology in business. COBIT 2019 is also easier to adapt to various references, making it easier for users to focus on managing information technology better [22].

2.3 Understanding Company Context and Strategy

Researchers will have a clearer understanding of strategy in the IT sector, existing problems, and the goals of the Manado Post company using design standards from COBIT 2019.

2.3.1 Determining the Initial Scope of the Governance System (Design Factors 1-4)

This stage is used to identify the initial scope in setting the governance system, especially by considering design factors 1 - 4, especially those related to company strategy and objectives, IT risk profile, as well as incidents related to IT in Manado Post.

2.3.2 Factor Design 1 (Enterprise Strategy)

Factor 1 design is a stage that involves many different strategies depending on the business area. Where the design factors are divided into 4 categories, namely, Growth/Acquisition which focuses on company growth, Innovation/Differentiation where the company focuses on providing innovative products to customers, Cost Leadership where the company focuses on reducing costs, Service/Stability focuses on providing stable services and focused on clients. With a description of the importance assessment, namely, value 5 is the most important, value 4 is very important, value 3 is important, value 2 is quite important, and value 1 is not important.

2.3.3 Factor Design 2 (Enterprise Goals)

Factor 2 design is a stage that involves identifying the goals that Manado Post wants to achieve. In COBIT 2019, factor 2 design includes 13 EG (Enterprise Goals) categories, where EG01 relates to having a competitive portfolio of products and services, EG02 focuses on managing business risks, EG03 focuses on compliance with external laws and regulations, EG04 concerns information quality finance, EG05 focuses on culture-oriented customer service, EG06 covers continuity and availability of business services, EG07 relates to quality information management, EG08 focuses on optimizing internal business processes, EG09 focuses on optimizing business process costs, EG10 relates to capability, motivation, and employee productivity, EG11 relates to compliance with internal policies, EG12 relates to managed digital transformation programs, and EG13 focuses on product and business innovation. This information also includes an assessment of the level of importance, where a value of 5 indicates the highest level of importance, a value of 4 is very important, a value of 3 is important, a value of 2 is quite important, and a value of 1 is not important. With this information, stakeholders can make clearer choices in determining appropriate business objectives.

2.3.4 Factor Design 3 (Risk Profile)

The factor 3 design stage is a step in determining the risk profile of Manado Post. At this stage, the focus is given to understanding risk scenarios that could affect Manado Post, as well as how to assess the level of impact and likelihood of these risks occurring. Therefore, high-level risk analysis is necessary to identify risks that have a significant impact.

2.3.5 Factor Design 4 (IT-Related Issue)

The 4th factor design stage involves identifying and analyzing problems related to information technology (IT) at Manado Post. This involves reviewing the IT problems currently being faced or risks that have already occurred. The main objective is to identify in detail IT problems that reflect the current situation, according to the COBIT 2019 framework standards, and to prepare for handling these problems in the future so that they can be handled more effectively. The ranking of IT problems is assessed based on their level of importance using a rating scale: 1. No Problem, 2. Problem, 3. Serious Problem.

2.4 Improving the Scope of the Governance System (Design Factors 5 – 10)

In this phase, an analysis is carried out to increase the scope of the governance system based on a 5 - 10-factor design. This includes questions regarding all matters relating to the company's work environment (in this case Manado Post). In addition, this stage aligns company values so that existing IT-related risks can be identified, measured, and categorized. At this stage, not all design factors can be applied to the company, so irrelevant factors can be ignored. Design factors 5 – 10 based on COBIT 2019 guidelines are:

2.4.1 Factor Design 5 (Threat Landscape)

In the context of this factor design, interviewees were asked to provide their views on the level of risk associated with aspects of work, especially those related to threats that could arise in the context of geopolitics, demographics, and other aspects. These 5 design factors aim to help assess the extent of the security environment that Manado Post has. In this factor, threats are divided into two categories, namely normal, which indicates that the company is operating under threat conditions that are within normal limits and do not have a significant impact on the company (Manado Post). A high threat level indicates that the company is operating in an environment with a higher threat level, which can have a major impact especially due to geopolitical or demographic issues, and can significantly influence the company's activities (Manado Post).

2.4.2 Factor Design 6 (Compliance Requirement)

In this design factor, the interviewee was asked questions about how the company complies with regulations from the local government. The questions in design factor 6 will help to find out how well the Manado Post company complies with government regulations. The level of compliance with government regulations is divided into three categories: 1. Low, indicating that the company's compliance with government regulations is considered below average, 2. Normal, where the company's compliance is generally considered the same as other companies, 3. High, in this case, Company compliance is considered to be above average or very high.

2.4.3 Factor Design 7 (Role of IT)

This design factor is a stage that aims to identify the role of information technology (IT) in Manado Post. At this design stage, resource persons were asked questions regarding the role of IT in the Manado Post organization. IT roles are classified into four categories, namely: The level of importance of each role is assessed using a scale that includes values 1 (not important), 2 (very important), 3 (important), 4 (very important), and 5 (most important).).

2.4.4 Factor Design 8 (Sourcing Model of IT)

This design factor is a stage that determines information related to IT resources in a company utilizing Outsourced, Cloud, insource, or hybrid IT services.

2.4.5 Factor Design 9 (IT Implementation Methods)

ISACA developed the implementation guide because COBIT is considered one of the most commonly used frameworks for Information Technology Governance and Management, but is often considered too complex. In this factor design stage, researchers ask questions about the three methods used by companies in software development. These three methods include:

1. Agile, this method involves iterative software development which aims to increase flexibility and responsiveness in development.
2. DevOps, is an integration of culture, implementation, and tools used to improve an organization's ability to develop, implement, and provide software services quickly.
3. Traditional Methods, which are related to IT development using a more conventional approach.

This research aims to understand how companies use these methods in their software development.

2.4.6 Factor Design 10 (Technology Adoption Strategy)

In this factor design stage, researchers ask questions regarding the rate at which companies adopt or implement new technology. Adoption of this technology can be grouped into three categories. The first is the First Mover strategy, which refers to the policy of implementing new technology as quickly as possible with the aim of achieving a competitive advantage. Second is the Follower strategy, namely an approach that follows other companies that have adopted new technology and have evidence of the positive impact of this adoption. Third is the Slow Adopter strategy, which reflects a slow technology adoption policy.

2.5 Concluding Governance System Design

This stage is the final step in the COBIT 2019 verification process. Each response has been implemented in the tool, and each design factor will provide results in the form of numbers and be measured as specified in COBIT 2019. The results obtained will then be analyzed to produce information and knowledge related to the corporate governance system of the Manado Post company.

3. Results and Discussion

The results that researchers obtained regarding the Design Factor came from the interview process with the IT Department at the Manado Post Office. 10 design factors need to be assessed to obtain results and priorities from IT governance, which aims to obtain corporate IT governance priorities. After analyzing to determine the objective with Design Factor (DF1-DF11), the process objective is obtained which will be further evaluated as shown in the following picture:

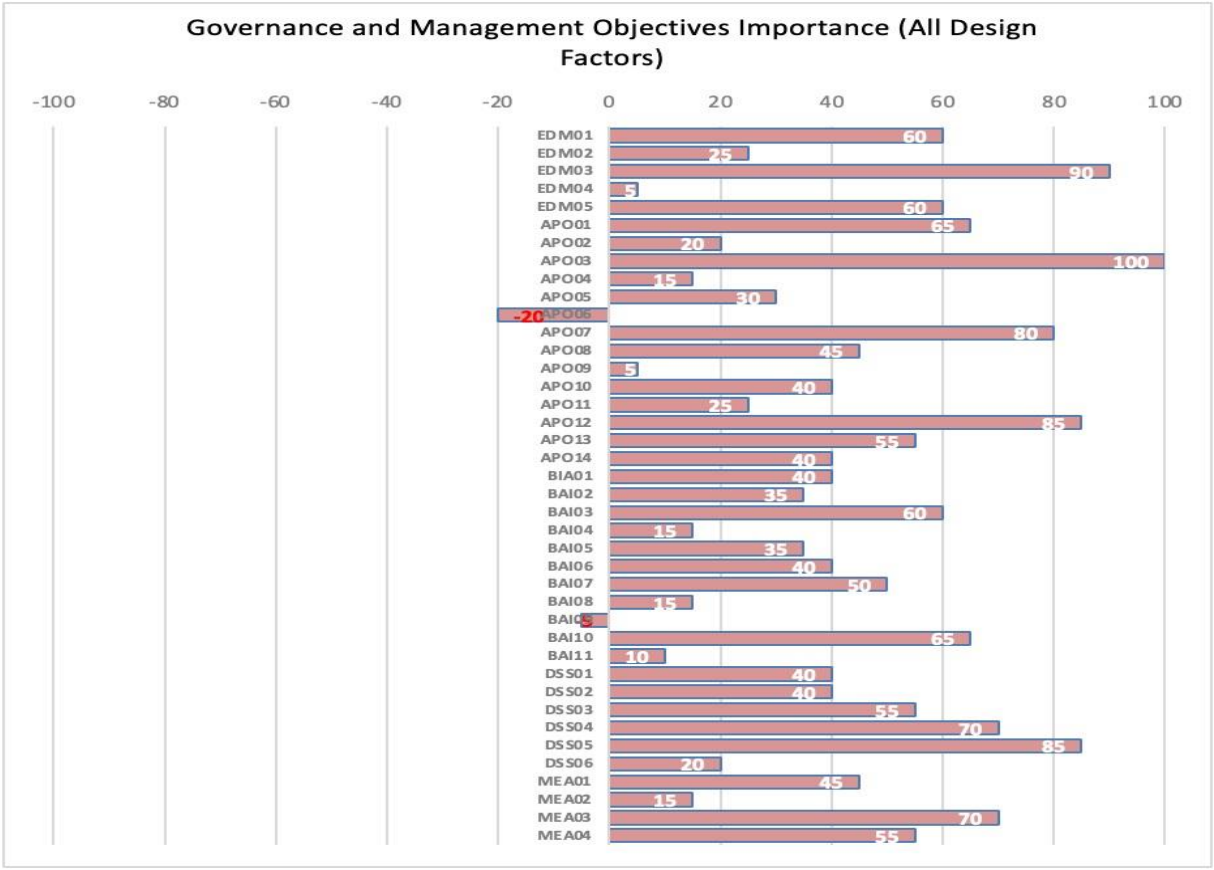

Figure 2. Priority Objectives

The results of filling in the 10 design factors found 2 priority objectives with a value of >95 which were based on and adapted to the company's conditions. The two priority objectives include EDM03 – Ensured Risk Optimization and APO03 – Managed Enterprise Architecture. Based on the results obtained, it will proceed to the core stage.

After the results of the design factors and determining respondents have been obtained, the researcher continues with interviews with respondents who have been determined according to the RACI chart. From the results of these interviews, calculations are made to obtain the capability level for each priority objective which will be categorized according to NPLF [23]. If the results of the capability level for priority objectives do not reach F (fully), then the capability level cannot be continued or stopped at that level [24]. Each priority objective is calculated starting from level 2 capability because it is by what has been determined and written in the COBIT 2019 governance and management objectives book [25].

3.1. EDM03 – Ensured Risk Optimization

Researchers conducted interviews with respondents in the form of activities contained in the EDM03 objective which were used to measure whether MANADO POST had reached the capability level for level 2, level 3, and level 4. These activities were level 2 activities.

3.1.1 EDM03 Level 2 Activity

Table 1. Activities on EDM03 Level 2

No	Process Name	Activities	Question	Capability Level	Yes/No
1	EDM03.01 Evaluate risk management.	Understand the organization and its context related to I&T risk.	Does the organization understand the internal and external context that may influence IT risks?	2	yes
2	EDM03.01 Evaluate risk management.	Determine the risk appetite of the organization, i.e., the level of I&T-related risk that the enterprise is willing to take in its pursuit of enterprise objectives.	Has the organization determined the level of risk it is willing to take regarding IT to achieve company goals?	2	yes

3	EDM03.01 Evaluate risk management.	Determine risk tolerance levels against the risk appetite, i.e., temporarily acceptable deviations from the risk appetite.	Has the organization established limits or tolerances for temporary deviations from the desired level of risk (risk appetite)?	2	yes
4	EDM03.01 Evaluate risk management.	Determine the extent of alignment of the I&T risk strategy to the enterprise risk strategy and ensure the risk appetite is below the organization's risk capacity	Has the I&T risk strategy been checked to ensure alignment with the company's risk strategy?	2	no
5	EDM03.02 Direct risk management	Direct the translation and integration of the I&T risk strategy into risk management practices and operational activities.	Are IT risk management practices organized to ensure alignment with IT risk strategies and operational activities?	2	yes
6	EDM03.02 Direct risk management	Direct the development of risk communication plans (covering all levels of the enterprise)	Is the Organization responsible for directing the development of a risk communications plan that covers all levels of the enterprise?	2	yes
7	EDM03.02 Direct risk management	Direct implementation of the appropriate mechanisms to respond quickly to changing risks and report immediately to appropriate levels of management, supported by agreed principles of escalation (what to report, when, where, and how).	Have appropriate mechanisms been implemented to respond quickly to changing risks, and are there agreed escalation principles?	2	yes
8	EDM03.02 Direct risk management	Direct that risks, opportunities, issues, and concerns may be identified and reported by anyone to the appropriate party at any time. Risk should be managed by published policies and procedures and escalated to the relevant decision-makers	Can risks, opportunities, issues, and concerns be identified and reported by anyone to the appropriate parties anywhere and at any time?	2	no
9	EDM03.03 Monitor risk management	Report any risk management issues to the board or executive committee	Are any risk management issues routinely reported to the board or executive committee?	2	yes

Unrealized activities are found in sub-objective EDM03.01, where the fourth activity highlights the process of determining the level of consistency of Information Technology (I&T) risk strategies with the company's risk strategy, as well as in sub-objective EDM03.02, which demands risk identification and reporting, opportunities, problems and fears to relevant entities in a timely and timely manner.

Meanwhile, activities that have been carried out can be differentiated based on sub-objectives EDM03.01 and EDM03.02. Activities under EDM03.01 include understanding the organizational structure and context related to I&T risk, determining the organization's risk propensity, and assessing the level of risk tolerance against risk preferences. On the other hand, activities included in EDM03.02 include initiatives to direct the process of translating and integrating I&T risk strategies into operational activities and risk management practices, facilitating the development of comprehensive risk communication plans, as well as implementing responsive mechanisms to rapidly changing risk dynamics, including appropriate reporting to relevant levels of management. Finally, the realization of activities also includes sub-objective EDM03.03, where disclosure of risk management issues is reported to the board or executive committee.

After that, level 2 capability calculations were carried out for EDM03 priority objectives and the percentage results obtained were 77.77%, namely based on the NPLF EDM03 level 2 objectives were at the Fully Achieved rating, which means the company has achieved level 2 capability so that it can be continued with level 3 capability assessment [26].

3.2 APO03 - Managed Enterprise Architecture Goals

Priority objective APO03 regarding how the Enterprise Architecture is Managed and each activity addressed indicates level 2 activities.

3.1.2 APO03 Level 2 Activity

Table 2. Activity at APO03 Level 2

No	Process Name	Activities	Question	Capability Level	Yes/No
1.	APO03.01 — Managed Enterprise Architecture	Identify key stakeholders and their concerns/objectives. Define key enterprise requirements to be addressed as well as architecture views to be developed to satisfy stakeholder requirements.	Have key stakeholders and their concerns/goals been identified in the development of the enterprise architecture?	2	no
2.	APO03.01— Managed Enterprise	Identify enterprise goals and strategic drivers. Define constraints that must addressed, including both enterprisewide and project-	Have the company's objectives and strategic drivers been identified as a basis for	2	yes

	Architecture	specific constraints (e.g., time, schedule, resources, etc.).	enterprise architecture development?		
3.	APO03.01 — Managed Enterprise Architecture	Align architecture objectives with strategic program priorities.	Are architectural objectives aligned with the company's strategic program priorities?	2	no
4.	APO03.01 — Managed Enterprise Architecture	Understand enterprise capabilities and goals, then identify options to realize those goals.	Has an understanding of the company's capabilities and objectives guided the identification of options to realize those objectives?	2	yes
5.	APO03.01 — Managed Enterprise Architecture	Assess the enterprise's readiness for change.	Has an assessment of the company's readiness for change been carried out as part of the architecture development?	2	yes
6.	APO03.01 — Managed Enterprise Architecture	Define the scope of baseline architecture and target architecture. Enumerate items that are in scope as well as those out of scope. (Baseline and target architecture need not be described at the same level of detail.)	Has the scope of the base architecture and target architecture been determined taking into account the company's strategic goals and objectives?	2	no
7.	APO03.01 — Managed Enterprise Architecture	Understand current enterprise strategic goals and objectives. Work within the strategic planning process to ensure that IT-related enterprise architecture opportunities are leveraged in the development of the strategic plan.	Are the company's current strategic goals and objectives understood and utilized in the development of I&T-related enterprise architecture strategic plans?	2	yes
8.	APO03.01— Managed Enterprise Architecture	Based on stakeholder concerns, business capability requirements, scope, constraints, and principles, create the architecture vision (i.e., the high-level view of baseline and target architectures).	Has the vision architecture been created based on stakeholder concerns, business capability requirements, scope, constraints, and principles?	2	no

Manado Post has carried out four of the eight activities listed in APO03 level 2. The four activities that have not yet been carried out focus on sub-objective APO03.01, which includes identifying objectives and stakeholders, aligning architectural objectives with strategic programs, determining basic architectural scope and targets, and creating an architectural vision. Meanwhile, the activities carried out by Manado Post are included in the same sub-objective, namely APO03.01, including identifying strategic drivers and constraints, understanding the company's capabilities and objectives, assessing the company's readiness for change, as well as understanding strategic goals and targets company to support strategic plans.
After that, the level 2 capability calculation was carried out for the APO03 priority objectives and the percentage results obtained were 50%, which means that the APO03 level 2 objectives were at the Fully Achieved rating, which means the calculation could not be continued at level 3 capability because it did not reach the capability for level 2[26].

3.3 Level Capability Gaps

As for the results obtained, there is a gap between each priority objective from the results of calculating the current level of capability and the expected level of capability, namely the level of capability obtained from the results of the design factor toolkit analysis. This can be seen in Table 3. Level Capability Gaps

No	Objektif Prioritas	Expected Capability Level	Current Capability Level	Gaps
1	EDM03	9	7	2
2	APO03	8	4	4

3. Conclusion

After completing the ten design factors in the COBIT 2019 toolkit, two priority goals were identified, namely EDM03 - Ensured Risk Optimization and APO03 - Managed Enterprise Architecture Goals. Manado Post has carried out several activities listed in the EDM03 priority objective. However, there are still activities that have not been realized, especially in sub-objectives EDM03.01 and EDM03.02, which require improvements in establishing consistency of I&T risk strategy with the company's risk strategy and identifying and reporting risks appropriately and on time. However, the calculation results show that Manado Post has achieved level 2 capability for EDM03 with a percentage of 77.77%, making it possible to proceed to level 3 capability assessment. Meanwhile, for the APO0 priority objective, Manado Post has also carried out some of the required activities, but there are still several activities that have not been implemented, especially in the APO03.01 sub-

objective. This shows the need for improvement in identifying goals and stakeholders as well as aligning architectural goals with strategic programs. The calculation results show that Manado Post has not reached level 2 capability for APO03, with a percentage of 50%. Therefore, calculations cannot be continued at level 3 capability because it has not yet reached level 2 capability. Overall, these conclusions provide an overview of progress and the need for improvement which can be used as a guide in further development of Manado Post.

Based on the findings obtained, the following are several suggestions that can be submitted to Manado Post to further strengthen and improve the effectiveness and efficiency of ensuring risk optimization and managing company architectural objectives:

1. In-depth Analysis of Unrealized Sub-Objectives: Conduct a more in-depth analysis of sub-objectives EDM03.01 and EDM03.02 to understand the obstacles that may prevent Manado Post from achieving unrealized activities. Identify the causes and propose solutions that can help increase the consistency of the I&T risk strategy with the company's risk strategy and identify and report risks appropriately and on time.
2. Benchmarking with Similar Organizations: Compare Manado Post's practices in risk management and enterprise architecture with similar organizations in the same industry. Identify whether there are best practices that can be adopted or opportunities to learn from the success of others.
3. Develop a Clear Follow-up Plan: Create a clear follow-up plan based on the findings from the previous analysis. This plan should include concrete steps to improve activities not yet realized in EDM03 and APO03. Make sure the plan can be implemented well and its success can be measured.

By conducting research based on these suggestions, Manado Post can improve its practices in risk management and enterprise architecture to achieve higher and more sustainable levels of capability.

References

[1] A. A. Aidhi, M. A. K. Harahap, A. Y. Rukmana, S. P. Palembang, and A. A. Bakri, "Peningkatan Daya Saing Ekonomi melalui peranan Inovasi," Jurnal Multidisiplin West Science, vol. 2, no. 02, Art. no. 02, Feb. 2023, doi: 10.58812/jmws.v2i02.229.

[2] Kementrian Komunikasi dan Informatika, "Perkembangan Ekonomi Digital di Indonesia, Strategi dan Sektor Potensial." Pusat Penelitian dan Pengembangan Aplikasi Informatika dan Informasi dan Komunikasi Publik Badan Penelitian dan Pengembangan SDM Kementerian Komunikasi dan Informatika, 2019.

[3] SISI, "Peluang dan Tantangan Teknologi dalam Mengubah Model Bisnis Tradisional," SISI - Sinergi Informatika Semen Indonesia. Accessed: Apr. 05, 2024. [Online]. Available: https://sisi.id/stories/insight/peluang-dan-tantangan-teknologi-dalam-mengubah-model-bisnis-tradisional/

[4] "Inovasi Teknologi Dibidang Pemasaran, Dorong Peluang dan Pertumbuhan Ekonomi," IAIN PAREPARE. Accessed: Apr. 05, 2024. [Online]. Available: https://www.iainpare.ac.id/en/blog/opinion-5/inovasi-teknologi-dibidang-pemasaran-dorong-peluang-dan-pertumbuhan-ekonomi-2165

[5] R. R. Suryono, D. Darwis, and S. I. Gunawan, "Audit Tata Kelola Teknologi Informasi Menggunakan Framework Cobit 5 (Studi Kasus: Balai Besar Perikanan Budidaya Laut Lampung)," Jurnal Teknoinfo, vol. 12, no. 1, Art. no. 1, Jan. 2018, doi: 10.33365/jti.v12i1.38.

[6] A. Muliani, M.Kom, Tata Kelola Teknologi Informasi.

[7] integraadmin, "Tahapan dalam Evaluasi Tata Kelola Teknologi Informasi," Konsultan IT | Software Development | E-Office, Sistem Persuratan Digital, Aplikasi Persuratan Elektronik, Aplikasi Document Management, IT Audit, IT Master Plan. Accessed: Apr. 05, 2024. [Online]. Available: https://integrasolusi.com/blog/tahapan-dalam-evaluasi-tata-kelola-teknologi-informasi/

[8] A. Prabowo, R. Fauzi, and I. Santosa, "Analisis Dan Perancangan Proses Manajemen Kinerja Ti Menggunakan Kerangka Kerja Cobit 2019 Di Pt Inti (persero)," eProceedings of Engineering, vol. 8, no. 5, Art. no. 5, Oct. 2021, Accessed: Apr. 05, 2024. [Online]. Available: https://openlibrarypublications.telkomuniversity.ac.id/index.php/engineering/article/view/15906

[9] "Panduan Lengkap COBIT 2019: Memahami Kerangka Kerja Governance Teknologi Informasi yang Efektif - IT Proxsis Group." Accessed: Apr. 05, 2024. [Online]. Available: https://it.proxsisgroup.com/panduan-lengkap-cobit-2019-memahami-kerangka-kerja-governance-teknologi-informasi-yang-efektif/

[10] "COBIT 2019: Framework Tata Kelola IT yang Mendukung Transformasi Digital - Eduparx Blog." Accessed: Apr. 05, 2024. [Online]. Available: https://eduparx.id/blog/insight/cobit-2019-framework-yang-mendukung-transformasi-digital/

[11] G. M. W. Tangka and E. Lompoliu, "Information Technology Governance Using the COBIT 2019 Framework at PT. Pelindo TPK Bitung," CogITo Smart Journal, vol. 9, no. 2, Art. no. 2, Dec. 2023, doi: 10.31154/cogito.v9i2.577.355-367.

[12] D. Mukarromah and T. Sutabri, "Analisis layanan RF Mobile menggunakan COBIT Domain Deliver and Support (DS)," Indonesian Journal of Multidisciplinary on Social and Technology, vol. 1, no. 2, Art. no. 2, Jun. 2023, doi: 10.31004/ijmst.v1i2.140.

[13] "(8) Pentingnya Tata Kelola TI untuk Meningkatkan Tingkat Kepatuhan Organisasi terhadap Peraturan dan Hukum | LinkedIn." Accessed: Apr. 05, 2024. [Online]. Available: https://www.linkedin.com/pulse/pentingnya-tata-kelola-ti-untuk-meningkatkan-tingkat/?originalSubdomain=id

[14] I. Hidayat, "Kupas Tuntas Tata Kelola IT (IT Governance)," ITGID | IT Governance Indonesia. Accessed: Apr. 06, 2024. [Online]. Available: https://itgid.org/kupas-tuntas-tata-kelola-it-it-governance/

[15] metatags generator, "Evaluation of Governance and Management of Information Technology Services Using Cobit 2019 and ITIL 4 | Jurnal RESTI (Rekayasa Sistem dan Teknologi Informasi)," Aug. 2020, Accessed: Apr. 06, 2024. [Online]. Available: https://jurnal.iaii.or.id/index.php/RESTI/article/view/2265
[16] "Analisis Validitas, Reliabilitas, Tingkat Kesulitan dan Daya Beda Butir Soal Ujian Akhir Semester Tema 7 Kelas III SDN Karet 1 Sepatan | BINTANG," Jul. 2021, Accessed: Apr. 05, 2024. [Online]. Available: https://ejournal.stitpn.ac.id/index.php/bintang/article/view/1291
[17] A. Gerl, M. von der Heyde, R. Groß, R. Seck, and L. Watkowski, "Applying COBIT 2019 to IT Governance in Higher Education," presented at the INFORMATIK 2020, Gesellschaft für Informatik, Bonn, 2021, pp. 517–530. Accessed: Apr. 06, 2024. [Online]. Available: https://dl.gi.de/handle/20.500.12116/34756
[18] A. Safitri, I. Syafii, and K. Adi, "Measuring the Performance of Information System Governance using Framework COBIT 2019," International Journal of Computer Applications, vol. 174, pp. 23–30, Apr. 2021, doi: 10.5120/ijca2021921253.
[19] "Designing Information Security Governance Recommendations and Roadmap Using COBIT 2019 Framework and ISO 27001:2013 (Case Study Ditreskrimsus Polda XYZ) | IEEE Conference Publication | IEEE Xplore." Accessed: Apr. 06, 2024. [Online]. Available: https://ieeexplore.ieee.org/abstract/document/9310875
[20] A. M. Syuhada, "Kajian Perbandingan Cobit 5 dengan Cobit 2019 sebagai Framework Audit Tata Kelola Teknologi Informasi," Syntax Literate ; Jurnal Ilmiah Indonesia, vol. 6, no. 1, pp. 30–39, Jan. 2021, doi: 10.36418/syntax-literate.v6i1.2082.
[21] J. Y. Mambu, R. Rantung, S. Adam, and D. Pungus, "Desain Tata Kelola Teknologi Informasi Hotel Menerapkan Kerangka COBIT 2019," KLIK: Kajian Ilmiah Informatika dan Komputer, vol. 3, no. 6, Art. no. 6, Jun. 2023, doi: 10.30865/klik.v3i6.841.
[22] S. F. Bayastura, S. Krisdina, and A. P. Widodo, "ANALISIS TATA KELOLA TEKNOLOGI INFORMASI MENGGUNAKAN FRAMEWORK COBIT 2019 PADA PT. XYZ," JIKO (Jurnal Informatika dan Komputer), vol. 4, no. 1, Art. no. 1, Apr. 2021, doi: 10.33387/jiko.v4i1.2977.
[23] A. Nisri, "Evaluasi Tingkat Kapabilitas Keamanan Sistem Informasi Menggunakan Kerangka Kerja Cobit 2019," Jurnal Tata Kelola dan Kerangka Kerja Teknologi Informasi, vol. 9, no. 1, pp. 34–41, May 2023, doi: 10.34010/jtk3ti.v9i1.9672.
[24] metatags generator, "Identifikasi Level Pengelolaan Tata Kelola SIPERUMKIM Kota Salatiga berdasarkan COBIT 2019 | Jurnal RESTI (Rekayasa Sistem dan Teknologi Informasi)," Jun. 2021, Accessed: Apr. 09, 2024. [Online]. Available: https://jurnal.iaii.or.id/index.php/RESTI/article/view/3060
[25] N. R. Oktadini and F. Alfito, "PENGUKURAN TINGKAT KEMATANGAN SISTEM INFORMASI TAHANAN POLDA SUMSEL MENGGUNAKAN FRAMEWORK COBIT 2019," Jurnal Teknologi Informasi, Komputer, dan Aplikasinya (JTIKA), vol. 5, no. 1, Art. no. 1, Mar. 2023, doi: 10.29303/jtika.v5i1.218.
[26] A. M. Fikri, H. S. Priastika, N. Octaraisya, S. Sadriansyah, and L. H. Trinawati, "Rancangan Tata Kelola Teknologi Informasi Menggunakan Framework COBIT 2019 (Studi Kasus: PT XYZ)," IMBI, vol. 5, no. 1, pp. 1–14, Dec. 2020, doi: 10.51211/imbi.v5i1.1410.