

Navigating Digital Transformation Challenges: An In-depth Analysis of IT Governance in the Media Industry Using COBIT 2019

Jonathan Sutanto¹, Melissa Indah Fianty^{2✉}, Eryanto Chandra³, Jessica⁴,
Azzahra Shaffira⁵, Yohanes Victor⁶

^{1, 2, 3, 4, 5, 6} Department of Information System, Faculty of Engineering & Informatics, Universitas Multimedia Nusantara, Indonesia

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ABSTRACT

This research was conducted with the main objective of evaluating and improving Information Technology (IT) Governance in an Indonesian media company facing significant challenges due to digital transformation. In the methodological approach, the study utilized the COBIT 2019 framework, involving planning, field implementation, reporting, and follow-up processes. The results of the capability level evaluation revealed a gap between actual achievements and desired targets, especially in the aspects of Managed Innovation (APO04) and Managed IT Changes (BAI06). The implications of these findings emphasize the need for improvements in activities related to managed innovation and IT change. The conclusion of this research underscores the urgency of effective IT governance in navigating the dynamics of digital transformation. It is hoped that these findings will serve as a guide for media companies and other organizations to formulate robust IT policies, enhance sustainable operations, and drive innovation in this digital era.

ABSTRAK

Penelitian ini dilaksanakan dengan tujuan utama untuk mengevaluasi serta meningkatkan Tata Kelola Teknologi Informasi (TI) dalam sebuah perusahaan media Indonesia, yang tengah menghadapi tantangan besar akibat transformasi digital. Dalam pendekatan metodologi, penelitian menggunakan kerangka kerja COBIT 2019, mengarah pada proses perencanaan, implementasi lapangan, pelaporan, dan tindak lanjut. Hasil evaluasi tingkat kapabilitas menunjukkan adanya kesenjangan antara pencapaian aktual dan target yang diinginkan, terutama dalam aspek *Managed Innovation* (APO04) dan *Managed IT Changes* (BAI06). Implikasi dari temuan ini adalah perlunya perbaikan pada aktivitas yang berkaitan dengan inovasi terkelola dan perubahan TI terkelola. Kesimpulan penelitian ini mempertegas urgensi tata kelola TI yang efektif dalam menghadapi dinamika transformasi digital, dengan harapan hasilnya dapat menjadi panduan bagi perusahaan media dan organisasi lainnya dalam merumuskan kebijakan TI yang tangguh, meningkatkan operasional yang berkelanjutan, dan memacu inovasi di era digital ini.

Corresponding Author :

Melissa Indah Fianty

Information System Department, Faculty of Engineering & Informatics, Universitas Multimedia Nusantara, Provinsi Banten, Indonesia

Jl. Boulevard, Gading Serpong, Kel. Curug Sangereng, Kec. Kelapa Dua, Kab. Tangerang, Provinsi Banten, Indonesia

Email: melissa.indah@umn.ac.id

INTRODUCTION

In the current era of technology, the role of Information Technology (IT) in organizational settings is crucial, especially amidst intensifying business competition. Technological advancements necessitate effective IT governance continually evaluated according to standards (Kumar et al., 2021). In this context, IT encompasses infrastructure, systems, or methods supporting the meaningful acquisition, delivery, processing, interpretation, storage, organization, and utilization of data (Lobo & Noronha, 2022). The purpose of employing IT is to enhance efficiency, effectiveness, and work control, providing optimal services to customers and stakeholders. Its application in a company aims to furnish accurate, timely, relevant information supporting decision-making (Angelina & Fianty, 2023).

As a leading media company in Indonesia, publishing news content through its website encompassing current news, informative articles, opinions, and various multimedia content, substantial investment and high risks are challenges faced in implementing Information Technology (IT) in the business environment. Nevertheless, the company perceives that long-term implementation is expected to add value to its business activities. The close relationship between IT progress and its existence as a media company is revealed through the crucial role of IT in supporting content delivery to the public and positive assessments of the long-term value of IT implementation.

Digital transformation poses complex issues for companies, particularly in adapting to digital transformation and changes in the media industry. The data indicates that this company faces a major challenge in adapting to changing consumer trends shifting towards online platforms. Despite the new opportunities brought by digitization, such as wider reach and faster interactions, there is also pressure to adapt to changing consumer behavior. The impacts of these issues include the risk of decreased efficiency in news and content delivery, additional investments in technology, and digital infrastructure development. Financially, changes in business models and declining purchasing power in the traditional media industry may negatively impact company revenue.

In addressing the challenges of adapting to changes in the media industry and digital transformation, the role of Information Technology (IT) governance becomes crucial. In this context, audit refers to the examination covering evaluations of various IT aspects of the company (Misuraca & Viscusi, 2013). Audit results encompass the identification of weaknesses in IT structures, potential data security risks, and opportunities for improvement (Nasser et al., 2022). The audit results can serve as a strategic guide for the company in formulating IT policies, ensuring operational sustainability, and effectiveness in this digital transformation era (Banerjee et al., 2015).

Conducting an IT Governance audit using the COBIT 2019 framework is relevant for evaluating and improving IT governance in an organization (Information Systems Audit and Control Association, n.d.). The data indicates that COBIT 2019, developed by ISACA (Information System Audit and Control Foundation), serves not only as a framework but also as a comprehensive guide (Mubarak & Fianty, 2023). It is renowned for analyzing IT governance due to its flexibility in implementation. COBIT 2019 includes the Design Factor (DF) concept, allowing a more detailed identification of processes or domains based on the actual IT governance conditions within a company (Jaime & Barata, 2023). The use of COBIT 2019 offers features for measuring the maturity level of IT in an organization, and its implementation has the potential to facilitate the development of effective policies in controlling IT in an organization (Amorim et al., 2020). Additionally, one of the benefits of implementing COBIT 2019 is its ability to categorize measurement functions into governance and management (Nachrowi et al., 2020). COBIT 2019 consists of five domains, including EDM (Evaluate, Direct, and Monitor) for governance objectives, and BAI (Build, Acquire, and Implement), APO (Align, Plan, and Organize), MEA (Monitor, Evaluate, and Assess), and DSS (Deliver, Service, and Support) for management objectives (Information Systems Audit and Control Association., n.d.).

In response to the dramatic changes in the company caused by digital transformation, the company has decided to conduct an IT audit using the COBIT 2019 framework. Data supports this decision by indicating that the audit using COBIT 2019 aims not only to identify issues but also to provide measurable and targeted solutions, ensuring the company can effectively compete in the digital era while maintaining operational sustainability and innovation in the media industry.media.

RESEARCH METHODS

The research process outlined in this study serves as a guiding framework for conducting further investigations, as illustrated in Figure 1. This visual representation details the sequential steps involved in the research workflow, providing a clear overview of each stage (Sanjaya & Fianty, 2022). The sequence of this research is delineated as follows:

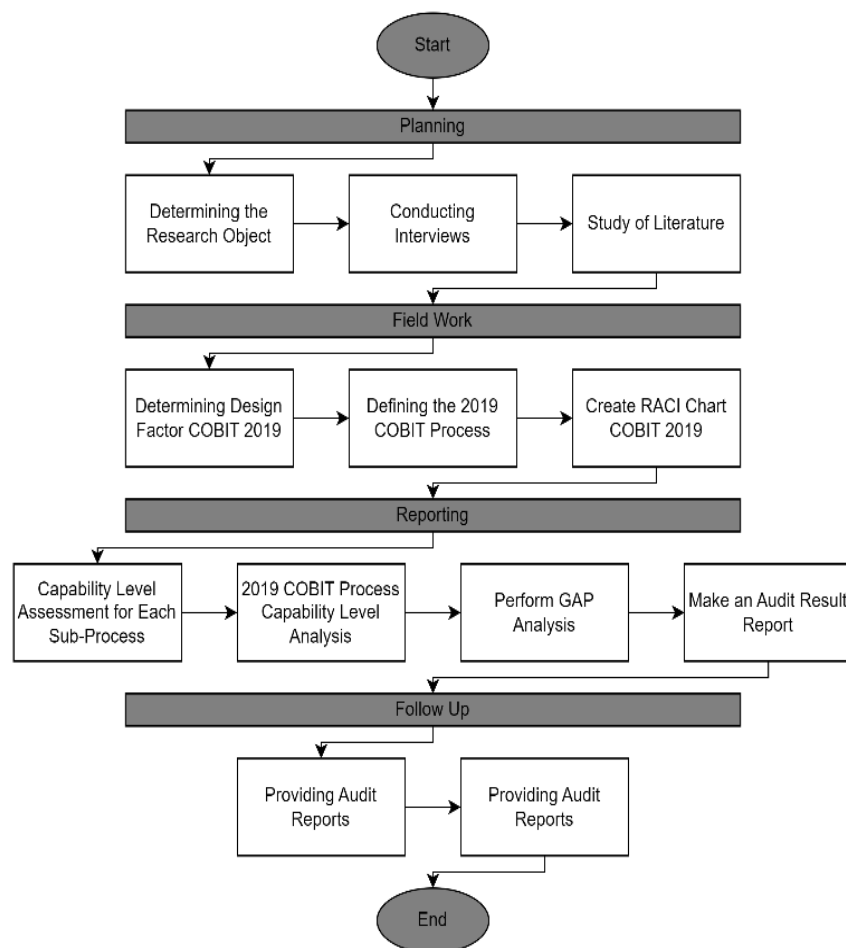


Figure 1. Research Workflow

Planning

In the Planning phase, three main steps are undertaken to prepare for the analysis of the company's governance. Firstly, the initial step is "Determining the Research Object," where the focus is on identifying the object to be examined. This involves identifying specific issues or aspects within the company that will be the focal point of the analysis. The next step in Planning is "Conducting Interviews," where interview schedules are prepared. In this phase, stakeholders or relevant personnel are engaged in interviews to provide direct insights, perspectives, and information related to the company's governance (Tantiono & Legowo, 2020). The interviews aim to understand internal perspectives and gather qualitative data for further analysis. The final step

is "Study Literature," where literature related to the company's governance is reviewed. This includes a review of relevant literature, previous research, and related frameworks to gain a profound understanding of issues associated with the company's governance (Nugroho, 2017).

Overall, the Planning phase aims to identify and comprehend issues within the company by determining the object of analysis, conducting interviews with stakeholders, and studying relevant literature. These steps form the foundation for further analysis in the subsequent stages of the company's governance evaluation and improvement process.

Field Work

The second phase of COBIT 2019 implementation, part of the fieldwork, encompasses crucial steps: Determining COBIT 2019 Design Factors, Defining COBIT 2019 Processes, and Creating a RACI Chart. Determining Design Factors involves identifying and assessing aspects like policies and procedures, providing insights into key elements influencing COBIT 2019 implementation. Defining Processes establishes roles within Evaluate, Direct, and Monitor (EDM), Build, Acquire, and Implement (BAI), and other domains. Creating a RACI Chart assigns responsibilities, clarifying roles throughout the implementation. The outcomes involve evaluating capability levels, analyzing gaps, and gaining insights into areas needing improvement to align with the desired capability level in the COBIT 2019 framework (Saeedinezhad & Naghsh, 2019).

Reporting

In the subsequent reporting phase, the assessment progresses through evaluating the activities in the selected processes, assigning values to each activity to determine the Capability Level. A detailed analysis of the Capability Level for each COBIT 2019 process is conducted, aiming to calculate overall effectiveness. The Gap Analysis then compares the achieved Capability Level with predefined targets, revealing areas for improvement. The culmination involves crafting a comprehensive audit report that documents assessment results and offers valuable recommendations in alignment with the COBIT 2019 framework. This report serves as a strategic tool to enhance the existing Capability Level for the organization, guiding improvements and ensuring alignment with specified targets in subsequent stages (Nurdin & Lubis, 2023).

Follow Up

The follow-up and enterprise feedback phase involves a meticulous examination of the recommendations provided, assessing their relevance and potential effectiveness in addressing the identified issues within the organization (Muttaqin et al., 2020). This process includes a detailed review to ensure that the proposed improvements align with the company's goals, resources, and operational context (Putra & Fianty, 2023). Simultaneously, the enterprise seeks feedback from various stakeholders, encompassing employees, managers, and other relevant parties (Putri et al., 2022). This feedback-gathering process aims to capture diverse perspectives and ensure that the recommendations resonate with the needs and expectations of different stakeholders. The culmination of this phase results in a comprehensive understanding of the feasibility of the recommendations and their alignment with organizational objectives.

RESULTS AND DISCUSSION

Planning

The strategic goal of the company is to address the impact of technological changes, especially in business and Information Technology (IT) management. Adopting the SMART method, concrete steps have been formulated, including increasing the number of subscription customers, engaging readers on the website, generating advertising revenue, developing mobile applications, and improving the quality of multimedia content. Through digital marketing strategies and product and service diversification, the company strives to meet user preferences and expand its visibility. Performance evaluation focuses on data analysis, financial performance, content quality, reader engagement, and customer feedback. Nevertheless, the company faces various challenges, such as difficulties in achieving subscription and advertising revenue targets,

as well as technological constraints in developing applications and enhancing multimedia content. In responding to these challenges, it must identify, prioritize, and communicate transparently to maintain a balance between set goals. The overall performance impact heavily depends on the ability to navigate the complex dynamics of technological transformation and accommodate user needs.

Field Work

The IT selection process involves determining or adjusting the company's IT needs to monitor, evaluate, and measure the performance of implemented IT solutions. This process is crucial for aligning organizational strategies and goals with existing IT infrastructure. The chosen approach is the COBIT 2019 core model, known for its adaptability to manage IT effectively in a company and meet organizational needs.

The COBIT 2019 Core Model selection process for the company involves four steps: understanding the organizational environment, determining governance focus, identifying governance activities, and mapping COBIT 2019 objectives. The initial scope of the existing governance system in a company is determined by various design factors, such as enterprise strategy design, enterprise goals, IT risk profile, IT-related issues, IT threat landscape, compliance requirements, role of IT, sourcing model for IT, IT implementation resource, technology adoption strategy, and enterprise size.

Enterprise Strategy Desain and Enterprise Goal

Enterprise strategy design for the company includes four categories: Growth/Acquisition, Innovation/Differentiation, Cost Leadership, and Client Service/Stability. Each is assigned a specific value. Enterprise goals are evaluated based on design factors, with Quality of Financial Information and Quality of Management Information receiving the highest scores, indicating the company's focus on enhancing the quality of information within the organization.

IT Risk Profile and IT Related Issues

The IT risk profile identifies potential threats faced by the company, with Logical Attacks being a significant concern. IT expertise, skills & behavior, and Data & Information Management are also recognized as risks. The assessment of IT-related issues reveals ongoing improvements in several areas, addressing specific issues related to service placement and indicating the company's commitment to adapt to digital processes.

IT Threat Landscape and Compliance Requirements

The IT threat landscape illustrates a relatively high level of threat placement, emphasizing the need for vigilant risk management to minimize potential losses. Compliance requirements are predominantly normal, with some policies being particularly sensitive in the development process, warranting careful attention.

Role of IT

The role of IT highlights the importance of IT Strategic, followed by IT Support, IT Factory, and Turnaround in contributing to various aspects within the organization. The sourcing model for IT shows the company leaning towards Cloud with a 60% preference, emphasizing its utilization of Cloud services to operate the company's systems.

Sourcing Model for IT and IT Implementation Resource

The IT implementation resource reveals that the company predominantly uses Agile methods (70%), focusing on collaboration, software development, and customer feedback. The Technology Adoption Strategy portrays the company as a Follower (90%), preferring to wait and observe before adopting new technologies.

Concluding the Governance System Design

The company formulates a design for the governance system, encompassing key governance and management objectives, to finalize the structure of the governance system and achieve alignment with the COBIT 2019 objectives.

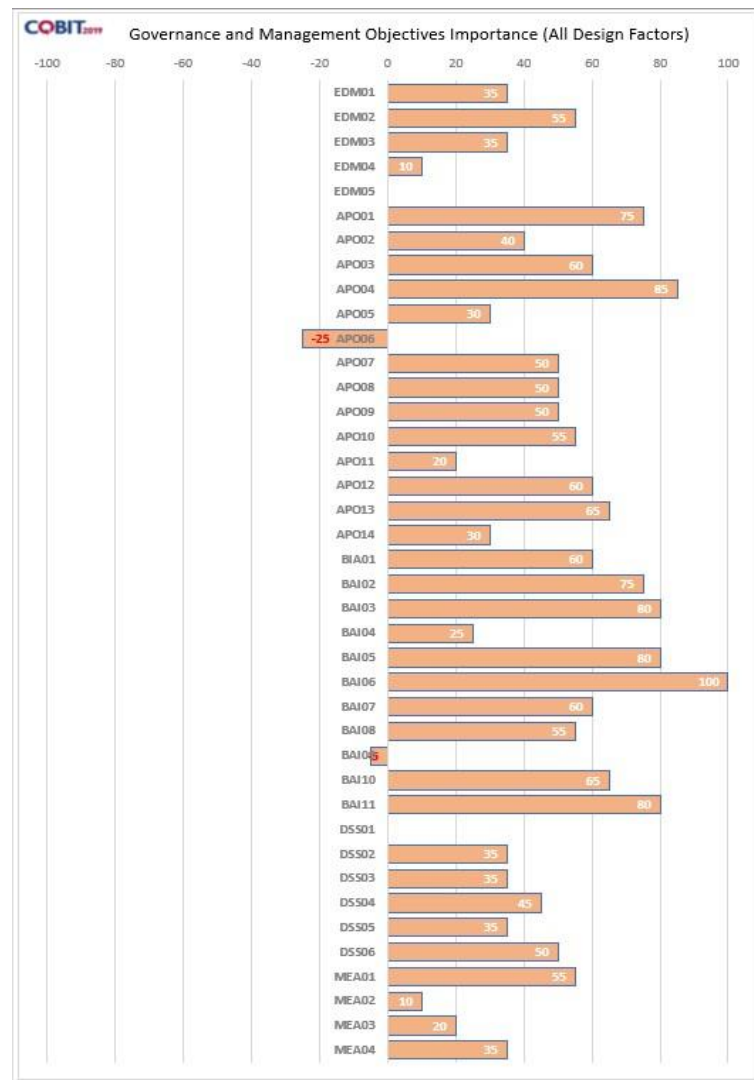


Figure 2. Design Factors Conclusions

Figure 2 provides a summary of the entire design factors measured, resulting in objectives aligned with the company's priority needs. Objectives are scored from -100 to 100, with 100 being the most crucial value. While all processes are assessed, not all are deemed important and prioritized. Target capability levels have been set, and objectives scoring 75 or higher are considered highly crucial, must be prioritized, and should achieve a capability level 4 target. BAI06 (Managed IT Changes) and APO04 (Managed Innovation) are two objectives that scored 75 or higher.

Reporting

The data analysis process begins by processing the interview results obtained, which includes the assessment conducted previously through the interview process by presenting questions in the form of audit documents to the IT and business divisions of the company. Subsequently, the capability levels of each objective defined in the objective mapping stage will be measured. The measurement of capability levels will be carried out by calculating the average for each objective.

APO04 (Managed Innovation)

The average calculation results for APO04 are as follows:

Table 1. APO04 Calculation Results

Process	Score
APO04.01	85%
APO04.02	87%
APO04.03	85%
APO04.04	82%
APO04.05	80%
APO04.06	81%
Capability Level Results	Total 500%
	Average 83.3%

The results depicted in Table 1 offer a comprehensive overview of the calculated values for each process within the APO04 objective, assessing the capability level at 2. The individual process scores are as follows: APO04.01 at 85%, APO04.02 at 87%, APO04.03 at 85%, APO04.04 at 82%, APO04.05 at 80%, and APO04.06 at 81%. The overall capability level, determined by averaging these values, stands at 83%. This cumulative score suggests that the company falls short of advancing to capability level 3, given that the calculated result does not meet the required threshold of 85%. Analyzing these specific process scores provides detailed insights into the strengths and potential areas for improvement within the APO04 objective. Notably, APO04.02 emerges with the highest score at 87%, indicating a relatively robust performance in that particular process. Conversely, APO04.05 records the lowest score at 80%, signifying an aspect that may necessitate attention or enhancement.

BAI06 (Managed IT Changes)

The average calculation results for BAI06 are as follows:

Table 2. BAI06 Calculation Results

Process	Score
BAI06.01	83%
BAI06.02	81%
BAI06.03	79%
BAI06.04	83%
Capability Level Results	Total 330%
	Average 82.5%

Table 2 provides a detailed breakdown of the calculated scores for individual processes within the BAI06 objective, assessing the capability level at 2. The specific process scores are as follows: BAI06.01 at 83%, BAI06.02 at 81%, BAI06.03 at 79%, and BAI06.04 at 87%. The overall capability level, obtained by averaging these values, stands at 82.5%. This cumulative score indicates that the company falls short of progressing to capability level 3, as the calculated result does not reach the required threshold of 85%. Analyzing these individual process scores offers a nuanced understanding of the strengths and potential areas for improvement within the BAI06 objective. Notably, BAI06.04 emerges with the highest score at 87%, showcasing a relatively robust performance in that particular process. Conversely, BAI06.03 records the lowest score at 79%, highlighting an aspect that may require focused attention or enhancement to elevate overall capability levels.

Gap Analysis

The Gap Analysis process aims to demonstrate the outcomes achieved by the company in comparison to the assessment targets. Its purpose is to serve as a reference for recommendations to the company and enhance overall performance.

Table 3. Gap Analysis

No.	Objective	Current Capability	Expected Capability	Gap
1.	APO04 (Managed Innovation)	2	4	2
2.	BAI06 (Managed IT Changes)	2	4	2

Table 3 provides a comprehensive gap analysis, comparing the current level of capability measurements with the targeted capability levels. This analysis serves as a valuable reference for the company, allowing them to assess the effectiveness of the implemented processes and identify areas that may require further improvement or enhancement. In examining the results for the two objectives, firstly, APO04 (Managed Innovation) indicates that the current measurement falls short of the expected target. The calculation reveals a capability level of 83%, placing it at level 2. However, the predetermined capability level is 100%, corresponding to level 4, highlighting a gap of 2 levels in APO04. Similarly, for BAI06 (Managed IT Changes), the measured capability level stands at 83%, indicating a level 2, while the predetermined capability level is 90%, corresponding to level 4. This, too, unveils a gap of 2 levels in BAI06. The gap analysis provides crucial insights for the company to make informed decisions on refining and advancing their processes to meet the desired capability levels.

Findings and Impacts of Capability Level Measurement

Based on the results of document audit segmentation, several processes have been executed, ranging from exploration and implementation of designs to the evaluation of business process changes involving IT services. Subsequently, there is an approval and rejection process for proposed changes, and the approved changes must be implemented according to plan because they will impact company procedures. The assessment results of previous objectives identified some weaknesses in activities with values ≤ 50 (Partially Achieved). These findings provide an evaluation of the IT governance performance in the company, serving as a basis for improvement. The findings offer an understanding of the impacts experienced by the company. Findings and impacts from the BAI06.01 process indicate server downtime issues, posing a significant challenge as company server activities are limited, restricting daily operations. BAI06.02 faces challenges in managing user expectations, which can reduce satisfaction and productivity, and harm the company's reputation. In APO04.1, issues related to digital disruption in the context of conflicts can seriously affect consumer trust if digital transformation is delayed. APO04.2 faces the risk of errors in implementing high-expectation product ideas, potentially lowering reputation and causing consumer dissatisfaction. APO04.3, with innovative changes, demands adjustments to internal rules, requiring employee adaptation for higher-quality outcomes.

Recommendations

Recommendations for improvement are utilized to enhance activities with a score less than 50 based on the findings and impacts that may affect the company. Accordingly, Table 4 is created to illustrate the processes within BAI06 and provide recommended changes to BAI06 activities.

Table 4. BAI06 Improvement Recommendations

Process	Activity	Recommendations
BAI06.01	Encountering issues related to server downtime. This can be a significant challenge for the company	The company can prepare a system that helps during server downtime, such as implementing a data server management supervision application.
BAI06.02	Facing challenges in managing user expectations in the SI/TI field.	Adding job descriptions to Quality Assurance to ensure that users can use features at the company and are satisfied with them.

Table 4 shows improvement recommendations for the company based on the findings obtained in BAI06. It is noted that there are still constraints related to relevant and significant IT risks externally and internally within the company. With the given recommendations, it is hoped that improvements can be made and systems can be prepared to prevent unwanted incidents.

Table 5. BAI06 Improvement Recommendations

Process	Activity	Recommendations
APO04.01	Facing issues in digital disruption within the context of conflict.	As a news provider, the company should consistently provide factual, clear, and understandable news information for the public.
APO04.02	Having high expectations for ideas on products.	The company should adapt to the evolving environment, technological changes, and innovations in society to ensure its products are enjoyed.
APO04.03	With innovation and system changes, there are changes in regulations that need to be adjusted internally.	The company can create policies, such as User Guidance or employee regulations, regarding the direction of the company regarding the changes made.

Table 5 presents improvement recommendations for the company based on COBIT 2019 recommendations for APO04. These improvements focus on the development of innovation and technology within the company to remain competitive and appealing to the public with the technology and products provided by the company.

Follow Up and Enterprise Feedback

The company will pay more attention to the findings and recommendations of the audit, ensuring effective follow-up implementation. This follow-up process involves identifying specific steps, implementation planning, and executing improvements to ensure the continuous development of the company. Additionally, the concept of Enterprise Feedback involves a two-way evaluation of feedback between the auditor and the company, ensuring that audit results and recommendations are considered beneficial and can enhance future audit processes. This establishes transparent and ongoing communication to ensure continuous improvements in company management.

CONCLUSION

The media company is facing digital transformation, particularly in managing Information Technology (IT). Significant investment and high risks pose challenges for the company in

implementing IT in its business environment. Nevertheless, the company believes that long-term implementation will add value to its business activities. In the context of digital transformation and changes in the media industry, the company faces complex challenges, especially in adapting to consumer trends shifting to online platforms. In response to these significant changes, the importance of IT governance becomes crucial. IT audit using the COBIT 2019 framework is considered relevant to evaluate and improve IT governance in the company. The use of COBIT 2019 provides a comprehensive overview, and audit results can be used as a strategic guide to formulate effective IT policies, ensure operational sustainability, and enhance innovation in this digital transformation era. Concrete steps have been taken, from planning, field implementation, reporting, to follow-up and feedback from the company. The evaluation results of the capability levels show a gap between the achieved capability levels and the desired targets in key aspects, such as managed innovation and managed IT changes.

Based on the findings and impacts of the capability levels, improvement recommendations have been proposed to address these issues, including improvements to BAI06 and APO04 activities. The implementation of these recommendations is expected to enhance the company's performance in facing the challenges of digital transformation and optimizing the long-term benefits of IT implementation. The importance of follow-up and feedback from the company in accepting audit recommendations cannot be overlooked. The company is expected to pay attention to findings and recommendations, ensuring effective follow-up implementation. This process also involves collecting feedback from various stakeholders, including employees and managers. Thus, transparent and sustainable communication can be maintained to ensure continuous improvement in company management, aligning with the company's vision in facing the dynamics of digital transformation and the increasingly intense competition in the media industry.

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