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Designing Information Technology Governance in Trading Companies Using COBIT 2019 Framework

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Abstract

Mooi Brand Salatiga, a company in the clothing retail sector, has implemented various information systems (IS) to enhance its business processes. These systems include social media platforms such as WhatsApp, Instagram, and Facebook, a Sales Information System for cashiers, and a website. However, Mooi Brand Salatiga often encounters several challenges with the use of these IS, including the lack of system integration, an overreliance on current technology, and an inability to develop independent information systems. COBIT 2019, a systematic and comprehensive framework, offers potential solutions to support companies in efficiently managing and monitoring their information technology. This study leads to the development of an improved pattern for information technology management at Mooi Brand Salatiga, addressing these challenges and paving the way for enhanced operational efficiency and technological autonomy.

Keywords: Governance, Enterprise, Sales, COBIT 2019, Factor Design

1. INTRODUCTION

With the ever-growing progress of the times and the rapid development of information technology, opportunities open up to increase company efficiency [1]. The increasingly rapid development of information technology has made organizations increasingly aware of the importance of ensuring the benefits of implementing information technology, managing risks associated with information technology, and how to regulate the use of information technology in accordance with the governance framework in the organization [2]. Entering the current digital era, information technology has become a key element of business success. Technologies such as cloud computing, artificial intelligence, and the internet of things are becoming more commonly used and trending [3]. Information technology governance prioritizes improving performance and technological capabilities to accommodate business demands in today's organizations, both internally and externally from the organization. When this aspect of governance is not paid enough attention, companies will face difficulties in controlling and assessing the effectiveness of the application of information technology and will not be able to use it as the main guide [4]. Information Technology (IT) governance is a very important component in successfully

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implementing the principles of good corporate governance. Using the COBIT 2019 framework in designing IT governance for enterprises can be a useful tool in helping organizations evaluate and improve their business processes by identifying risks and opportunities associated with the use of information technology [5].

Information Technology governance is very necessary for organizations, whether non-profit organizations or commercial companies, such as: trading companies, manufacturing companies and other commercial companies to manage all the Information Technology/Information Systems resources they own. Moreover, currently all aspects are using digitalization. Mooi Brand Salatiga is a company operating in the clothing sales sector that has implemented several information systems (IS) to support its business processes. The IS used includes social media such as WhatsApp, Instagram, and Facebook, Sales IS for Cashiers, and websites. Some of the problems that Mooi Brand Salatiga often experiences regarding the use of IS so far include: there is no system integration, it is still too dependent on current technology and has not been able to develop IS independently, so that if there is a technological failure, it can cause a decrease in company productivity, security and privacy aspects are still vulnerable to data loss and transaction errors which can have a negative impact on the company's reputation and customer trust, and expensive IS implementation costs can also hinder the company's progress in implementing the IS required by Mooi Brand Salatiga.

One framework that can be used for this audit is COBIT (Control Objective for Information & Related Technology). COBIT is a collection of guidelines that helps in managing IT governance. As technology develops, COBIT has evolved from COBIT 5 to COBIT 2019. COBIT 5 helps companies achieve higher levels of success, while COBIT 2019 is a comprehensive framework that helps organizations manage and control IT efficiently to achieve their business goals [6]. COBIT 2019 is a framework that helps companies manage their information/technology (IS/IT) systems. COBIT 2019 helps companies in several ways, such as understanding IS/IT risks, IS/IT asset management guidance, application development, IS/IT security, IT service management, and IS/IT performance measurement. By using COBIT 2019, companies can manage their IS/IT more efficiently, maximize technology benefits and reduce risks [7]. The aim of this research is to control, evaluate and design IT governance at Mooi Brand Salatiga. Because currently Mooi Brand Salatiga does not yet use SI/IT in every existing part. So, to be able to integrate IS/IT to be implemented, IT governance design is needed at Mooi Brand Salatiga.

The first research used as a reference in this research discusses how to determine the level of IT management capability in an organization based on the COBIT 2019 framework and provides recommendations for improving the organization's capability in IT governance so that it meets expectations in supporting its performance. The difference and development of this research with previous

research is the use of the newer COBIT 2019 framework. COBIT 2019 ensures that process objectives are aligned with business strategy and objectives, because an assessment is carried out first about the company's focus area using a system, namely the design factor toolkit [8]. Other research using the latest COBIT framework, namely COBIT 2019, has been carried out by other researchers. In this research, a clear capability level analysis was carried out, but did not provide recommendations. Therefore, this research will provide analysis results and provide recommendations [9].

Information Technology is a part that is difficult to separate from a company. Companies must find various types of strategies that can help the company achieve its goals from using IT [10]. The IT governance system structure consists of components that build an IT governance system, namely human assets, control, and regulations. In this case, humans are a component that has an important role and function in designing, implementing, evaluating systems. If in a company there is IT governance that is not effective, then the company will experience a negative impact. So, to avoid this, IT governance uses a framework. Using a framework has advantages that can be beneficial for companies, frameworks are easier for companies to follow and understand. Through the use of a framework within the company, management within the company and auditors have the same provisions for the process of examining, managing and measuring IT. Information technology can help sales companies in various aspects, such as inventory management, sales, and customer service. In the current digital era, the existence of online stores and the use of social media are very important in maintaining business continuity [11]. The use of information technology can help sales companies understand customer preferences through data analytics and then adjust sales and marketing strategies [12].

2. METHODS

This research combines qualitative and quantitative approaches. A qualitative approach allows researchers to deepen their understanding of phenomena that are complex, ambiguous, and difficult to explain numerically [12]. In contrast, a quantitative approach involves the use of measurement instruments that have been tested to produce consistent and reliable data [13]. Qualitative data in this research was obtained through observation and interviews, while quantitative data was obtained through questionnaires filled out by respondents, then analyzed using maturity level calculations.

Figure 1. Research Stages

The stages in this research include:

1) Determine COBIT 2019 Objectives

The aim of this stage is to identify appropriate domains or process objectives from the COBIT 2019 framework for Mooi Brand Salatiga. This involves understanding the context and strategy of the company. The next stage is to carry out an evaluation by utilizing design factors to determine the initial scope of the management system (DF 1-4) and expand the scope of the management system (DF 5-11). The results of this analysis will determine the design of a management system that will highlight the domains or process objectives that have the highest level of importance at Mooi Brand Salatiga. After that, data related to the objectives being evaluated will be collected. By considering COBIT 2019 design factors, organizations can develop an IT management system that can be tailored to the company's needs and business goals [14].

2) Data collection

In this series of research, the data collection methods used include primary and secondary methods, such as observation, interviews and literature studies.

3) Data analysis

a) In the measurement scale analysis, a recapitulation of respondents' answers from questionnaires that had been distributed to Mooi Brand Salatiga regarding IT management and utilization was carried out. In the 2019 COBIT scale, the respondent's answer will be assessed as "yes" with a value of 1 or "no" with a value of 0.
b) Capability Level Analysis is an analysis carried out after calculating the questionnaire using the Guttman scale. In this analysis, Mooi Brand Salatiga's current IT governance capabilities will be assessed in accordance with the COBIT 2019 framework to determine the level of capability of certain activities.
c) Gap analysis is carried out after knowing the current level of ability and the expected level of ability. This analysis aims to identify what activities Mooi Brand Salatiga needs to improve in implementing SI.

4) Developing Recommendations

The recommendations given as a follow-up to the improvement plan that must be carried out by Mooi Brand Salatiga are aimed at achieving the target level of IT process capability as expected.

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The COBIT 2019 framework Design Principles help companies to develop IT governance that focuses on achieving business goals, as well as ensuring transparency, accountability and effective decision making **Error! Reference source not found.**.

3. RESULTS AND DISCUSSION

3.1 Knowing the Company's Conditions and Strategy

After undergoing a series of interviews with related parties at Mooi Brand Salatiga, we obtained the following results:

1) Understanding Company Strategy

Mooi Brand Salatiga implements a business strategy aimed at increasing sales and service to customers. In its efforts, Mooi Brand Salatiga is actively trying to develop new fashion products and innovations to improve the quality of products and services provided to customers.

2) Understanding Company Goals

Mooi Brand Salatiga prioritizes the application of information technology which is currently experiencing rapid development, which is often known as the digitalization era.

3) Understanding the Company's IT Risk Profile

Every company always faces potential risks that could occur. The consequences will vary depending on the type of risk that may occur, ranging from limited impacts to potentially broader impacts. One potential risk that could affect Mooi Brand Salatiga is in the context of the use of IT resources, development and implementation of application systems in the company. Apart from that, risks can also arise in the form of system failures that have the potential to affect IT operations and ongoing business processes.

4) Understanding Corporate IT Related Issues

Issues in information technology that relate to IT risks can be considered materialized IT risks. Obstacles that arise in the IT context at Mooi Brand Salatiga include problems with inadequate employee capabilities and weaknesses in the security system which makes data vulnerable to breaches.

3.2 Determine the Initial Scope of Governance

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The results of the introduction through interviews and observations have been applied to the design factors in the COBIT 2019 framework as follows.

Design Factor 1: Corporate Strategy

This first design factor describes the different strategic approaches of various organizations and companies. Each organizational entity naturally differs in how they design their basic strategy. There are four main categories in company strategy, namely growth/acquisition, innovation/differentiation, cost leadership, and customer service/stability. Identification of the results of the first design factor for Mooi Brand Salatiga can be depicted in Figure 2.

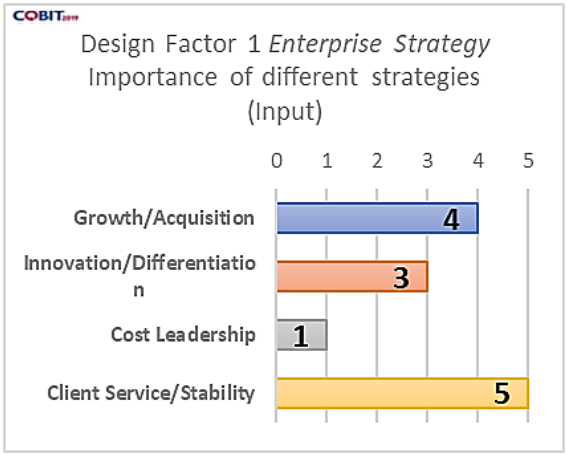

Figure 2. Corporate Strategy Design Factors

Based on Figure 2 that has been presented, Mooi Brand Salatiga's main focus in the company's strategy is centered on the service to clients/stability aspect which is assessed with a score of 5. This assessment is based on Mooi Brand Salatiga's core objective, which focuses on improving product quality and service to customers. Apart from that, the growth aspect is assessed with a score of 3 because Mooi Brand Salatiga is committed to continuing to develop in serving customers well. Innovation is also part of Mooi Brand Salatiga's strategy, although it is not the main focus, because the innovation implemented is largely based on customer needs. Meanwhile, the value in terms of cost leadership is given a score of 1, considering that Mooi Brand Salatiga is basically a sales company that gets goods from suppliers and does not focus on cost control.

Design Factor 2: Company Goals

In the second design factor, a company adopts a strategy to achieve a set of predetermined goals. This goal can be explained in the context of the COBIT 2019

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framework in the second design factor, namely "Company Goals". The identification results are as shown in Figure 3.

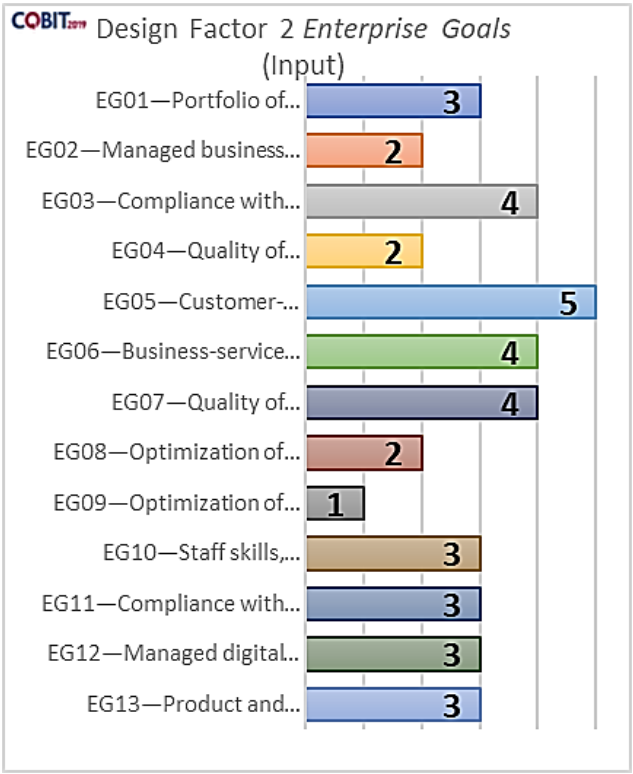

Figure 3. Design Factors Corporate Goals

Based on Figure 3, it can be seen that Mooi Brand Salatiga emphasizes customer-oriented service aspects, which can be found between EG05 to EG07 with point 4 which focuses on customers.

Design Factor 3: Risk Profile

In design factor 3, there is recognition of the risks that may arise within the company. Risk profiles are the most current issues related to information technology that are being faced today and indicate the most vulnerable areas. There are 11 risk categories that need to be considered. The following are the results of introducing the risk profile at Mooi Brand Salatiga as shown in Figure 4.

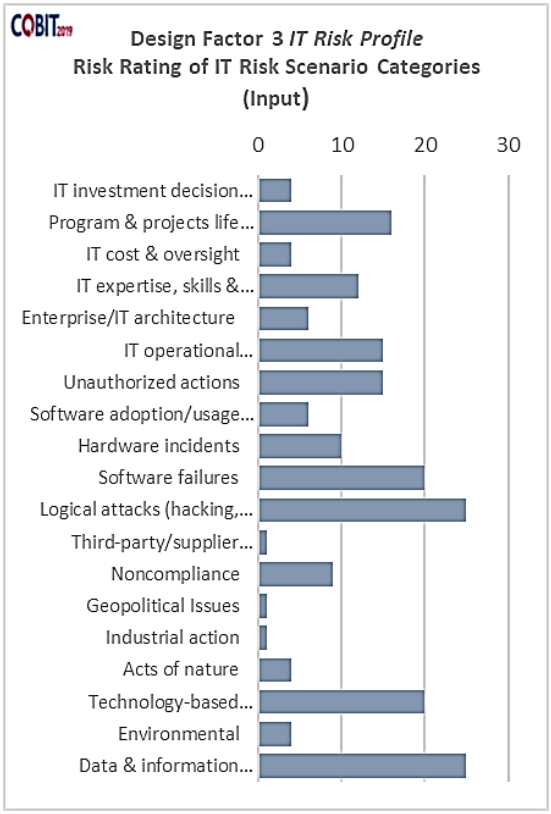

Figure 4. Risk Profile Design Factors

Referring to Figure 4, the highest value is 25, which has a big impact if this risk occurs. The categories of logical attack and data & information management are assets that must be considered and managed carefully by Mooi Brand Salatiga. This is because if there is a leak of transaction data and customer data, the consequences will be very serious. Population data, especially if it falls into the big data domain, will have a very detrimental impact on companies. In addition, in the context of technology-based innovation, good planning is very important. Mooi Brand Salatiga must ensure that the use of technology does not complicate or complicate company operations.

Design Factor 4: Enterprise IT-Related Issues

The fourth design factor records the discovery of problems that Mooi Brand Salatiga is currently experiencing. At this stage, an evaluation is carried out regarding issues or problems related to Information Technology that are being faced by the company. The following are the results of identification of ongoing Information Technology problems as shown in Figure 5.

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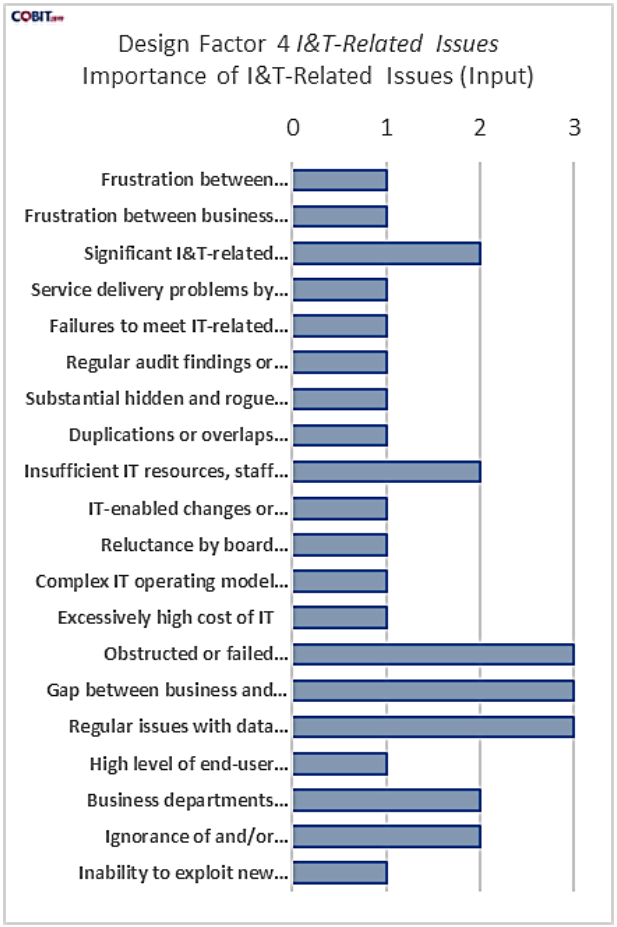

Figure 5. Design Factors Related to Enterprise IT

Referring to Figure 5, the issues that often arise at Mooi Brand Salatiga are related to information technology. This includes a lack of effectiveness in implementing previously prepared innovation plans, as well as a lack of employee ability to utilize technology to create innovations that support the company in managing its operations.

Design Factor 5: IT Threat Landscape

The fifth design factor is understanding the Information Technology Threat Landscape, which is an important step in helping companies or organizations to recognize various potential threats that could endanger the organization's operations. In this context, we will focus on the Mooi Brand company in Salatiga.

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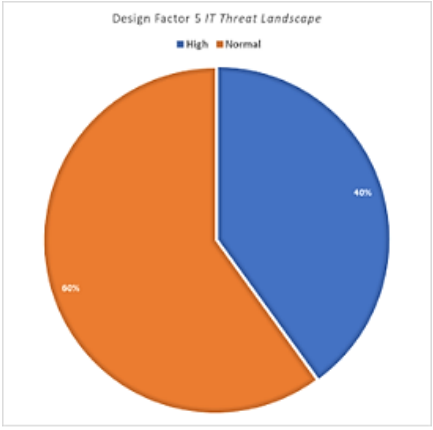

Figure 6. IT Threat Landscape Design Factors

The identification results can be found in the illustration in Figure 6. There is a conventional risk of 60% which arises due to frequent disruptions to the installed WiFi network. The next threat, with a high-risk level of up to 40%, is repeated damage to Mooi Brand Salatiga hardware. These threats can be handled effectively because the companies concerned quickly resolve problems that arise.

Design Factor 6: Compliance Needs

The 6th design factor describes the process of identifying the company's level of conformity with compliance requirements, both coming from internal and external to the company. The interview results show that Mooi Brand Salatiga complies with these requirements with a compliance level of 100%, indicating that Mooi Brand Salatiga fully complies with existing requirements as shown in Figure 7.

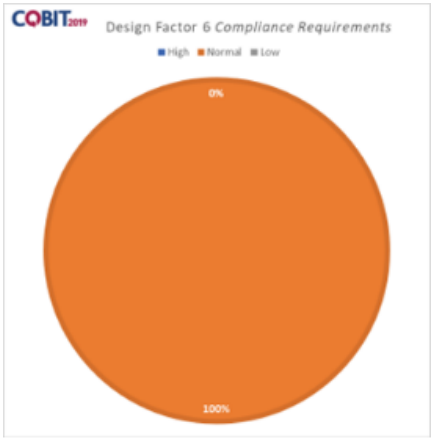

Figure 7. Requirements Compliance Design Factors

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Design Factor 7: Role of IT

The 7th design factor is the role of information technology issues, which was designed with the aim of assisting in identifying the role of information technology within the company.

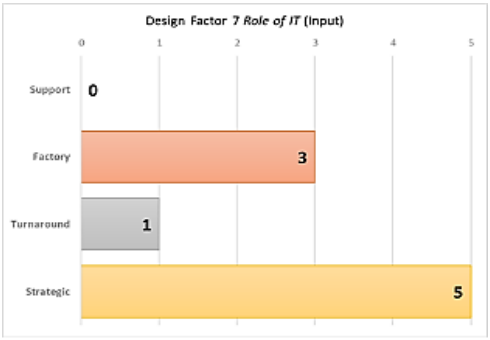

Figure 8. IT Role Design Factors

Based on Figure 8, Information Technology (IT) has a very significant role in the operations of Mooi Brand Salatiga. This is reflected in the strategic assessment given with a score of 5, indicating that all aspects of the company's operations are highly dependent on IT. A score of 3 on the factory factor indicates that when a disruption occurs in the company's IT system, this will have a direct impact on Mooi Brand Salatiga's business processes. On the other hand, an assessment with a score of 1 on the change factor indicates that IT does not have a significant role in the innovation efforts carried out by Mooi Brand Salatiga.

Design Factor 8: Enterprise IT Sourcing Model

Design factors 8 are used to identify how companies plan their IT resource procurement, represented in the form of percentages. An illustration of the results of design factor 8 can be found in the following image.

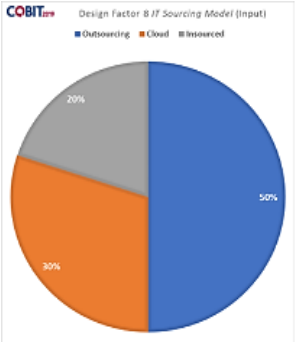

Figure 9. Company IT Resource Model Design Factors

Figure 9 above shows that the share of outsourcing activities is 50%. This is due to the fact that Mooi Brand Salatiga duplicates IT services from third parties in the creation and development of certain IT programs or applications. Additionally, about 30% comes from the cloud portion, as companies use cloud services such as Google Drive to store data online. Furthermore, around 20% comes from insourced activities, which shows that Mooi Brand Salatiga has its own IT staff, but their function is more focused on monitoring and operating existing IT service systems.

Design Factor 9: Implementation Method

Design factor 9 aims to identify the methods or approaches used by companies in developing information technology, and this is measured in percentage form. The results of design factor 9 can be found in Figure 10.

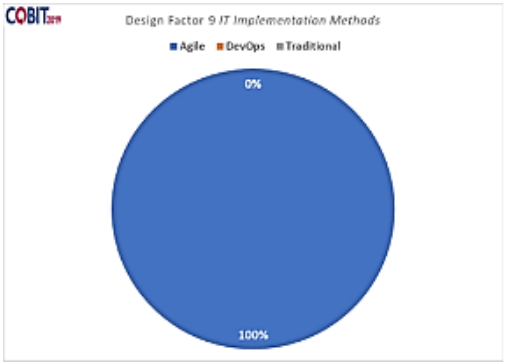

Figure 10. IT Implementation Method Design Factors

According to the data seen in Figure 10, the percentage of implementing the Agile method at Mooi Brand Salatiga reaches 100%. This is due to the fact that most of the information technology development and implementation processes in these companies adopt Agile methods. Mooi Brand Salatiga decided to apply the Agile method because they actively use feedback from customers in the development process. Thus, the information obtained from customer feedback is used to communicate and coordinate among various teams within the company.

Design Factor 10: Technology Adoption Strategy

Implementation Strategy Technology Adoption is the 10th design factor. This aims to recognize the strategy adopted by Mooi Brand Salatiga in adopting technology. As seen in Figure 12, it can be seen that the company's approach in implementing technology consists of several aspects: 15% is the first step (first mover), because Mooi Brand Salatiga is a pioneer in implementing this technology when compared to similar competitors in the same region. 60% are followers,

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because the company uses technology that is not from Mooi Brand Salatiga and has been used by many similar competitors outside the same area. Meanwhile 25% are slow adopters, where Mooi Brand Salatiga is not in a rush to implement new technology and prefers to utilize existing IT resources.

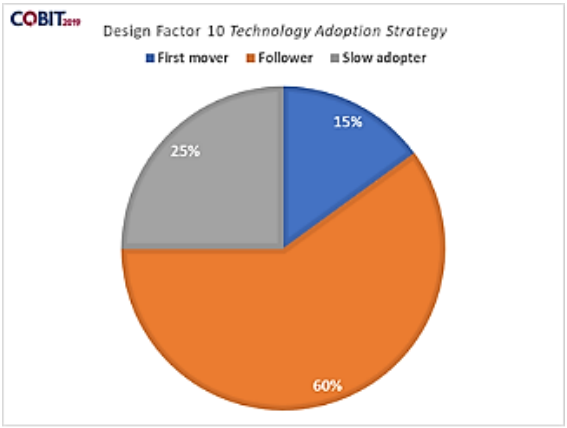

Figure 12. Technology Adoption Strategy Design Factors

Based on the results of the research that has been carried out, several recommendations can be given for Mooi Brand Salatiga, including: the risk of hacking attacks needs to be anticipated, the security risks of customer data and information need to be considered. Issues of a lack of effectiveness in implementing previously prepared innovation plans, as well as a lack of employee ability to utilize technology to create innovations that support the company in managing its operations, and companies should not become followers in implementing technology so that they can have a competitive advantage compared to similar competitors.

4. CONCLUSION

The research conducted provides clear evidence that the COBIT 2019 framework is an effective tool for structuring IT governance at Mooi Brand Salatiga. The application of this framework has demonstrated significant potential in aligning IT operations with the company's business objectives, while concurrently minimizing the risks associated with the use of information technology. The implementation of IT governance using COBIT 2019 at Mooi Brand Salatiga not only streamlines technology management but also elevates overall corporate governance. This strategic approach ensures that information technology is utilized in the most effective and efficient manner, in line with the standards of ideal information technology governance. Therefore, the adoption of the COBIT 2019 framework marks a pivotal step in enhancing Mooi Brand Salatiga's operational excellence and long-term sustainability in the competitive business landscape.

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