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Implementation Of The COBIT 2019 Framework To Improve Information Technology Performance In Tokopedia

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ABSTRACT

Effective information technology (IT) governance has a significant impact on overall performance and outcomes. The COBIT framework, currently known as COBIT 2019, is widely adopted by IT auditors for assessing IT governance within organizations. By utilizing various components of this framework, auditors gain valuable insights into an organization's governance model. Nevertheless, it has been acknowledged that a thorough understanding of IT governance requires the inclusion of organizational culture assessment in the audit approach. This study aims to analyze the implementation of the COBIT 2019 framework to enhance IT performance within the scope of Tokopedia. Adopting a qualitative descriptive approach, primary and secondary data were collected through direct observations of Tokopedia's e-commerce system via tokopedia.com pages, as well as a review of relevant journal articles. This performance evaluation had a particular focus on the DSS (Deliver, Support, and Service) domain and indicated areas for improvement. Notably, certain aspects related to IT delivery, support, and services were found to be lacking in their execution. By conducting this study, we aim to shed light on the importance of assessing IT governance using the COBIT 2019 framework and provide insights into the specific areas where organizations can improve their IT performance. The results of this study have practical implications for organizations looking to optimize their IT governance practices and achieve better results overall, such as increased efficiency, cost savings, improved risk management, and better alignment between IT and business objectives.

Keywords: COBIT 2019, Performance, Information Technology

INTRODUCTION

Tokopedia is the largest e-commerce platform in Indonesia and has experienced significant growth in terms of users, transactions, and operational complexity. Tokopedia faces challenges in managing complex information technology and meeting evolving business needs due to rapid business growth. To face the challenges of managing information technology, Tokopedia needs a structured and measurable framework. The right framework to solve Tokopedia's problems is the COBIT framework provided by ISACA. This framework has now been developed into COBIT 2019.

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The COBIT framework is still widely used by IT auditors today because it offers a complete framework and covers various aspects of information technology governance. COBIT has made it clear that to gain complete insight into the governance model in an organization, IT auditors must incorporate an assessment of the organization's culture into the audit approach (ISACA, 2019). COBIT 2019 provides complete guidance for information technology governance, covering various aspects such as strategy and planning, risk management, supervision, monitoring, and performance measurement. In this research, we will look at the application of COBIT 2019 to improve information technology performance at Tokopedia. In the current era, information technology governance is very important and needed by companies. IT governance regulates information technology investments within the company to achieve goals and meet current and future needs. (Saputra and Abdullah, 2020). In addition, information technology governance is important to achieve the company's vision and mission and evaluate the effectiveness of the current use of information technology and its potential to be better managed. (Joshi et al., 2018).

In the midst of intense competition in the e-commerce industry, Tokopedia, as the pioneer of the first store on the website in Indonesia, needs to utilize effective information technology governance to ensure smooth operations. According to research by Frastian (2022) from a survey of online shopping at Tokopedia and other e-commerce sites, 55% of Tokopedia users consider the transaction process on the site to be complicated, while 45% came from other e-commerce sites. Regarding order cancellation, 40% of cancellations are made by Tokopedia users and 60% by other e-commerce users. Then, regarding the long delivery of goods, 80% of the statements were obtained from other e-commerce users and the remaining 20% from Tokopedia users. Furthermore, for the problem of returning goods, 75% came from Tokopedia users and 25% from other e-commerce users. Finally, regarding the lack of information, 40% of Tokopedia users and the remaining 60% of other e-commerce users.

This shows that there are many problems that arise when shopping online, especially for Tokopedia application users. Therefore, a comprehensive evaluation of the existing problems is needed by examining the implementation of the information technology system used by Tokopedia. In this evaluation, it is necessary to analyze the extent to which Tokopedia's information technology system supports a smooth shopping experience, data security, transaction speed, an intuitive user interface, and the ability to deal with large volumes of users. This evaluation will help identify and understand the root of the problems that occur when shopping online at the Tokopedia application and provide a basis for improving the existing information technology system to improve the quality and shopping experience for users.

THEORETICAL FOUNDATION

IT Capability

IT Capability refers to a company's ability to effectively use its IT resources in conjunction with other resources. When a company can plan and integrate its IT resources well, it gains an advantage in obtaining customer information, sharing knowledge, and improving business processes (Yang and Jian, 2020). To achieve superior performance in IT resource management, it is crucial to assess and develop IT Capability across the entire organization. This involves combining IT infrastructure, the skills of IT personnel, and intangible IT-enabled assets with other resources specific to the company. The impact of IT Capability on firm performance has garnered significant attention, as companies with strong IT capabilities tend to outperform their competitors. Some studies emphasize that the competitive advantage of IT capabilities depends on how well firms harness their existing IT capabilities, considering the ever-evolving nature of IT as a capability and its effects (Nwankpa, 2016). In today's digital business environment, IT Capability has resurfaced as a crucial mechanism for creating widespread digital connections among activities and entities in the value chain. By leveraging IT Capability, companies can effectively embrace emerging digital technologies and adapt to changing market demands (Yang and Jian, 2020).

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COBIT 2019

COBIT 2019 was founded as a way to reflect the most recent innovations that may have an impact on an organization's information and technology landscape. It assists businesses in creating efficient governance systems by providing a set of design elements to guide the process. There are 11 key variables that should be considered while developing a system (ISACA, 2019):

1. A company's enterprise strategy refers to the various tactics it employs based on its specialized business domain. Within this design component, organizations can follow a variety of corporate strategies. These methods include a focus on attaining firm growth, focusing on client product and service innovation, limiting short-term expenditures, and emphasizing the provision of stable and service-oriented solutions.
2. Enterprise Goals: There are 13 broad goals that are important to company operations in this section of COBIT 2019. Each organization has to determine whether these objectives align with their own corporate strategy. Stakeholders must make a deliberate decision when selecting the enterprise goals they desire to pursue in order to set the priority and significance of governance and management objectives.
3. IT Risk Profile: It is essential to understand a company's risk profile, which includes knowing the potential risk scenarios that can harm the organization, assessing their potential implications, and determining the likelihood of their occurrence. To do this, a full examination of high-level hazards within the firm, including the identification of relevant risks, is required. To aid in this analysis, COBIT 2019 presents a framework that identifies 19 unique categories of risk scenarios.
4. Risk management, audit, senior management, and external stakeholders can all work together to detect and report on key issues. COBIT 2019 includes over 20 exhaustive lists of typical IT-related concerns. To effectively prioritize governance design, a clear differentiation based on the assessment of IT concerns is required, which offers the necessary input for decision-making.
5. Threat Landscape: The typical threats that a company faces are also a factor in proper governance system design. There are two types of threats: normal threats and high threats.
6. Meeting a company's requirements and demands is a vital issue to consider. There are three types of compliance needs or demands to address: low, average, and high.
7. The role of IT in the company is also an important factor, whether it is positioned as strategic, support, or factory.
8. IT Source Model, The IT power transfer model implemented in companies usually uses IT services in several models, such as outsourcing, cloud, insourcing, or hybrid.
9. IT Implementation Methods encompass a variety of approaches for implementing IT projects. Some examples of these methods include Agile, DevOps, Traditional, and Hybrid.
10. Technology Adoption Strategy: There are several types of strategies for adopting new technology in the company. Like the first mover, where the company always wants to adopt new technology as quickly as possible. Then there are followers, where companies wait for others to implement technology and only follow, and slow adopters, where companies are very slow in adopting new technology.
11. Company size, which is commonly used, among others, is determined by the number of permanent employees it employs.

The main purpose of the design factors is to select the IT-critical processes or specific content of the relevant COBIT 2019 core model and customize and prioritize this content as required by the organization or company. It therefore requires a certain level of experience and a thorough understanding of the company. Such a range of understanding and experience enables the organization or enterprise to adapt the core COBIT 2019 guidance into customized and focused guidance for the organization or enterprise. The 2019 COBIT Framework has a core model that is divided into two parts, namely governance and management, as shown in Figure 1..

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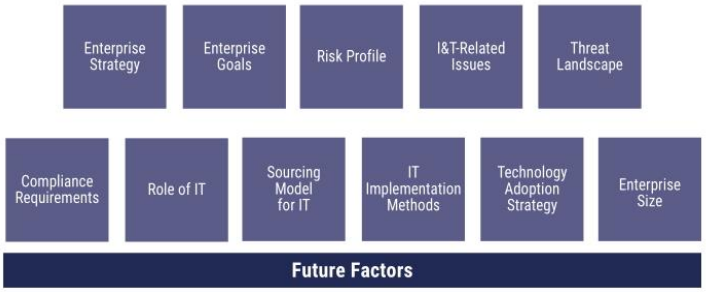

Figure 1. COBIT 2019 Core Model (ISACA, 2019).

The integration of COBIT 2019 with the IT Capability concept enables companies to derive maximum benefits from information technology, improve IT risk management, increase business process efficiency, and create pervasive digital connections in the organization's value chain (Yang and Jian, 2020). By integrating the IT Capability concept and using COBIT 2019 guidelines, companies can improve their IT performance. IT Capability assists companies in optimizing the use of IT resources to achieve competitive advantage, while COBIT 2019 provides a structured framework for designing and managing effective IT governance systems.

Overall, the integration between IT Capability and COBIT 2019 is important for improving information technology performance. IT Capability helps companies optimize the use of IT resources, while COBIT 2019 provides a structured framework for designing and managing effective IT governance systems. By utilizing the IT Capability concept and using COBIT 2019 guidelines, companies can achieve competitive advantage, better manage IT risks, improve business process efficiency, and respond to changing market demands in an increasingly digital business era.

METHOD

This research method uses descriptive qualitative research. Qualitative research is a research process that needs to understand human or social phenomena by creating different comprehensive and complex mental images that can be expressed in words, a detailed insight report from sources of information, and a report made in the background of the natural environment (Walidin, Saifullah, & Tabrani, 2015: 77). The data collection technique uses the literature study method. The research stages include:

1. Problem identification
   Identify problems that exist in the object of research to find out the utilization and application of existing governance, and find problems that occur related to IT at Tokopedia by describing the business model process that occurs in the company.
2. Observation
   Observation is carried out to find out the profile of the company's organization. In the form of Tokopedia's vision, mission, and strategy for achieving goals through the website https://www.tokopedia.com/about/. In addition, observations were made of the problems complained about through data sources from survey results on ginee.com.
3. Literature study
   Conduct literature studies by understanding the concepts of COBIT 2019 through modules provided by ISACA and looking for previous research documents as research references.
4. Business goal analysis
   To find out the business objectives of Tokopedia, it can be done using the Balanced Scorecard (BSC) framework with four perspectives: financial perspective, customer perspective, internal process perspective, and learning and growth perspective.
5. Alignment of business objectives with enterprise goals
   After analyzing the business objectives of the Tokopedia system, the next stage is to analyze and align business objectives with enterprise goals in COBIT 2019. For the analysis process,

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we will see the relationship between the business objectives of the Tokopedia system and the enterprise goals in COBIT 2019.

6. Subdomain determination
   The selected COBIT 2019 enterprise goals will then determine the IT process using the Agile process model. The Agile process model uses a domain consisting of the Deliver, Support, and Services (DSS) domain, which has six IT processes or subdomains in DSS. The goal is to manage the delivery, support, and information technology services of a system to improve its effectiveness and efficiency.After determining the subdomains, the preparation of related recommendations is carried out in order to improve the performance of the Tokopedia system.

RESULT AND DISCUSSION

Tokopedia Marketplace is a platform that intercedes between sellers and buyers as well as makes sales with payment facilities. You could say Tokopedia is a supermarket whose kiosk sellers are Tokopedia clients, and buyers who make transactions on Tokopedia are also Tokopedia clients. Tokopedia's e-commerce platform offers a diverse range of products through various avenues, including Marketplace, Official Stores, Instant Commerce, Interactive Commerce, and Rural Commerce.

In growing its business, Tokopedia uses a business model system that is quite rarely used. Tokopedia's business model is consumer-to-consumer (C2C). Clients of Tokopedia are sellers and buyers at the same time. Sellers who trade their products on Tokopedia are clients of Tokopedia, while buyers who make purchase transactions on Tokopedia are also clients of Tokopedia.

Consumer-to-consumer (C2C) is a type of e-commerce model that facilitates direct interactions and transactions between individual sellers and buyers. This concept is commonly seen on online auction sites, and platforms like e-bay.com serve as examples of C2C portals. C2C encompasses all electronic transactions involving the exchange of goods or services between consumers. These transactions typically take place through third-party online platforms. The defining characteristic of C2C is that it involves transactions solely between consumers, unlike B2C, which involves companies, or G2C, which involves government entities. In C2C, individuals can engage in buying and selling goods in a manner similar to a marketplace.

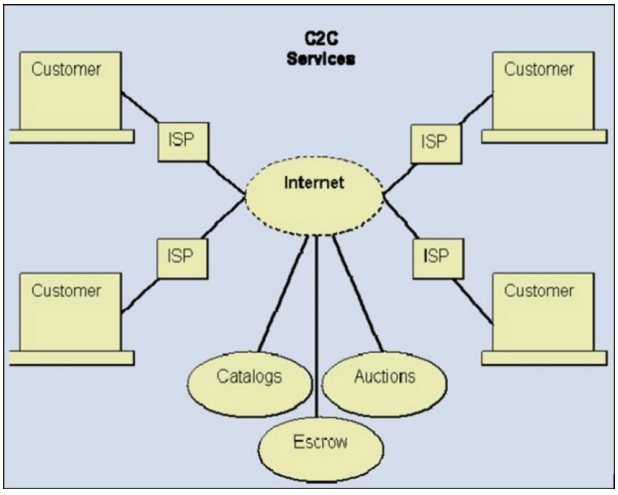

Figure 2. *Consumer-to-Consumer* (C2C) *E-commerce relationship*.

C2C E-Commerce Business Model Process

The first step in the C2C e-commerce business model on Tokopedia is for buyers to place orders. Every buyer has a need for goods to buy, both goods that are known to be of type and brand as well as goods that are only known to be branded. To choose products for which they already know the brand

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and type, buyers usually use search engines that have been provided in the Tokopedia application. For buyers who have the needs of a product but do not know the brand information, a choice of product categories is provided in the Tokopedia application to make it easier for buyers to choose products according to their wishes.

The second process in the C2C e-commerce business model process at Tokopedia Salam is that buyers pay to Tokopedia's joint account. In this process, Tokopedia is the third party between the seller and the buyer. Tokopedia provides payment systems in collaboration with banks and other cashless payment systems to make it easier for buyers to make payment transactions. Tokopedia will hold the funds until the transaction is successful. In the Tokopedia system, if the funds have successfully entered the Tokopedia account, Then there will be a notification to the buyer that the funds were successfully transferred.

The third process is Tokopedia forwarding the order to the seller. Information related to buyer orders submitted by the Tokopedia system will be forwarded to the seller. So that the seller can prepare the goods that have been ordered and send them to the buyer as soon as possible. The fourth process is that the seller processes and sends the order. In this process, the seller prepares a product that matches the buyer's order. Products that have been prepared will be sent through the agreed-upon delivery service. This process is not explained in detail because it relates to buyers. But it can be known through observation that the seller, after preparing the product and sending it, will get a receipt number, which will be inputted in the Tokopedia system so that the delivery process can be tracked.

The fifth process is that the buyer receives the order and confirms receipt of the goods (if the goods received are in accordance with the order). In this process, the buyer will check the product to find out if it conforms to the order without any flaws or defects. In the Tokopedia system, buyers will be given a preferred menu in the form of products that have been received after the order or products that do not match the order. If the buyer chooses the product menu not according to the order or if the product does not arrive in the buyer's hands. Then the seller and buyer enter the resolution center system with Tokopedia as the supervisory party until there is an agreement between the seller and the buyer. The sixth process is that the funds from the sale go to the seller's Tokopedia balance. The funds from the sale that have been deposited by Tokopedia will be forwarded to the seller and automatically enter the seller's Tokopedia balance system. It's automated and systematized.

Based on a survey conducted by ginee.com, some of the problems that occur in Tokopedia include too frequent maintenance. In a few moments, the Tokopedia online shopping site application often experiences interference, and users who want to use this site through the Aps application often experience failed incoming connections to the site. This is due to the large number of users who are visiting the Tokpedia application or site. The crowds of visitors to the Tokopedia site itself occur due to the Flash Sale program offered by Tokopedia to consumers throughout Indonesia. At certain hours, consumers can also get surprise coupons and other promotions. In this case, Tokopedia usually notifies the user directly through the application or site used by the user.

Figure 3. Tokopedia System Maintenance Notice

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Another problem to complain about is that the price war is too tight. One of the factors that determines the price is the fierce competition in the market. There are business people who do not hesitate to slash prices to attract more customers. This impact is greater for sellers. For sellers who sell better-quality goods, it is not possible to sell at the lowest price. While users mostly only look at the price and do not pay attention to the quality description of the goods, So that sellers who are able to slash the lowest prices have many buyers who can provide their own added value to the store. Tokopedia is considered necessary to filter out sellers who slash prices but have low quality.

Problems regarding goods received that are not in accordance with consumer or user expectations also occur a lot. There are still many sellers who sell products that do not match the images and descriptions that have been listed. In this case, Tokopedia has not provided a blacklist feature. Stock management is not optimal, and stock deductions are not reduced for buyers who are waiting for payment.

The problem that is no less important is the problem of communication response time from the seller to the user or customer. The communication is carried out through the chat window on the e-commerce system, which is considered by some users to be less efficient because not all sellers serve online communication in real time with their customers, especially in consumer-to-consumer (C2C) type e-commerce such as Shopee, and not all sellers are diligent in checking transactions that enter their merchant accounts, so that inefficient response time is obtained and will make the transaction process become hampered.

Based on several findings and issues that occur in the e-commerce system, it is better to evaluate the performance and risk management of information technology governance implemented in the e-commerce system to assist companies in protecting users or customers, sellers or merchants, expedition service companies, and the company itself. In addition, solutions and recommendations to solve these problems are that e-commerce system service providers must innovate and develop e-commerce systems, especially in terms of operations both on the back-end and front-end sides.

After knowing the various issues that arise in the Tokopeddia e-commerce system, it is necessary to evaluate the performance of information technology governance in the e-commerce system using the COBIT 2019 framework. The first stage in the COBIT 2019 framework is to analyze the business objectives of the Tokopedia e-commerce system. Analysis can be done using the Balanced Scorecard (BSC) framework, which has four perspectives: financial, customer, internal process, and learning and growth. The following are the results of the analysis of the business objectives of the Tokopedia system, as shown in Table 1.

Table 1. Enterprise Goals Tokopedia System

Perspective	***Goals***
Financial Perspective	Can maximize company performance by reducing costs.
Customer Perspective	1) Increase the efficiency of shopping time, sales time, and management time. 2) Provide up-to-date, dynamic, multi-directional communication to customers. 3) Reach all corners of the world by disseminating information and attracting customers or partnerships. 4) Increase profitability and customer loyalty.
Internal Process Perspective	Making an e-commerce portal \/ e-shop is not just a shopping portal, but a place for community gathering by building a community base, building a market concept

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	not just a place to buy and sell and as an information center
Learning And Growth Perspective	1) Service-oriented management is a combination of conventional and virtual service conceptions: responsive (fast and friendly response), dynamic, informative, and communicative. 2) Improve the ability of employees to operate the system by providing additional knowledge and training.

After analyzing the business objectives of the Tokpedia system, the next stage is to analyze and align business goals with enterprise goals in COBIT 2019. For the analysis process, we will see the relationship between the business objectives of the Tokopedia system and the enterprise goals in COBIT 2019. Here are the selected COBIT 2019 enterprise goals as shown in Table 2.

Table 2. Selected Enterprise Goals

No	***Enterprise Goals* COBIT 2019**	***COBIT 2019 Corporate Goals Description***	***Linkage with Tokopedia System Business Goals***
1	EG1	*Stakeholder value of business investment*	*Unrelated*
2	EG2	*Portofolio of competitive products and services*	*Related*
3	EG3	*Managed business risks (safeguardi ng assets)*	*Unrelated*
4	EG4	*Compliance with external laws and regulations*	*Unrelated*
5	EG5	*Financial Transparency*	*Unrelated*
6	EG6	*Customer oriented service culture*	*Related*
7	EG7	*Business service continuity and availability*	*Related*
8	EG8	*agile responses to a changing business environmen environment*	*Related*
9	EG9	*Information based strategic decision making*	*Related*
10	EG10	*Optimization of service delivery costs*	*Related*
11	EG11	*Optimization of business process functionality*	*Related*
12	EG12	*Optimization of business process costs*	*Related*
13	EG13	*Managed business change programmes*	*Related*
14	EG14	*Operational and staff productivity*	*Related*
15	EG15	*Compliance with internal policies*	*Unrelated*

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16	EG16	*Skilled and motivated people*	*Related*
17	EG17	*Product and business innovation culture*	*Related*

The selected COBIT 2019 enterprise goals will then be determined by IT processes using an agile process model. The Agile process model uses a domain consisting of a Deliver, Support, and Services (DSS) domain that has six IT processes or subdomains on the DSS. The goal is to manage the delivery, support, and service of information technology on a system to improve its effectiveness and efficiency. The domains on the selected DSS are as follows:

Table 3. Sub Domain *Deliver, Support, and Service* (DSS)

IT Process Code / Sub Domain	IT Process
DSS01	Manage Operations
DSS02	Manage Service Requests and Incidents
DSS03	Manage Issues
DSS04	Managing Sustainability
DSS05	Manage Service Security
DSS06	Manage Business Process Controls

From the subdomain Deliver, Support, and Service (DSS), we then analyzed findings related to IT processes or subdomains on DSS.

Tabel 4. Findings

IT Process Code / Sub Domain	***Findings***
DSS01 *Manage Operations*	1) Overfrequent maintenance. 2) There are occasional errors on both websites and the app. 3) Lack of maximum transaction monitoring due to time constraints 4) The system does not have a guaranteed fast response time.
DSS02 *Manage Service Requests and Incidents*	1) There are no special features for service requests or incidents. 2) There is no alternative service for service requests and incidents. 3) Stock reductions do not occur while the buyer is waiting for payment, which refers to suboptimal stock management. 4) Tokopedia is still unable to fulfill user requests.
DSS03 *Manage Issues*	1) There are no special features available for user complaints. 2) There is no documentation for problems that occur in the system.
DSS04 *Managing Sustainability*	1) Not all e-commerce service providers have data backups for business continuity.
DSS05 *Manage Service Security*	1) There is no blacklist feature for sellers or users who commit fraud in transactions.

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	2) Tokopedia has not been able to guarantee the security of its user data, such as personal data and payment transactions.
DSS06 *Manage Business Process Controls*	1) The system does not yet have specific rules for transactions, such as buying and selling. 2) Do not yet have a standard operating procedure (SOP) to carry out business process operations according to standards.

Based on these findings, improvements to the system are required in order to improve company performance. The main focus of this research is compiling various recommended solutions based on the 2019 COBIT framework according to IT processes or subdomains in DSS. Here are the solution recommendations based on the findings of the system problems:

Tabel 5. Solution recommendations

IT Process Code / Sub Domain	Solution recommendations
DSS01 *Manage Operations*	1) Companies need to consider quality and maintenance needs so that they are on target and the system can be used properly. 2) Companies can evaluate and improve systems that often experience errors to make it easier for users to transact. 3) There needs to be a guarantee of a fast response time from the e-commerce system to maintain customer loyalty. 4) E-commerce system service providers need to have employees who work non-stop to monitor customer activities in the e-commerce system.
DSS02 *Manage Service Requests and Incidents*	1) It is necessary to add special features for users to be able to submit requests or incidents that occur in the application. 2) It is necessary for employees to work to monitor stock management, and stock deductions are not reduced for buyers who are waiting for payment. 3) E-commerce system service providers need to know how to meet the needs of users.
DSS03 *Manage Issues*	1) Special features or sites are needed for users to convey the problems they face in transactions. 2) There is no documentation for problems that occur in the system. 3) There is a need for documentation for problems that occur in the e-commerce system.
DSS04 *Managing Sustainability*	1) Ecommerce service providers need to prepare data backups for business continuity.
DSS05 *Manage Service Security*	1) There needs to be a special feature or employee to monitor fraud and fraud between users to then be blacklisted. 2) The e-commerce system must be able to guarantee the security of user data, such as personal data and payment transactions.

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DSS06 *Manage Business Process Controls*	1) There needs to be socialization, which can be conveyed through the Tokopedia website, regarding the terms and conditions as a user. 2) The e-commerce system must have a standard operating procedure (SOP) to carry out business process operations in accordance with the standards.

CONCLUSION

Based on the research findings regarding the implementation of the COBIT 2019 framework to enhance information technology performance in Tokopedia using an Agile process model, it is evident that the evaluation of information technology governance performance in the Tokopedia e-commerce system, with a specific focus on the DSS domain (deliver, support, and service), highlights areas where the system falls short in delivering, supporting, and providing optimal information technology services. These findings underscore the challenges associated with the e-commerce system's business processes, including both the back-end involving developers or service providers and the front-end concerning the end-user experience.

The research findings establish a clear link between the identified issues and the COBIT 2019 framework. By implementing the framework's best practice standards, it becomes possible to address the identified deficiencies and enhance the effectiveness and efficiency of Tokopedia's e-commerce system in achieving its business goals through information technology, such as increased efficiency, cost savings, improved risk management, and better alignment between IT and Tokopedia’s objectives. Therefore, it is recommended to develop tailored information technology governance strategies for each e-commerce system service provider, ensuring alignment with user requirements and adherence to the maturity levels outlined in the COBIT 2019 framework's best practices.

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ISSN : 2615-2088 (PRINTED)

REFERENCES

Frastian, Arif. (2022). *Pengaruh Teknologi Informasi Dan Komunikasi Pemasaran Terhadap Keputusan Pembelian Online Di Aplikasi Tokopedia Pada Mahasiswa Universitas Muhammadiyah Sumatera Utara*. Skripsi: Universitas Muhammadiyah Sumatera Utara.

ISACA. (2019). COBIT 2019. https://www.isaca.org/isaca-digital-videos/cobit/introducing-cobit-2019

ISACA. (2019). *COBIT Design Factors: A Dynamic Approach to Tailoring Governance in the Era of Digital Disruption*. USA.

Joshi, A., Bollen, L., Hassink, H., Haes, S.D., anda Gerembergen, W. (2018). Explaining IT governance disclosure through the constructs of IT governance maturity and IT strategic role. *Information & Management* Vol. 55, 368-380.

Nwankpa, J. (2016). Capability and Digital Transformation: A Firm Performance Perspective Completed Research Paper. *Thirty Seventh Int. Conf. Inf. Syst*, hal. 1–16.

Saputa, H., and Abdullah, A. (2020). Penyesuaian Sistem Tata Kelola Pada Institut Teknologi Kalimantan Dengan Menggunakan COBIT 2019. *Jurnal Sistem Informasi*, vol. 12, 2060–2074.

Tridoyo and Wijaya, A.F. (2017). Analysis of Information Technology Governance e-KTP using COBIT 5 Framework. *ICITECH*.

Yang, Q. and Jian Z. (2020). Research on the Correlation between Information Technology Capability and Enterprise's Sustainable Competitive Advantage Based on Game Theory. *International Information Technology and Artificial Intelligence Conference (ITAIC), Chongqing*, China, 2020, pp. 1544-1548, doi: 10.1109/ITAIC49862.2020.9338766.

Lestari, M., Iriani, A., & Hendry, H. (2022). Information Technology Governance Design in DevOps-Based E-Marketplace Companies Using COBIT 2019 Framework. INTENSIF: Jurnal Ilmiah Penelitian dan Penerapan Teknologi Sistem Informasi, 6(2), 233-252.

Wijaya, A. F., & Lestari, M. (2021). Evaluasi Kinerja E-Commerce Berdasarkan Perspektif Pengguna Menggunakan Framework Cobit 2019. Inspiration: Jurnal Teknologi Informasi dan Komunikasi, 11(2), 143-152.