International Journal of Scientific Research and Management (IJSRM)
||Volume||13||Issue||05||Pages||9927-9140||2025||
Website: https://ijsrm.net ISSN (e): 2321-3418
DOI: 10.18535/ijsrm/v13i05.em18

Strategy to Improve IT Maturity Level Using COBIT 2019 Framework to Improve Service Quality at PT XYZ

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Abstract
Service quality and business viability in the digital age are significantly influenced by the maturity of IT governance. This research investigates the strategic application of the COBIT 2019 framework to enhance IT maturity and service delivery in the Testing, Inspection, and Certification (TIC) sector. At PT XYZ, a case study was conducted on three key COBIT domains: APO02 (Managed Strategy), DSS06 (Managed Business Process Controls), and EDM03 (Ensured Risk Optimization). These areas were chosen due to their direct impact on risk management, organizational agility, and process control.
A qualitative case study methodology that involved in-depth interviews, document reviews, and on-site observations was used to gather data. Using open-ended questions and a five-point Likert scale, respondents evaluated the adoption of COBIT design factors, identifying both quantitative and qualitative trends. The findings show that the three domains' maturity level stays at Level 2 (Managed), indicating limited implementation in the absence of integrated risk governance or standardized procedures. However, a strong foundation for consistent gains is provided by strong leadership support and ongoing digital transformation initiatives.
Based on SWOT and TOWS analyses, the study suggests solutions to assist the company in achieving Level 3 (Defined). Proactive risk management, better business-IT alignment, and structured procedures are the main focuses of these solutions. Lastly, this study emphasizes how crucial COBIT 2019 is to tackling issues with digital governance in dynamic industries. It offers professionals and legislators useful suggestions for enhancing organizational agility, digital readiness, and IT maturity.

Keywords: IT Maturity; COBIT 2019; Service Quality; Risk Optimization.

1. Introduction

Ensuring the safety, quality, and compliance of goods and services in global marketplaces depends heavily on the Testing, Inspection, and Certification (TIC) sector. The industry is expected to grow at a compound annual growth rate (CAGR) of 3.8%, from USD 233.2 billion in 2024 to USD 280.6 billion in 2029, according to the TIC Market Forecast (2024). The increasing complexity of global supply networks and the strictening of regulations in many countries are linked to this steady trend.
Testing, inspection, and certification are the three main service categories that make up the TIC market. By 2023, the testing industry is predicted to lead the market with 67% of total revenue. The increased need to guarantee product performance, quality, and safety prior to market introduction is what is driving this dominance (By Regional Outlook and Forecast, 2024).
Figure 1 depicts the essential characteristics of the present TIC market, which include a growing emphasis on product safety, quality assurance, and regulatory compliance across industries such as automotive, healthcare, and consumer products. Market participants compete by utilizing technological innovation and offering a broad range of services to efficiently fulfill the different needs of clients and changing regulatory requirements.

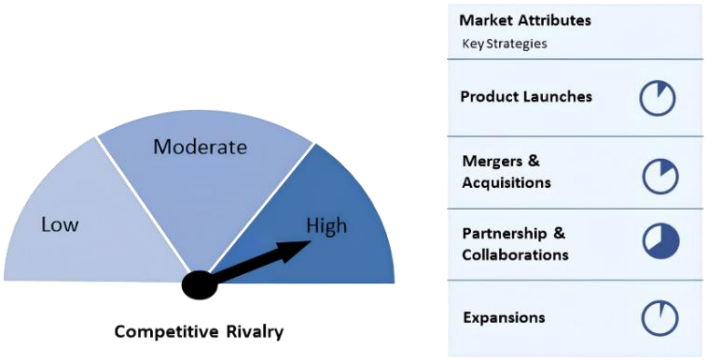

Figure 1. Market Competition and Attributes

Source: By Regional Outlook and Forecast (2024)

Investments in technology can improve cost control, productivity, and operational effectiveness, highlighting the importance of budgeting for IT expenditures as a crucial part of a business's digital transformation plan. This makes companies more competitive and enables them to react to changes in the market (Lim et al., 2024). Businesses that make information technology investments are better able to handle internal operations and adapt to shifting customer demands and market trends. Businesses must find the right balance to avoid excessive transaction costs and successfully promote collaborative innovation, even though IT investment is a significant driver of transformation (Wu et al., 2024).

In order to stay flexible in the face of evolving regulations and a rapidly evolving business environment, PT XYZ, a Testing, Inspection, and Certification (TIC) company, is striving to increase its Information Technology (IT) maturity. Yuen et al. (2022) assert that in order to enhance operational efficiency and real-time decision-making, the TIC sector needs to integrate digital technologies such as big data, cloud computing, artificial intelligence, and cyber-physical systems. Technology, organization, and environment are the three main components that make up IT maturity, which is the degree of integration between IT and business processes (Senna et al., 2023). Leadership, IT infrastructure, human resources, and process readiness are important enablers of digital maturity (Chaves Franz et al., 2024).

It has been discovered that applying risk assessment techniques to business operations lowers the likelihood of failures, which in turn lowers the additional costs associated with fines, damage to one's reputation, or violations of regulations (Hou et al., 2020). However, effectively managing risks to reduce increased operating costs and ensure adherence to established standards is a significant challenge in the TIC industry. Maintaining a balanced approach is essential to ensure efficiency and effectiveness because excessive IT investment can result in high transaction costs and complexities in managing complex information systems (Wu et al., 2024).

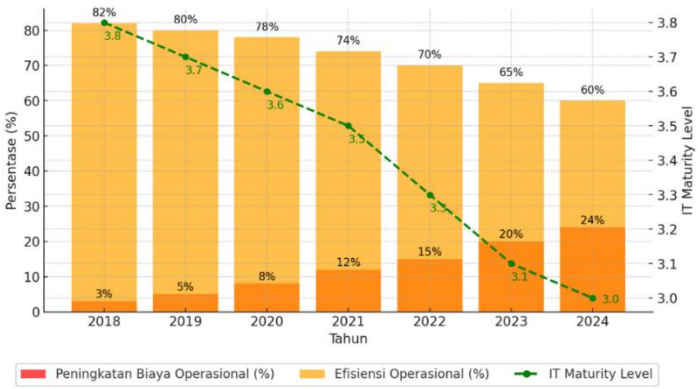

Figure 2. Market Competition and Attributes

Source: Document Internal PT XYZ (2024)

The chart in Figure 2 illustrates a steady rise in operating expenses and a decline in operational effectiveness. While operational efficiency decreased from 82% to 60%, operational costs increased from 3% in 2018 to 24% in 2024. A low level of IT maturity, which indicates that the organization's use and management of information technology has not been optimal, is directly linked to this decline in efficiency. Poorly managed IT systems lead to lower IT maturity levels, which raise costs without increasing output in proportion.

As highlighted by Li et al. (2024b), digitalization and improved IT Maturity in the TIC industry support adaptation to new standards, enhance regulatory compliance through technologies such as IoT and LIMS, accelerate testing and certification processes for greater service efficiency, and provide real-time information that boosts transparency and stakeholder trust. Furthermore, according to the TIC Council (2020), digitalization in this sector not only facilitates adaptation to evolving standards but also reduces processing times, minimizes errors, and strengthens stakeholder confidence through enhanced service quality and operational consistency.

The most recent tool developed by ISACA to assist businesses in managing and controlling IT to achieve organizational objectives and reduce IT-related risks is COBIT 2019, which was published in late 2018 (Rachman, 2021). The primary goal of COBIT 2019 is to give businesses a comprehensive set of guidelines for managing IT risk, maximizing the return on IT investments, and ensuring that IT effectively supports overall business strategy (ISACA, 2019b). According to ISACA (2019), there are numerous benefits to implementing COBIT 2019, such as increased operational effectiveness, improved risk management, and greater alignment of IT systems with strategic business objectives.

Businesses can achieve strategic business goals and improve service quality by improving these elements and increasing their IT maturity. The need to improve IT governance execution and control is highlighted by the fact that, despite clear capability targets, some priority processes evaluated through COBIT 2019 have not yet attained the intended maturity level (Amorim et al., 2021). The COBIT 2019 framework supports improved decision-making by offering a systematic way to improve IT governance. By using international standards and best practices, this alignment ensures that IT enhances performance, adds value, and supports business objectives. Klotz (2019).

According to Bagus et al. (2022), the COBIT 2019 framework is essential to achieving effective IT governance because it demonstrates how IT can align with business objectives. By altering organizational structures, work procedures, and collaboration models, digitalization is increasing operational efficiency and the strategic role of IT (Urbach et al., 2019). Although COBIT 2019 offers a comprehensive framework for IT risk management, its success depends on a clear implementation strategy; without it, risk governance may be fragmented and ineffective (Darmi et al., 2024). Hardjadinata (2023) asserts that consistent and methodical application of the framework is crucial to its efficacy. This study assesses IT maturity in domains with a score below level 3, where processes exist but are not quantified or codified. Increasing maturity improves process performance, according to Febrianti and Utama (2024). Therefore, this study's goal is to advance Managed Strategy (APO02), Managed Business Process Controls (DSS06), and Ensured Risk Optimization (EDM03) from level 2 to level 3.

The study's goals are to identify areas for improvement in IT implementation, provide tactical recommendations, and ensure that IT practices effectively support business operations. As shown by Žvanut et al. (2020), combining COBIT, risk management, and SWOT analysis offers a synergistic approach to improving IT governance, particularly in the healthcare sector.

Previous research using COBIT 4.1 and COBIT 5 has focused on evaluating IT process capabilities across various sectors (e.g., Madyatmadja et al., 2020; Eriana & Susanti, 2024). However, these studies often fail to examine the connection between service quality and IT maturity. This study contributes by using the COBIT 2019 framework, which places an emphasis on governance alignment, and by adding risk and SWOT analysis to offer a more comprehensive perspective. Additionally, it bridges the gap by examining the ways in which improvements in IT maturity affect the service performance of TIC (Testing, Inspection, and Certification) organizations. According to Nuranto et al. (2024), aligning enterprise strategy with the five governance domains of COBIT 2019 is still a crucial success factor, despite the fact that it is

frequently ignored in practice. Additionally, even though COBIT 2019 offers instruments for assessing capability and maturity, these are usually limited to process-level evaluations. Indrawati et al. (2023) stress the need for more comprehensive assessment tools that cover all COBIT components in order to ensure a more thorough maturity evaluation. Without a clear strategic direction, organizations might not be able to identify and address weaknesses in their IT capabilities.

2. Concepst And Research Methodology

2.1. Strategic Management

Strategic management is the systematic process of planning, monitoring, evaluating, and analyzing organizational activities in order to achieve long-term goals and maintain competitive advantage in dynamic markets. According to Fuertes et al. (2020), it comprises establishing the organization's vision and mission, putting strategies into action and evaluating them, and using environmental analysis to align resources. David (2015) continues by highlighting the ways that structured strategy development, execution, and evaluation help businesses adjust to changing internal and external circumstances. Nabiela et al. (2023) define a digital transformation development strategy as a strategic approach to shift traditional business models toward more efficient and digital operations. This procedure comprises evaluating the company's operational status, understanding its digital objectives, and developing a strategy to achieve them.

2.2. Enterprise Risk Management

The comprehensive, organizational-wide process of enterprise risk management (ERM) aims to control uncertainties that may facilitate or obstruct the achievement of corporate objectives. By aligning risk responses with the company's risk tolerance, ERM enables organizations to pursue targeted growth while preserving operational stability (Wheelen et al., 2018). The risk assessment process consists of three main steps: identifying potential risks through brainstorming, scenario analysis, or self-evaluation; ranking these risks based on established impact and likelihood scales; and measuring them using recognized standards. According to David (2015), risk management is an essential component of every business operation. Every business, including insurance companies, can benefit from accurately identifying, tracking, and evaluating the risks associated with the numerous operational and strategic decisions they make every day. Business analytics enhances this process and enables the application of proactive and knowledgeable risk mitigation strategies by providing data-driven insights.

2.3. IT Governance

IT governance is a systematic set of rules, regulations, and controls that ensures IT complements and supports an organization's strategic objectives. IT governance enables companies to efficiently manage and guide how they use IT to achieve their goals, claim Cahyaningrum et al. (2024). According to the IT Governance Institute (quoted in Cahyaningrum et al., 2024), there are five primary areas of focus: Value delivery is the goal of optimizing the business value from IT investments; risk management is the identification and mitigation of potential IT-related risks to maintain business continuity; and strategic alignment ensures that IT initiatives support the organization's mission and long-term vision.

The last two areas are resource management and performance measurement. Resource management focuses on the effective and efficient use of IT assets, such as hardware, software, and human resources, to support operational goals and optimize return on investment. Performance measurement ensures that IT procedures and outcomes are regularly monitored and assessed by utilizing instruments such as the balanced scorecard to monitor development, assess performance, and guide strategic choices. Together, these components provide a comprehensive governance model that enhances organizational agility, risk management, and value creation in the digital age.

2.4. COBIT (Control Objectives for Information and Related Technologies)

ISACA, a global organization devoted to IT governance, developed the COBIT 2019 framework to enhance risk management and align IT operations with strategic business goals. With 32 integrated guidance documents, COBIT 2019 provides a more thorough framework than COBIT 5 and promotes a situational approach that lets businesses adapt the framework to suit their particular needs. Klotz (2019). According to Žvanut et al. (2020), COBIT 2019 supports strategy development primarily through a process-based approach that manages and clarifies business processes; performance measurement tools with defined KPIs to monitor progress; integration with current management practices like risk and quality management; and a flexible structure that can be adjusted to different organizational contexts. COBIT also emphasizes stakeholder engagement to ensure that strategies are inclusive and well-supported, and strong risk management components help organizations anticipate and proactively address potential roadblocks to achieving strategic goals.

2.5. SWOT Analysis

Strengths are internal assets like resources, abilities, or skills that give a company a competitive edge, whereas weaknesses are internal constraints that make it harder to achieve corporate goals. Opportunities are favorable external conditions, like market trends, pro-business legislation, or technological advancements, that can be leveraged to spur growth. Threats, however, are external elements that could make an organization less successful, such as increased competition or changing regulations (Wicaksono, 2023). The study develops alternative strategies based on the SWOT analysis using the TOWS Matrix, which combines internal and external factors to create approaches that leverage opportunities and strengths while addressing potential threats and mitigating weaknesses (R. Pasaribu et al., 2022). According to R. D. Pasaribu et al. (2023), the strategies that emerge from this matrix provide detailed guidance for enhancing company sustainability and competitiveness in a shifting market. Each strategic quadrant in the matrix is explained in detail in the section that follows.

2.6. Research methodology

Based on particular attributes like research objectives, theoretical development approach, methodology, strategy, and unit of analysis all of which are enumerated in Table 1 the chosen research type was chosen. This strategy was selected to support the study's main objective of assessing the IT Maturity Level, allowing for a more effective procedure for gathering and analyzing data.

Table 1: Type of Research

No.	Research Characteristics	Type
1	Research Objective	Descriptive
2	Approach to Theory Development	Inductive
3	Research Methodology	Qualitative
4	Unit of Analysis	Company
5	Research Setting	Noncontrived
6	Time Horizon	Cross-Sectional

The purpose of this study is to use the COBIT 2019 framework to evaluate PT XYZ's IT Maturity Level. To give a thorough overview of current IT governance, a descriptive approach is used, with an emphasis on important process areas linked to service quality improvement. Using standardized frameworks, descriptive research is useful for assessing governance and provides a maturity map and a basis for improving IT services (Sahir, 2021; Rooswati & Legowo, 2018).

In order to derive theoretical conclusions, an inductive approach is used to analyze empirical data from PT XYZ. This approach works well for looking at actual situations and evaluating how well COBIT 2019 is being implemented. Inductive reasoning is commonly employed in IT governance research (Huang et al., 2010) and proceeds from specific observations to general insights (Riswandi et al., 2024).

Interviews, observations, and document analysis are all part of the qualitative methodology. An in-depth

comprehension of governance procedures, difficulties, and areas for improvement is made possible by this method. Because of its versatility in capturing organizational complexity, it is especially well-suited for assessing COBIT frameworks (Sugiyono, 2013; Suryawan & Veronica, 2018). The IT service provider PT XYZ serves as the analytical unit. Targeted evaluation in line with business goals is made possible by concentrating on the organizational level.

The study is conducted in a noncontrived (natural) setting, meaning no experimental manipulation occurs. Data is collected from actual business activities, ensuring practical and contextually relevant findings (Sekaran & Wiley, 2003). This is a cross-sectional study, capturing IT governance conditions at a specific point in time ideal for rapid assessments and actionable recommendations (Cohen et al., 2007). In qualitative research, the focus is on deeply understanding the interaction between place, actors, and activities referred to as the *social situation* (Spradley in Abdussamad, 2021).

This study was conducted at PT XYZ, a TIC company, focusing on the Information and Business Solutions Division, which manages IT strategy, systems, infrastructure, and digital services. Participants included internal stakeholders—division heads and key staff from Finance, Strategy, Corporate Development, Marketing, Human Capital, and Internal Audit—with at least three years of experience, as well as two external consultants in risk management and IT governance. The research examined core activities such as IT planning, governance implementation, system integration, and digital service delivery, highlighting how IT supports business efficiency and strategic alignment. Together, the place, actors, and activities form the contextual foundation of the study.

3. Results And Discussion

In the implementation of COBIT 2019 at PT XYZ, the evaluation of the eleven design factors plays a crucial role in tailoring the governance system to the company's unique context and business strategy. These factors serve as a foundation for aligning IT governance initiatives with organizational goals, risk appetite, and operational realities.

To ensure alignment between COBIT 2019 implementation and enterprise context, this study evaluated eleven design factors as outlined in the COBIT 2019 Design Toolkit. These factors guided the selection of governance and management objectives relevant to PT XYZ's digital transformation goals. The assessment results are summarized below:

Table 2: Resume Design Factor

Design Factor	Description
Enterprise Strategy	PT XYZ focuses on business sustainability and digital transformation. However, IT is not yet a strategic driver of this agenda.
Enterprise Goals	The prioritized goals include service efficiency and IT-business alignment, reinforcing the need for integrated IT planning (APO02).
Risk Profile	The organization has a medium risk profile, with key concerns in system availability, data security, and service continuity. This justifies the inclusion of EDM03.
Compliance Requirements	PT XYZ must comply with industry regulations in manufacturing, labor, and information security, highlighting the importance of standardized controls (DSS06).
IT Operating Model	IT operations are centralized, with key decisions managed from headquarters, necessitating structured governance mechanisms across units.
IT Threat Landscape	Moderate to high, including cybersecurity risks and system downtime. These threats elevate the need for proactive risk optimization.
IT Implementation Methods	The company follows a traditional waterfall model with gradual adoption of agile practices. This hybrid model must be governed to ensure quality and agility.
Sourcing Model	A mix of in-house and outsourced services, requiring coordinated control and compliance practices.
Role of IT	IT acts as a business enabler but is under-leveraged due to limited strategic

Design Factor	Description
	engagement.
Enterprise Size	A mid-to-large organization with a complex structure, which intensifies the need for mature IT governance.
Current IT Maturity	Evaluated at Level 2 across domains, with the enterprise targeting Level 3 to support future growth.

The capability assessment was conducted on three selected COBIT 2019 process domains: APO02, DSS06, and EDM03. The evaluation followed the COBIT 2019 performance management guidelines, using a capability model that ranges from Level 0 (Incomplete) to Level 5 (Optimizing). Each domain was assessed based on a set of process attributes, including process performance, management practices, definition, integration, and continuous improvement.

APO02 – Managed Strategy

The APO02 domain assesses the organization's capability in aligning IT strategy with business objectives. The results show an average capability score of 88%, which corresponds to Capability Level 2 (Performed Process). Although strategic IT planning activities exist, they are neither formally documented nor effectively integrated into the company's long-term business strategy. Stakeholders indicated that IT functions participate in operational planning but are not consistently involved in high-level strategic formulation.

Table 3. Result *Capability Level* 3 – APO02

Objective		Managed Strategy (APO02)		
Evaluation Date		14 March 2025		
Capability Level		Level 3		
Process	**Respondent ID**	**Total Activity Value**	**Total Number of Activities**	**Capability Score**
APO02	R1	8	17	59%
	R2	7	17	41%
	R3	7	17	41%
	R4	8	17	53%
	R5	7	17	41%
	R6	8	17	53%
	R7	8	17	59%
	R8	6	17	53%
	R9	8	17	59%
	R10	8	17	53%
	R11	7	17	47%
Total		82	187	559%
Result *Capability Level Objective*				51%

According to COBIT 2019, Capability Level 3 requires that processes are not only performed and managed but also well-documented, standardized, and continuously monitored for effectiveness. In the case of PT XYZ, the evaluation resulted in a score of 51%, placing the organization at Level 2 indicating that processes are established and repeatable but lack consistency and formal control. While there is a clear intention to align IT with business strategy, the absence of structured governance frameworks, documented procedures, and defined performance metrics prevents advancement to Level 3. These gaps limit the ability to monitor and improve IT processes systematically.

DSS06 – Managed Business Process Controls

The DSS06 domain examines how well the organization implements control mechanisms over business processes. With a high average capability score of 92%, the domain still falls within Level 2, primarily due to the lack of formal documentation such as Standard Operating Procedures (SOPs), work instructions, and structured audit mechanisms. While day to day operations demonstrate consistency and reliability, the informal nature of controls undermines standardization and traceability. Interview data revealed that many units rely on tacit knowledge or legacy routines, increasing the risk of human error and non-compliance. Digital transformation is a comprehensive organizational change process that leverages digital technologies to reshape business models, operational processes, and customer experiences (Sina et al., 2023).

Table 4: Result *Capability Level* 3 – DSS06

Objective		*Managed Business Process Controls* (DSS06)		
Evaluation Date		14 March 2025		
Capability Level		Level 3		
Process	**Respondent ID**	**Total Activity Value**	**Total Number of Activities**	**Capability Score**
APO02	R1	7	15	40%
	R2	9	15	47%
	R3	8	15	47%
	R4	7	15	47%
	R5	9	15	60%
	R6	8	15	47%
	R7	10	15	60%
	R8	6	15	33%
	R9	7	15	40%
	R10	8	15	53%
	R11	8	15	47%
Total		87	165	520%
Result *Capability Level Objective*				47%

The overall evaluation result showed a total score of 47%, indicating that the process is at Capability Level 2 and has not yet met the criteria for Level 3. This condition aligns with prior research showing that undocumented control environments often struggle with scalability and accountability, especially under regulatory scrutiny. To progress to Level 3, PT XYZ must formalize its control systems, implement digital monitoring tools, and ensure that business units adopt and adhere to these standards through training and internal audits.

EDM03 – Ensured Risk Optimization

The EDM03 domain relates to IT risk governance and optimization. The average maturity score here was 88%, also placing it at Level 2. While PT XYZ has initiated IT risk assessments and has a designated risk management function, these efforts remain reactive and disconnected from strategic business processes.

Table 5: Result *Capability Level* 3 – EDM03

Objective		Ensured Risk Optimization (EDM03)		
Evaluation Date		14 March 2025		
Capability Level		Level 3		
Process	**Respondent ID**	**Total Activity Value**	**Total Number of Activities**	**Capability Score**
APO02	R1	2	17	40%
	R2	2	17	40%

Objective		Ensured Risk Optimization (EDM03)		
	R3	2	17	40%
	R4	2	17	40%
	R5	1	17	20%
	R6	1	17	20%
	R7	2	17	40%
	R8	2	17	40%
	R9	2	17	40%
	R10	3	17	60%
	R11	1	17	20%
Total		20	187	400%
Result *Capability Level Objective*				24%

There is no formal, regularly updated IT risk register or risk map, and communication around IT risk tends to occur only after incidents. This reactive approach exposes the company to significant operational and compliance risks, especially as digital threats (e.g., cyberattacks, data breaches) increase in frequency and complexity. The overall evaluation result showed a total score of 24%, indicating that the process remains at Capability Level 2 and has not yet fulfilled the criteria for Level 3. According to COBIT 2019 standards, moving to Level 3 requires not only risk identification and response but the proactive integration of risk considerations into strategic planning.

Table 6: Summary of Key Findings

Domain	Average Score	Current Maturity	Target Maturity	Key Issues
APO02	51%	Level 2	Level 3	No formal IT strategy; poor strategic alignment
DSS06	92%	Level 2	Level 3	Informal controls; no SOPs or audits
EDM03	88%	Level 2	Level 3	Reactive risk management; no formal framework

Strategic Analysis: ALE, ALI, SWOT, and TOWS

Incorporating a strategic perspective into the IT governance maturity assessment, this study applies a multi-layered analysis comprising Actual Level of Execution (ALE), Anticipated Level of Implementation (ALI), SWOT, and TOWS to the COBIT 2019 domains APO02, DSS06, and EDM03. This integrated framework assesses organizational readiness, strategic intent, internal capabilities, and external risks. Drawing from interviews, documentation, and stakeholder input at PT XYZ, the ALE–ALI comparison reveals a significant gap, particularly in APO02, where IT strategy development remains informal and disconnected from enterprise-wide planning. Despite a clear managerial intent to formalize IT's role through documented strategies and defined metrics, the current maturity level indicates a need for structural improvements, enhanced documentation, and stronger executive alignment to translate vision into execution. In Sustainable Future: Trends, Strategies, and Development (Noviaristanti & Boon, 2022), SWOT analysis is described as a practical tool for digital startups to better understand their internal strengths and weaknesses, while also identifying external opportunities and threats. This approach highlights how important it is for businesses to look both inward and outward when building sustainable strategies. For digital startups, using SWOT helps decision-makers make the most of their resources, spot new market opportunities, prepare for potential risks, and stay competitive in a fast-changing industry.

For the DSS06 (Managed Business Process Controls) domain, the ALE suggests that control activities are consistently applied through routine operations, although informally managed. The ALI expresses a desire to

institutionalize these controls via formal SOPs, integrated monitoring systems, and internal audits. The relatively small gap between ALE and ALI in this domain indicates that the organization possesses operational strength and is ready to progress, requiring primarily formalization and enforcement of existing practices.

In the EDM03 (Ensured Risk Optimization) domain, ALE observations show that the organization conducts risk-related activities, albeit reactively. The ALI reveals the aspiration to establish a proactive and centralized risk governance framework. This includes implementing a formal IT risk register, integrating risk considerations into decision-making, and conducting regular simulations and audits. The moderate ALE–ALI gap in this domain suggests awareness and some action, but points to the need for more proactive, structured, and continuously monitored risk management systems.

Each domain underwent a SWOT analysis to help with the operational assessment. According to Nabiela et al. (2023), a digital transformation development strategy is a strategic technique for transforming existing business models into more digital and efficient forms. APO02's strengths include existing IT infrastructure and leadership support, while its flaws are insufficient documentation and minimal IT engagement in planning. National digital efforts and IT's rising strategic role create opportunities, while technological upheaval and competitiveness pose risks. DSS06 benefits from experienced personnel and internal dependability, but it lacks written controls and automatic monitoring. Digital tools provide potential for modernization, but they also pose concerns such as human mistake and regulatory scrutiny. In EDM03, a dedicated risk division and organizational awareness are strengths, but they are hindered by the lack of formal documentation and systematic risk mitigation. Externally, cybersecurity concerns and increased compliance demands emphasize the need for tighter governance.

Table 7: Matriks TOWS

	Strength	***Weakness***
	S-O *Strategy*	**W-O *Strategy***
Opportunity	• Use national digital policies and executive support to institutionalize IT strategic planning (APO02). • By automating controls with the help of current audit capabilities, you can improve compliance (DSS06). • Using ISO 31000 and current awareness, create a structured IT risk governance framework (EDM03).	• Create KPIs and documentation for your IT strategy that are in line with COBIT and TOGAF (APO02). • Adopt RPA/ERP to digitize manual controls (DSS06). • Establish ERM procedures with distinct roles for accountability (EDM03).
	S-T *Strategy*	**W-T *Strategy***
Threat	• Review IT strategies frequently to keep up with technological advancements (APO02). • To handle regulatory requirements, use control maturity (DSS06). • Integrate governance policies with risk management (EDM03).	• To manage cyberthreats, assign risk ownership and establish escalation pathways (EDM03). • Monitor KPIs to ensure clear execution and integrate IT with business strategy (APO02). • To lower audit risk, minimize reliance on manual processes (DSS06).

Following the construction of the TOWS matrix, strategic recommendations were generated by connecting PT XYZ's internal strengths and weaknesses with external opportunities and threats across the three COBIT 2019 categories. This strategy establishes a formal foundation for enhancing IT capacity maturity while assuring alignment with both organizational conditions and external environments.

Strategies in the Strength-Opportunity (SO) quadrant concentrate on internal advantages as well as positive external drivers. In the APO02 (Managed Strategy) area, institutionalizing IT strategic planning is a top objective, backed up by strong executive support and national digital transformation strategies. Existing

audit processes in DSS06 (Managed Business Process Controls) can be enhanced using automation technology to improve compliance and efficiency. In the EDM03 (Ensured Risk Optimization) domain, management's understanding of IT risks can be further improved by adopting international standards such as ISO 31000 to develop a formal risk governance structure.

The Weakness-Opportunity (WO) techniques aim to overcome internal inadequacies by using accessible external resources. The lack of written strategy and KPIs in APO02 can be addressed by implementing structured frameworks like COBIT and TOGAF. For DSS06, shortcomings in process control owing to manual activities can be addressed by introducing automation solutions such as Robotic Process Automation (RPA) and Enterprise Resource Planning (ERP). In EDM03, the absence of established risk management frameworks mandates the deployment of Enterprise Risk Management (ERM) techniques with unambiguous accountability.

The Strength-Threat (ST) strategy seeks to manage external risks by exploiting internal capabilities. In APO02, regular IT strategy reviews assure alignment with rapid technical advances. DSS06 can take use of its internal control maturity to meet growing regulatory requirements. For EDM03, implementing risk management within enterprise governance structures improves resilience against cybersecurity and regulatory threats.

Finally, Weakness-Threat (WT) techniques aim to reduce vulnerabilities caused by internal restrictions and external pressures. To respond to evolving cyber threats, EDM03 needs assigning risk ownership and establishing explicit escalation procedures. APO02 must increase the integration of IT and business strategies while assuring measurable execution via established KPIs. DSS06 should decrease dependency on manual processes to reduce audit-related risks and promote operational consistency.

Building on the SWOT, a TOWS analysis was developed to generate actionable strategies for each area. APO02 recommends adopting a clear IT strategy aligned with company goals, increasing IT involvement in strategic decision-making, and incorporating key performance indicators to quantify IT's contribution to business objectives. These strategies address weaknesses by leveraging organizational strengths and seizing policy-level opportunities. For DSS06, proposed strategies involve initiating formal documentation of control processes, prioritizing high-risk areas, implementing digital audit tools, and establishing an internal control literacy program. These initiatives aim to institutionalize reliability while mitigating regulatory risks. In EDM03, strategies focus on creating a centralized IT risk register, building a real-time risk dashboard, embedding risk oversight into planning, and running business continuity drills. These actions target the transition from reactive to proactive risk management.

Collectively, the ALE–ALI assessment outlines the implementation gap, the SWOT analysis contextualizes internal and external factors, and the TOWS matrix guides strategic responses. This multi-perspective framework strengthens the diagnosis of PT XYZ’s IT governance landscape and forms a critical foundation for designing structured, capability-enhancing interventions. The insights derived emphasize the urgency of moving beyond performed processes toward managed and institutionalized IT governance, in alignment with COBIT 2019 standards and in pursuit of the organization’s strategic digital.

4. Conclusion And Recommendations

This study applied the COBIT 2019 framework to evaluate and enhance the IT governance maturity level at PT XYZ, focusing on three priority domains: APO02 (Managed Strategy), DSS06 (Managed Business Process Controls), and EDM03 (Ensured Risk Optimization). The findings reveal that all three domains currently reside at Capability Level 2 (Performed Process), indicating that while the processes are executed, they lack formal documentation, standardization, and consistent governance. In APO02, IT strategic planning exists but is neither formally documented nor fully aligned with corporate objectives. In DSS06, business process controls are practiced informally without standardized procedures, exposing the organization to inefficiencies and risks. In EDM03, risk management practices are reactive and not

systematically embedded into strategic decision-making, leaving the company vulnerable to IT-related threats.

To address these gaps, the company must prioritize the formalization of strategic IT documents, including IT strategy plans, standardized procedures, and risk registers. Institutionalizing these elements will enable more consistent execution, better performance tracking, and improved decision-making. Moreover, implementing real-time monitoring tools and enhancing cross-departmental coordination will support the transition to a managed process state. Regular maturity assessments should also be conducted to measure progress and ensure continuous improvement. Future research should extend the scope to other COBIT 2019 domains such as BAI (Build, Acquire and Implement) and MEA (Monitor, Evaluate and Assess), while also exploring the integration of complementary frameworks like ITIL or the Balanced Scorecard. These actions are essential for PT XYZ to achieve its strategic objective of becoming a Smart Digital TIC company by 2025.

Acknowledgements: The authors would like to express their sincere gratitude to the IT Governance Division of PT XYZ for providing access to internal documentation, key stakeholders, and strategic planning materials necessary for this research. Special thanks are extended to the Chief Digital Officer and the IT Governance Team for their valuable insights during interviews and validation workshops. The authors also acknowledge the support of the Faculty of Technology and Vocational Education, Universitas Negeri Surabaya, for facilitating academic guidance throughout the research process.

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