

Performance Evaluation of Information Technology Governance using the COBIT 5 Framework at PT. Global Bangunan Jaya

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ABSTRACT

PT. Global Bangunan Jaya Riau is a company focused on providing essential building materials in Riau Province. This is driven by the rapid development in the region, including office infrastructure and road networks. The company was established to support the significant growth of construction in Riau, and due to its high competitiveness, it must maintain strong performance both in terms of product quality and customer service. To ensure that the quality and services provided by PT. Global Bangunan Jaya Riau align with the company's vision and mission, it is essential to evaluate the extent to which the organization's IT goals support its overall business objectives. This evaluation is carried out using the COBIT 5 framework, focusing on the EDM (Evaluate, Direct, Monitor) domain. The research process involves three stages of analysis: assessing the current IT capability level, identifying the desired capability level, and analyzing the gap between the two. Data for this study were collected through questionnaires. The results indicate that the IT processes at PT. Global Bangunan Jaya Riau have been effectively implemented, achieved, and well-managed.

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1. INTRODUCTION

PT. Global Bangunan Jaya, located in Riau, is a company primarily engaged in the construction and property development industry. With extensive experience and a strong commitment to quality, the company has become a leading player in the regional construction sector (PT. Global Bangunan Jaya, n.d.). PT. Global Bangunan Jaya is well known for its dedication to innovation in every project it undertakes and for its success in building solid relationships with both clients and business partners. Supported by a skilled and experienced team, the company consistently strives to provide the best solutions for construction and property needs in the region, while maintaining high standards of sustainability and diversity across all aspects of its operations (Nurholis & Jaya, 2022).

Conducting an information technology (IT) audit is a critical step for PT. Global Bangunan Jaya, particularly because the company operates an online platform for construction material sales. This audit ensures that the information systems in use are functioning optimally and comply with applicable security standards and regulations (Jannah & Maula Sulthon, 2022). As a company focused on online building material sales within the construction industry, the reliability and security of its information systems are vital for maintaining customer trust and ensuring smooth business operations. (Doharma et al., 2021) IT audits help identify potential

security risks, evaluate operational efficiency, and highlight areas that require improvements within the IT infrastructure (Nurul Wahidah et al., 2022)(Saryoko et al., 2022).

This study aims to evaluate the implementation of information system governance principles at PT. Global Bangunan Jaya through an audit process based on the Control Objectives for Information and Related Technology (COBIT) 5 framework (Rahayu et al., 2020) (Rabhani et al., 2020). COBIT 5 offers a comprehensive framework for enterprise information technology governance and management, providing managers with tools to address control challenges, technical issues, and business risks (Setiawan et al., 2019). COBIT encompasses five core domains: EDM (Evaluate, Direct, and Monitor), APO (Align, Plan, and Organize), BAI (Build, Acquire, and Implement), DSS (Deliver, Service, and Support), and MEA (Monitor, Evaluate, and Assess) (Efendi et al., 2019) (Hartati et al., 2020). This framework is widely adopted by organizations across various industries and scales including government institutions to improve IT governance and management while ensuring alignment between IT initiatives and business goals. (Fernando et al., 2023).

The evaluation of IT governance using the COBIT 5 framework has assisted PT. Global Bangunan Jaya in identifying and addressing potential risks, improving operational efficiency, and ensuring compliance with industry security standards and regulations (Darwis & Pauristina, 2020)(Mawarni et al., 2022). The company is currently facing several issues related to IT governance that require comprehensive evaluation and improvement. These issues include strategic planning processes, IT architecture design, and challenges in meeting regulatory compliance related to data privacy and security.(Imania, 2024) (Amalia et al., 2020).

In response to these challenges, this study focuses on the Evaluating, Directing, and Monitoring (EDM) domain. The EDM domain enables organizations to assess the performance of IT and its alignment with business objectives (Riani et al., 2021). The processes within this domain include assessing business needs, measuring performance, and identifying and analyzing existing gaps (Aristawidya et al., 2020). Through the EDM domain, COBIT 5 provides guidance to help organizations effectively and efficiently manage and oversee the use of information technology, while also ensuring adherence to applicable policies and regulations (Pratama et al., 2020 ; Purwaningrum et al., 2021; Hambali, 2021; Priambodo, 2023)

2. METHOD

Research methods refer to the strategies or approaches selected to collect and analyze both primary and secondary data required to achieve the objectives of a study (Tetiawadi & Abijono, 2023). This research employed a combination of quantitative and qualitative approaches. The quantitative method was used to assess capability levels through questionnaire data analysis, while the qualitative approach involved interviews and discussions to align organizational goals with the principles of COBIT 5 (Driya et al., 2022)(Febriani & Manuputty, 2021).The research methodology is illustrated in a diagram that presents the research stages, as shown in Figure 1.

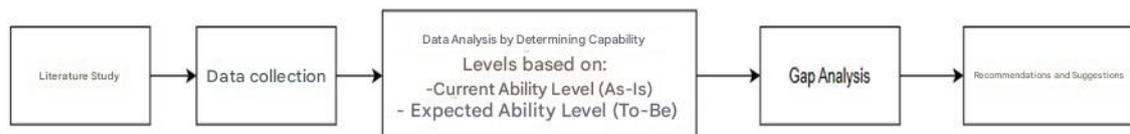


Figure 1. Research Stages

This study was conducted through several steps, namely:

1. Literature Study

In this phase, the researchers conducted a review of relevant literature to gain a comprehensive understanding of theoretical concepts related to the evaluation of IT governance using the COBIT 5 framework (Zuraidah & Sulthon, 2022).

2. Data Collection

Data were collected using two methods: interviews and questionnaires. The interviews aimed to understand the company's current situation and to identify challenges in IT governance (Triyunsari & Sutabri, 2023). Meanwhile, the questionnaires were designed to assess the company's readiness level based on COBIT 5, and to evaluate discrepancies between current conditions and desired expectations (Hadiyanto et al., 2020). The questionnaire items were based on specific process activities defined in COBIT 5. The research participants consisted of IT personnel at PT. Global Bangunan Jaya.

3. Data Analysis

This stage involved interpreting the questionnaire data by applying formulas to calculate the organization's capability level (Halawa & Haryanti, 2024). The output is the quantified capability level of the organization.

4. Gap Analysis

In this phase, the researchers analyzed the extent of the gap between the current IT governance conditions and the company’s targeted governance state(Erstiawan & Soebijono, 2022).

5. Recommendations and Suggestions

Based on the results, recommendations were provided to the company to enhance the effectiveness of its IT governance and support the achievement of strategic goals.

3. RESULTS AND DISCUSSION

Based on the IT governance evaluation questionnaire using the COBIT 5 standard, which was distributed to three respondents from the IT division of PT. Global Bangunan Jaya, the following results were obtained and analyzed for each process.

A. Data Analysis

1. Process Attribute Level EDM01

Table 1. Capability Achievement Results for EDM01 Domain

No	Sub-Process	Capability Value		Level of Capability	
		As-is	To-be	As-is	To-be
1	EDM01.01	3.42	3.75	3	4
2	EDM01.02	4.05	4.33	4	4
3	EDM01.03	3.11	3.72	3	4
Average		3.52	3.93	3	4

From the table above, it can be concluded that the current (As-Is) average score for the EDM01 domain (Ensure Governance Framework Setting and Maintenance) at PT. Global Bangunan Jaya is **3.52**. This indicates that the capability level is at Level 3, meaning that the process is considered to be in an *Established Process* state. This level reflects that PT. Global Bangunan Jaya has implemented standard processes consistently across this domain.

Meanwhile, the desired (To-Be) score for the EDM01 domain is 3.93, which places it at Level 4. At this level, the process is expected to be in a *Predictable Process* state, which implies that the procedures are well-defined, consistently followed, and can reliably produce results aligned with business objectives. Thus, it is expected that PT. Global Bangunan Jaya will be able to implement these defined procedures effectively to achieve targeted outcomes.

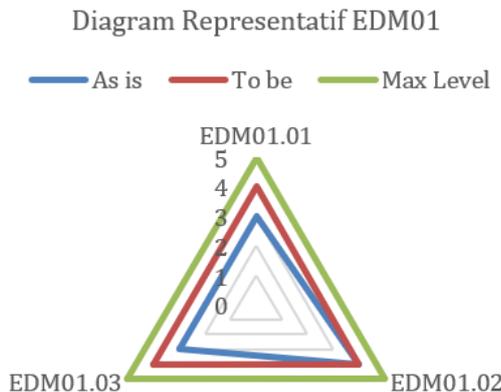


Figure 2. Diagram Representatif EDM01

2. Process Attribute Level EDM02

Table 2. Capability Achievement Results for the EDM02 Domain

No	Sub-Process	Capability Value		Level of Capability	
		As is	To be	As is	To be
1	EDM02.01	3.5	3.91	3	4
2	EDM02.02	3.19	3.71	3	4
3	EDM02.03	3.39	4.06	3	4
Average		3.36	3.89	3	4

Based on the table, the current (As-Is) average value for the EDM02 domain (Ensure Benefits Delivery) at PT. Global Bangunan Jaya is 3.36. This places the capability level at Level 3, indicating that the process is in an *Established Process* state. This suggests that PT. Global Bangunan Jaya has implemented standard processes consistently across the EDM02 domain.

Meanwhile, the desired (To-Be) average value is 3.89, corresponding to Level 4. At this level, the process is expected to operate in a *Predictable Process* state, meaning that the organization aims to execute well-defined procedures and achieve results aligned with its strategic objectives.

Diagram Representatif EDM02

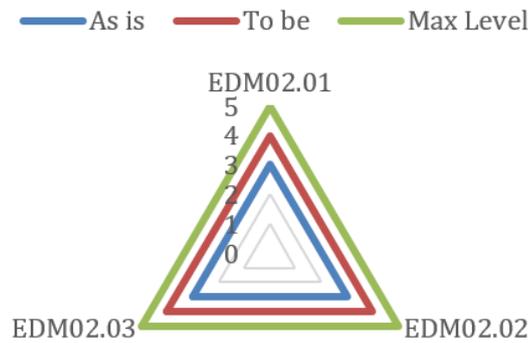


Figure 3. Diagram Representatif EDM02

3. *Process Attribute Level EDM05*

Table 3. Capability Achievement Results for the EDM05 Domain

No	Sub-Process	Capability Value		Level of Capability	
		As-is	To-be	As-is	To-be
1	EDM05.01	3.22	3.67	3	4
2	EDM05.02	3.33	2.50	3	2
3	EDM05.03	2.56	4	3	4
Average		3.03	3.39	3	4

According to the table, the current (As-Is) average value for the EDM05 domain (Ensure Stakeholder Transparency) is 3.03, categorized as Level 3 or an *Established Process*. This indicates that PT. Global Bangunan Jaya has implemented standard procedures effectively in this domain.

The desired (To-Be) value is 3.39, indicating a move toward Level 4. This means the company aims to achieve a *Predictable Process* level in stakeholder transparency, ensuring consistent and measurable results that align with the organization's goals.

Diagram Representatif EDM05

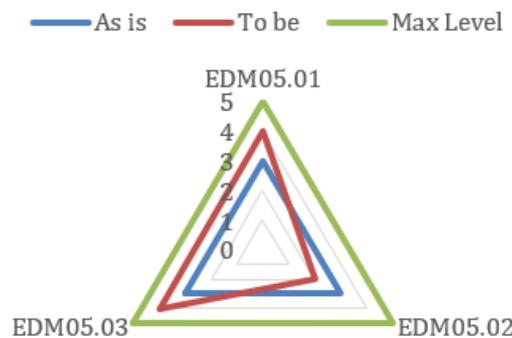


Figure 4. Diagram Representatif EDM05

B. Gap Analysis

Based on the evaluation conducted at PT. Global Bangunan Jaya, the gap was determined by analyzing questionnaire responses from participants to compare the current and desired capability levels. The results are shown in the following table:

Table 4. Gap Analysis Summary

No	Domain	<i>As-is</i>	<i>To-be</i>	GAP
1	EDM01	3	4	1
2	EDM02	3	4	1
3	EDM05	3	4	1
Average		3	4	1

The gap analysis for the EDM01, EDM02, and EDM05 domains illustrates the disparity between the current state and future expectations. At present, each domain has achieved a capability level of 3, indicating a reasonably mature and well-established process. However, the desired condition reflects a target level of 4, signifying the company’s aspiration to achieve a higher standard in the near future. This comparison reveals a consistent gap of 1 level across all domains. This indicates that, although PT. Global Bangunan Jaya has a solid foundation in EDM01, EDM02, and EDM05, there is still room for improvement to reach the desired standard. Therefore, the company must identify and address the underlying factors contributing to this gap in order to enhance its capability in managing information technology governance.

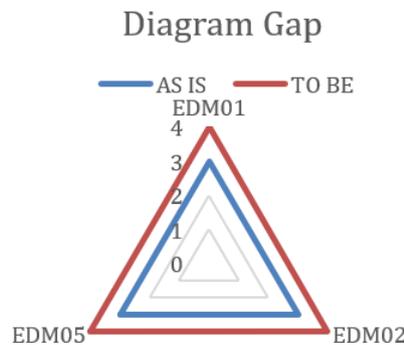


Figure 5. Diagram Gap

4. CONCLUSION

Based on the analysis conducted in this study regarding the evaluation of information technology governance at PT. Global Bangunan Jaya, the following conclusions can be drawn:

1. EDM01 (Ensure Governance Framework Setting and Maintenance) at PT. Global Bangunan Jaya has a current capability level (As-Is) of 3.52, which corresponds to Level 3, indicating that the process is well-established and standardized across the organization. The desired capability level (To-Be) is 3.93, representing Level 4, where the implementation of defined processes is expected to produce outcomes that align with organizational objectives. The gap between As-Is and To-Be is 1 level, indicating room for improvement.
2. EDM02 (Ensure Benefits Delivery) at PT. Global Bangunan Jaya currently has a capability score (As-Is) of 3.36, which corresponds to Level 3, indicating that the process is well-established and consistently applied according to organizational standards. The desired capability score (To-Be) is 3.89, placing it at Level 4, where the implementation of predefined processes is expected to consistently achieve outcomes aligned with business objectives. The capability range from As-Is to To-Be, which spans from 3 to 4, reflects a gap of 1 level in EDM02.. EDM05 (Ensure Stakeholder Transparency) at PT. Global Bangunan Jaya has a current capability score (As-Is) of 3.03, indicating a Level 3 maturity, which means the process is well-established and consistently implemented in accordance with standardized procedures. The desired capability score (To-Be) is 3.39, corresponding to Level 4, where the implementation of defined processes is expected to consistently deliver results aligned with the organization's objectives. The capability range between the As-Is and To-Be conditions from Level 3 to Level 4—demonstrates a 1-level gap in EDM05. The results obtained from the maturity level assessment indicate that the EDM01, EDM02, and EDM05 process domains are all currently positioned at Level 3 (Established Process).

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