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Strengthening SIMRS Governance Through Performance and Compliance Monitoring: Audit Management Objective MEA01 COBIT 2019

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ABSTRACT

Objective: *Performance and compliance monitoring is an important part of the management of the Hospital Management Information System (SIMRS) governance to ensure that information technology implementation runs according to organizational goals and complies with applicable regulations. The implementation of monitoring mechanisms that are not yet optimal can affect the effectiveness of evaluation, control, and decision-making. This study aims to evaluate the monitoring of SIMRS performance and compliance based on the Management Objective Managed Performance and Conformance Monitoring (MEA01) within the COBIT 2019 framework, identify implementation gaps, and formulate improvement recommendations.* ***Method:*** *The study uses a descriptive approach with a case study design. Data were collected through observation, interviews, documentation, and questionnaires to SIMRS stakeholders. Assessment was conducted using COBIT 2019 Performance Management through evaluations of Base Practice, Work Product, and Capability Level. Next, a gap analysis was conducted between actual conditions and targeted capability levels based on the best practices of Management Objective MEA01.* ***Results:*** *The results show that the best practices score is 2.39 (Partially Achieved) and the Work Product score is 1.20 (Not Achieved), so the MEA01 process is at Capability Level 0 (Incomplete Process). The organization's target is at Capability Level 2, resulting in a gap of two levels. The implementation gap is mainly caused by the absence of standardized monitoring indicators, unclear documentation of roles and responsibilities, the lack of periodic monitoring and performance reports, and the lack of documentation of evaluation results as the basis for corrective actions. The study shows that monitoring implementation is not yet fully aligned with the best practices of the Management Objective MEA01 COBIT 2019, especially in the practice of establishing monitoring approaches, measuring performance and compliance, processing and reporting data, as well as continuously implementing corrective actions. This condition indicates that the monitoring process has not been able to produce adequate information to support governance evaluation and performance improvement of SIMRS.* ***Novelty:*** *The application of MEA01 best practices through standardization of monitoring indicators, strengthening documentation, preparing periodic reporting, establishing responsibility, and continuously implementing corrective actions is necessary to enhance the capability of SIMRS performance monitoring and compliance in accordance with COBIT 2019 governance principles.*

INTRODUCTION

Digital transformation has become a strategic priority in the delivery of healthcare services, including through the implementation of the Hospital Management Information System (SIMRS) as the main infrastructure supporting clinical services, administration, reporting, and decision-making [1]. In Indonesia, the implementation of Electronic Medical Records (EMR) is reinforced through the Regulation of the Minister of Health of the Republic of Indonesia Number 24 of 2022, which requires all healthcare facilities to maintain electronic medical records. This policy shows that the success of digital

transformation depends not only on technology implementation but also on governance that can ensure that information systems provide benefits to organizations, comply with regulatory requirements, and support the improvement of health service quality. Therefore, information technology governance is an important factor in ensuring that the implementation of SIMRS runs effectively, efficiently, and sustainably [2], [3].

Information technology governance and management is a system designed to create value through benefit *realization*, risk *optimization*, and *resource optimization*. The governance process is realized through *integrated Governance and Management Objectives*. One of the *Management Objectives* that plays an important role in supporting governance is *Managed Performance and Conformance Monitoring* (MEA01). This aims to ensure that organizational performance, compliance with internal policies and external regulations, as well as the effectiveness of information technology control are monitored, evaluated, analyzed, and reported systematically. ISACA emphasizes that the implementation of MEA01 is carried out through a series of *best practices* including establishing monitoring approaches, data collection and validation, measuring performance and compliance, reporting monitoring results, and implementing corrective actions as part of *continuous improvement* [4].

In practice, performance monitoring and compliance mechanisms in SIMRS remain a challenge for many organizations. Unstructured monitoring causes organizations to have difficulties evaluating performance indicator achievements, documenting evaluation results, measuring policy compliance levels, and ensuring that monitoring results are used as a basis for corrective actions. This condition impacts low control effectiveness, suboptimal managerial decision-making, and a decline in the organization's ability to continuously improve the quality of information technology governance. Thus, performance and compliance monitoring not only functions as supervisory activities but also as mechanisms that support decision-making and improve the quality of SIMRS governance.

Research developments regarding the implementation of COBIT 2019 governance show that this framework has been widely used to evaluate information technology governance in various organizations, including healthcare organizations. Determining *Governance and Management Objectives* priorities based on organizational characteristics can produce recommendations for more adaptive governance development [5]. In addition, assessing information system governance using domains BAI02, BAI03, and BAI07 through *Capability Level* measurement can formulate recommendations for process improvements in information systems [6]. Several recent studies on the implementation of SIMRS also show that COBIT 2019 governance is effective for identifying process capability levels, measuring implementation gaps, and formulating governance improvement recommendations based on the actual organizational conditions [7], [8].

Based on the literature review, it shows that most studies are still oriented towards measuring *Capability Level* or determining the priority *of Governance and Management Objectives*. Previous research has generally not conducted an in-depth evaluation regarding *the Management Objective* domain MEA01, especially in integrating the

assessment of *Base Practices, Work Products*, and *Capability Level* as the basis for identifying the root causes of low process capability [9], [10]. Furthermore, most of the recommendations produced are still general and have not been explicitly formulated based on the best practices of MEA01 COBIT 2019, thus they have not provided implementable guidance for organizations in strengthening performance monitoring and compliance mechanisms. This gap indicates that research on the implementation of MEA01 still requires more comprehensive studies to produce strategies to strengthen SIMRS governance aligned with COBIT 2019 best practices.

Based on these issues, this study aims to evaluate the implementation of *Management Objective* MEA01 (Managed Performance and Conformance Monitoring) in the Hospital Management Information System using the COBIT 2019 governance framework in the Performance Management (MEA) domain through assessments of *Base Practices, Work Products*, and *Capability Level*. In addition, this study analyzes the implementation gaps in MEA01 best practices and develops strategies to strengthen SIMRS governance through improved performance monitoring and compliance mechanisms. The research results are expected to provide scientific contributions to the development of information technology governance studies in the health sector and serve as a practical reference for hospitals in improving monitoring effectiveness and compliance in accordance with the COBIT 2019 governance principles.

RESEARCH METHOD

This study uses a quantitative approach with a case study design to evaluate the implementation of Hospital Management Information System (SIMRS) governance based on *the Management Objective* MEA01 domain (*Managed Performance and Conformance Monitoring*) within the COBIT 2019 framework through the *assessment of Base Practices, Work Products,* and *Capability Level.* The research population consists of stakeholders involved in SIMRS management. The sample was determined using purposive sampling based on the COBIT 2019 RACI Chart, so respondents are parties who have the roles of *Responsible, Accountable, Consulted,* and *Informed* in the MEA01 process.

Data collection was conducted through questionnaires, interviews, observations, and documentation studies. The research instruments were developed based on the *indicators of Base Practices* and *Work Products* in the *Management Objective* domain MEA01, referring to the COBIT 2019 *framework for Governance and Management Objectives* and *Performance Management*. Instrument validity was carried out through content *validity* based on the conformity of COBIT 2019 indicators. Data analysis was conducted using the COBIT 2019 *Performance Management framework* through assessments *of Base Practices, Work Products*, and *Capability Level*, followed by gap analysis between actual capability levels and organizational targets. The analysis results were used to formulate recommendations for improving SIMRS governance based on *best practices of Management Objective* MEA01 COBIT 2019.

RESULTS AND DISCUSSION

Results

The evaluation of the Hospital Management Information System (SIMRS) governance was conducted using *the Management Objective* MEA01 (*Managed Performance and Conformance Monitoring*) within the COBIT 2019 *Performance Management framework*. Assessment was conducted through questionnaires on five *Management Practices*, then verified through observation and documentation studies to obtain objective evidence (*work products*) of the implementation of the performance monitoring and compliance process. The questionnaire assessment results show that the implementation of *Base Practices* obtained an average score of 2.39 with a *Partially Achieved* category. This score indicates that some performance monitoring and compliance activities have been carried out, but the implementation is not yet fully consistent and does not meet all the practices recommended in *the Management Objective* MEA01. The recap of assessment results shows that the highest score was obtained in MEA01.02 *Set Performance and Conformance Targets* at 2.71, followed by MEA01.05 *Ensure the Implementation of Corrective Actions* at 2.63, while the lowest scores were in MEA01.03 *Collect and Process Performance and Conformance Data* at 2.17 and MEA01.04 *Analyze and Report Performance* at 2.19. These results indicate that the organization has made efforts to set monitoring targets and implement follow-up actions on problems, but the data collection, analysis, and performance reporting processes have not yet run optimally.

Table 1. Assessment Results *of Base Practices Management Objective* MEA01

Management Practice	Current Value	Target
MEA01.01 Establish a Monitoring Approach	2,25	4,00
MEA01.02 Set Performance and Conformance Targets	2,71	4,00
MEA01.03 Collect and Process Performance and Conformance Data	2,17	4,00
MEA01.04 Analyze and Report Performance	2,19	4,00
MEA01.05 Ensure the Implementation of Corrective Actions	2,63	4,00
Average	**2,39**	**4,00**

These findings are reinforced by observation results and documentation studies showing that monitoring implementation has not been supported by *the Work Products* required in COBIT 2019. Several important documents, such as SIMRS monitoring indicators, periodic monitoring reports, SIMRS performance reports, evaluation documentation, and corrective action documentation, are not yet fully available. Of all the documents required in *Process Attribute* 1.1 (*Process Performance*), only a small portion of implementation evidence can be found, so *the Work Products* score only reaches 1.20 with a *Not Achieved category*. This condition indicates that although monitoring activities have been carried out, objective evidence supporting the process implementation has not been adequately documented.

Table 2. Work Products Evaluation Results

Work Product	Status
List of SIMRS management officers	Not available
Simrs monitoring indicators	Not available
SIMRS daily report	Not available
HMIS performance report	Not available
Documentation of evaluation results	Some are available, but not yet formally documented

Based on the results of *the Base Practices and Work Products assessment, the capability assessment* was conducted using the COBIT 2019 *Performance Management* mechanism. The *Base Practices* value of 2.39 (*Partially Achieved*) and *Work Products* of 1.20 (*Not Achieved*) indicate that the MEA01 process is at Capability Level 0 (*Incomplete Process*) because *the Process Performance* attributes have not met the criteria required to reach *Capability Level* 1. Organizations set capability targets at *Capability Level* 2 (*Managed Process*), resulting in a gap of two levels between actual conditions and expected conditions.

Table 3. Capability *Assessment Management Objective* MEA01 Results

Assessment Components	Value	Category
Base Practices	2,39	Partially Achieved
Work Products	1,20	Not Achieved
Capability Level Aktual	Level 0	Incomplete Process
Capability Level Target	Level 2	Managed Process
Gap	**2 Level**	-

Overall, the evaluation results show that the implementation of *Management Objective* MEA01 has accommodated some of the performance monitoring and compliance activities of the SIMRS but has not yet met COBIT 2019 best practices. The main weaknesses lie in the absence of standardized monitoring indicators, unclear documentation of roles and responsibilities, the lack of periodic monitoring and performance reports, as well as the lack of documentation of evaluation results and corrective actions as a basis for *continuous improvement*. This condition causes the monitoring process to not yet be able to produce adequate information to support governance evaluation and continuous performance improvement of SIMRS.

Discussion

The results show that *Management Objective* MEA01 (*Managed Performance and Conformance Monitoring*) obtained a Base Practices score of 2.39 categorized as Partially Achieved, while Work Products scored 1.20, categorized as Not Achieved. Based on the COBIT 2019 Performance Management mechanism, this condition places the process at Capability Level 0 (Incomplete Process). These findings indicate that some of the performance monitoring and compliance activities of SIMRS have been carried out, but their implementation is not yet supported by adequate process evidence, so the process

objectives have not been optimally achieved.

The *Base Practices value*, which falls into the Partially Achieved category, indicates that the organization has carried out several activities in the five Management Practices of MEA01, especially in setting monitoring targets and implementing follow-up actions on emerging issues. However, the lower achievements in activities such as collecting, processing, analyzing, and reporting performance data indicate that the monitoring process has not been running consistently. An effective monitoring process must be able to produce accurate, timely, and relevant performance information so that it can be used as a basis for evaluation and organizational decision-making. Thus, although monitoring activities have been carried out, the monitoring function has not fully provided added value to the governance of the SIMRS [4], [11].

Observation results show that most of the Work Products required in MEA01 are not yet available, such as monitoring indicators, performance reports, evaluation documentation, and corrective action reports. This condition causes the Work Products value to fall into the Not Achieved category, so the Process Performance attribute has not been fulfilled. These findings indicate that the low level of capability in hospital information system governance is related to suboptimal process documentation and evidence of activity implementation. Without adequate documentation, organizations will have difficulty evaluating process effectiveness or proving that monitoring activities have been consistently carried out [12], [13].

The gap of two levels between the actual Capability Level (Level 0) and the target Capability Level (Level 2) indicates that monitoring implementation has not yet met the characteristics of Managed Process. Improving the capability level in information system governance not only depends on operational activities but also requires standardized processes, controls, documentation, and consistent reporting. Thus, organizations are not limited to just monitoring, but must also ensure that all monitoring results are documented and can be used as a basis for decision-making [14], [15]. In addition, standardized monitoring indicators are not yet available. This condition causes organizations to not be able to measure the achievement of SIMRS performance objectively and continuously. The readiness of hospital information system implementation is greatly influenced by the existence of clear performance measurement mechanisms, enabling organizations to identify deviations and make appropriate improvements. Therefore, developing measurable monitoring indicators is an important step in improving the effectiveness of the MEA01 process [16]. Furthermore, the lack of periodic monitoring and performance reports indicates that evaluation results have not been managed as managerial information. The low maturity level of hospital information system governance is often caused by weak reporting mechanisms and documentation of evaluation results. As a result, organizations experience difficulties in tracking follow-up improvements and measuring the effectiveness of actions taken [17].

Based on best practices Management Objective MEA01 COBIT 2019, capability enhancement can be carried out through the development of documented monitoring approaches, determination of measurable performance and compliance indicators,

development of periodic reporting mechanisms, documentation of evaluation results, and documented implementation of corrective actions. These recommendations are also in line with the research by Sari and Nuryana, 2025, which emphasizes that control, monitoring, and process documentation are important components in information technology governance in hospitals. With the implementation of these recommendations, organizations are expected to enhance process capabilities towards Capability Level 2 (Managed Process) so that monitoring of SIMRS performance and compliance can run consistently, documented, and support the strengthening of information technology governance [18].

CONCLUSION

Fundamental Finding : The implementation of Management Objective MEA01 (Managed Performance and Conformance Monitoring) in the management of the Hospital Management Information System (SIMRS) has not fully met COBIT 2019 best practices. The evaluation conducted shows that the performance and compliance monitoring processes have been applied to several activities, but are not yet supported by standardized monitoring mechanisms, complete process documentation, systematic performance reporting, and documented follow-up on evaluation results. This condition results in process capabilities not reaching the expected level, so the effectiveness of monitoring in supporting SIMRS governance still needs to be improved. **Implication :** Based on these findings, strengthening SIMRS governance needs to be directed towards developing measurable monitoring and compliance indicators, clearly defining roles and responsibilities, strengthening work product documentation, and preparing regular monitoring and evaluation reports as a basis for continuous improvement. The implementation of these recommendations is expected to improve process capabilities in accordance with the Management Objective of MEA01 COBIT 2019, so that performance and compliance monitoring can support decision-making and enhance the effectiveness of information technology governance in hospitals. **Limitation :** The implementation of Management Objective MEA01 (Managed Performance and Conformance Monitoring) in the management of the Hospital Management Information System (SIMRS) has not fully met COBIT 2019 best practices. **Future Research :** The implementation of these recommendations is expected to improve process capabilities in accordance with the Management Objective of MEA01 COBIT 2019.

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