

SYSTEMATIC LITERATURE REVIEW ON THE IMPLEMENTATION OF APO11 MANAGED QUALITY COBIT 2019 IN INFORMATION TECHNOLOGY GOVERNANCE

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OPEN ACCESS

No article processing charge (APC)

ARTICLE INFORMATION

Page
9-19

Received
10 June 2026

Revised
30 June 2026

Accepted
15 September 2026

Published
28 September 2026

DOI
<https://doi.org/10.67955/xxxx>

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Abstract: Information technology governance plays a crucial role in ensuring that the use of technology effectively, efficiently, and sustainably supports the achievement of organizational goals. One of the widely used frameworks in IT governance implementation is COBIT 2019, specifically the APO11 Managed Quality domain, which focuses on managing and improving the quality of information technology services. This study aims to analyze the implementation of APO11 Managed Quality across various organizations using a Systematic Literature Review (SLR) approach. The research process followed the PRISMA guidelines, which include the stages of identification, screening, eligibility assessment, and article selection. A total of 33 articles meeting the inclusion criteria were analyzed to address research questions regarding the implementation, benefits, and challenges of APO11. The findings indicate that APO11 is generally implemented through IT governance audits, capability assessments, information system evaluations, as well as measurements of capability and maturity levels. The implementation of APO11 has been shown to contribute to improved service quality, business process efficiency, user satisfaction, and the strengthening of quality monitoring and documentation mechanisms. However, various organizations still face challenges such as limited human resources, inadequate documentation, low understanding of COBIT 2019, and suboptimal system integration. The research findings indicate that the success of APO11 implementation is influenced by management support, clear process standards, human resource competencies, and organizational commitment to continuous improvement.

Keywords: IT Governance; COBIT 2019; APO 11; Managed Quality; Systematic Literature Review

1. Introduction

Information technology governance has become a critical issue as organizations increasingly rely on digital services to support operations, decision-making, and value creation. In this context, IT governance not only requires alignment with business objectives but also the continuous control of service quality, risks, and resources. ISO/IEC 38500 emphasizes that IT governance is part of organizational governance focused on current and future IT usage, while COBIT positions governance as a holistic approach to aligning IT Objectives with stakeholder needs (*Industry News 2019 COBIT Design Factors*, 2019).

COBIT 2019 provides a more adaptive framework than previous generations because it supports customization based on design factors, goal cascading, and varying organizational needs. Within this framework, the APO domain plays a critical role in ensuring that the planning, organization, and management of IT resources are effective. One of the crucial management objectives is APO11 Managed Quality, as this process is directly related to service quality assurance and continuous improvement in the digital business environment (*Industry News 2019 COBIT Design Factors*, 2019).

Previous research indicates that COBIT 2019 has been implemented across diverse organizational contexts, ranging from government agencies, universities, hospitals, financial institutions, to IT service providers. These studies generally employ capability assessments, governance audits, and maturity level evaluations to map the current state of IT governance and formulate improvement recommendations. Nevertheless, studies specifically synthesizing the implementation of APO11 Managed Quality remain relatively scattered and have not yet been systematically summarized within a single analytical framework (Naibaho & Cahyono, 2024; Nuranto et al., 2024a; Wattimury & Faza, 2023).

Although various studies have examined the implementation of COBIT 2019 across diverse organizational sectors, most research still focuses on measuring capability levels, governance audits, and evaluating specific domains individually. Studies specifically analyzing

the implementation of APO11 Managed Quality across various organizational contexts remain relatively limited and scattered across various publications. Consequently, there is no existing literature synthesis capable of providing a comprehensive overview of the implementation patterns, benefits, and challenges of APO11 across various organizational sectors. Therefore, a Systematic Literature Review (SLR)-based study is needed to integrate existing findings, thereby generating a more comprehensive understanding of the application of APO11 Managed Quality within the COBIT 2019 framework.

Given these conditions, this study aims to conduct a Systematic Literature Review (SLR) to explain how APO11 is implemented, what benefits are most prominent, and what challenges organizations most frequently face. The primary contribution of this study is to provide a more structured literature synthesis for students, researchers, and practitioners seeking to understand the implementation of APO11 Managed Quality within COBIT 2019. The SLR approach was also selected because it enables a transparent, measurable, and replicable process for identifying and selecting studies in accordance with the PRISMA guidelines (Page et al., 2021).

2. Literature Review

2.1 Systematic Literature Review (SLR)

A Systematic Literature Review (SLR) is a research method used to systematically, transparently, and replicably identify, evaluate, and synthesize relevant research findings on a specific topic. Unlike traditional literature reviews, SLRs employ structured procedures ranging from formulating research questions, literature search strategies, and study selection based on inclusion and exclusion criteria, to the analysis and synthesis of research findings. This approach enables researchers to obtain more comprehensive and objective scientific evidence, thereby reducing potential bias in the literature review process (Page et al., 2021).

In research within the fields of information systems and information technology governance, the SLR method is widely used to identify research trends, map research gaps, and synthesize knowledge from various published studies. Therefore, this method is considered effective for generating a deeper understanding of the implementation of a framework or IT governance practice based on empirical evidence available in the scientific literature (Kitchenham et al., 2009).

2.2 Information Governance

Information governance is a mechanism to ensure that information assets, digital processes, and IT services deliver value aligned with organizational objectives. In a modern governance framework, attention is directed not only toward technical controls but also toward decision accountability, performance measurement, risk management, and meeting stakeholder needs. ISO/IEC 38500 places IT governance as the responsibility of the organization's leadership, while COBIT emphasizes a balance between value creation, risk optimization, and resource optimization (*Industry News 2019 COBIT Design Factors*, 2019).

IT governance is a process aimed at regulating the use of information technology to deliver maximum results within the company, support sound decision-making, and help resolve issues. IT governance focuses on objectives that include ensuring the implementation of information technology provides benefits aligned with the company's goals, that information technology resources are used responsibly, enabling the company to capitalize on opportunities created by information technology, and effectively managing risks (Hidayah et al., 2024a).

Implementation studies indicate that organizations that adopt a more formal approach to IT governance tend to have better process documentation, clearer escalation pathways, and more consistent evaluation capabilities. In the context of this study, IT governance serves as the conceptual foundation for assessing how the quality of IT services is planned, monitored, and continuously improved through APO 11 (Lumingkewas et al., 2023; Sukanto et al., 2021; Tambunan & Legowo, 2024).

2.3. The COBIT 2019

COBIT (Control Objectives for Information and Related Technologies) is an information technology governance and management framework developed by ISACA to help organizations create value from the use of information technology. COBIT 2019 provides a comprehensive and

flexible approach to managing and controlling IT processes through governance principles focused on value creation, risk optimization, and resource optimization. This framework also supports alignment between business objectives and information technology objectives so that organizations can continuously improve the effectiveness of IT service and process management (COBIT 2019 Framework Governance and Management Objectives, 2019).

COBIT 2019 is an evolution of COBIT 5. The COBIT 2019 framework draws a clear distinction between governance and management; these two areas involve different activities, structures, and objectives. In addition, COBIT 2019 also identifies components for building and supporting governance systems, processes, organizational structures, policies and procedures, information flows, culture and behavior, as well as skills and infrastructure [13]. COBIT 2019 includes 40 core objective models and 11 design factors that describe information technology governance and management (Herianto & Wasilah, 2022).

The strength of COBIT 2019 lies in its ability to link business objectives with IT objectives through goal cascade. In this way, organizations can map strategic priorities into governance processes that can be measured and monitored. Various studies indicate that this approach facilitates the evaluation of capability levels and the formulation of more specific improvement recommendations in the education, government, and industry sectors (Novanni et al., 2025; Utomo et al., 2022; Widharto et al., 2022).

2.4. APO 11 Managed Quality

APO11 Managed Quality focuses on structured quality management to ensure that IT products, services, and processes meet the standards set by the organization. In practice, this process involves establishing a quality management system, setting service standards, quality control, and continuous evaluation of IT service outcomes. Due to its cross-functional nature, APO11 is often used as a foundation to strengthen service consistency and reduce quality variations across processes (Afriyanto et al., 2025).

Studies in the APO11 domain demonstrate that service quality is determined not only by technological tools but also by governance, documentation, and adherence to work procedures. Research in educational and public sector settings confirms that APO11 helps organizations monitor process gaps, establish work standards, and guide more measurable corrective actions (Afriyanto et al., 2025; Arimurti et al., 2024; Beato & Fianty, 2024).

3. Methodology

3.1. Research Method

This study employs the Systematic Literature Review (SLR) method to identify and analyze research related to the implementation of APO11 Managed Quality within the COBIT 2019 framework. The SLR method is used to obtain systematic and structured research results through the process of identifying, screening, and evaluating scientific articles.

The approach used in this study is PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses). In this study, PRISMA was used to assist in the process of identifying, screening, determining eligibility, and selecting the final articles relevant to the research topic (Page et al., 2021).

This study has the following Research Questions (RQs):

RQ 1: How is the implementation of the APO11 Managed Quality domain of COBIT 2019 carried out across various organizations?

RQ 2: What are the benefits of implementing APO11 in improving IT governance quality?

RQ 3: What are the challenges or obstacles in implementing APO11 of COBIT 2019?

3.2. Literature Search Strategy

The literature search process was conducted through several academic databases such as Google Scholar, and ScienceDirect. The articles used were scientific articles published between 2020 and 2026.

Following the initial search, the identified articles were progressively screened using inclusion and exclusion criteria to ensure the relevance and quality of the data align with the research objectives. The selection process began with an evaluation of titles and abstracts to exclude articles not aligned with the research focus, followed by an assessment of the full text to evaluate the depth of content and the relevance of empirical data..

Tabel 1. Inclusion and Exclusion Criteria

Criteria	Description
Inclusion	The article discusses APO 11 COBIT 2019
	The article discusses IT Governance
	The article is a scientific Journal/Proceedings
	Articles published between 2020-2026
	Full-text articles available
Exclusion	Relevant to the research questions that have been formulated
	Duplicate articles
	Articles that do not discuss APO 11
	Non-Scientific articles
	Articles not available in full-text
	Not relevant to the research question

Articles that do not meet the inclusion and exclusion criteria are excluded from the analysis. The selection process then continues with a more in-depth evaluation to ensure that the remaining articles are strongly relevant to the research question.

4. Result

4.1 Literature Screening Results

Based on the literature search and screening process conducted using the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) method, 110 scientific articles relevant to the research topic regarding the implementation of the APO 11 Managed Quality domain within the COBIT 2019 framework were identified. The literature search and screening process was conducted using several academic databases such as Scopus, Google Scholar, and IEEE, employing keywords such as “COBIT 2019,” “APO11 Managed Quality,” “IT Governance,” and “Quality Management.”

The screening process was conducted systematically by considering the relevance of the title, abstract, research content, and alignment with the predefined Research Question (RQ). The selected papers addressed the implementation of APO11 Managed Quality, COBIT 2019-based IT governance, capability assessment, quality management, as well as the benefits and challenges of implementing APO11 across various types of organizations. Meanwhile, articles that had no direct connection to APO11, quality management, or COBIT 2019-based IT governance were eliminated from the analysis process, leaving 60 articles. In the final stage, a full-text review of these articles was conducted, and 30 articles were selected from journals that met the criteria.

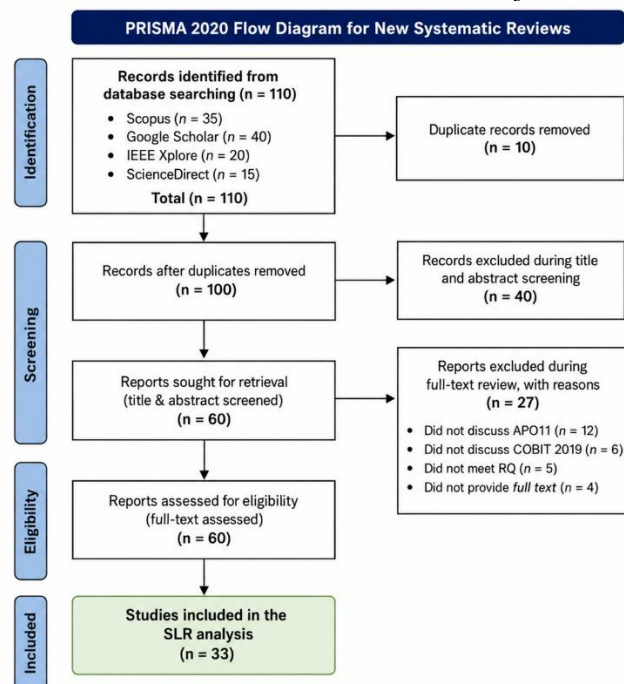


Figure 1. Flow Diagram PRISMA 2020**4.2 List of Selected Articles**

The scientific article search process yielded a set of articles organized by title and journal to facilitate the identification of the types of data and publications obtained. Table 2 displays a list of selected articles, including the title, author, year of publication, and journal of the articles relevant to the topic.

Tabel 2. List of Selected Articles

No	Paper Title	Author	Year	Journal Name
1	Analysis of the USM Lecturer PPKM application portal using COBIT 2019 Framework	Bogo Nuranto, Kristoko Dwi Hartomo, Teguh Wahyono	2024	Jurnal SISFOKOM (Sistem Informasi dan Komputer)
2	Assessing Information Security Using COBIT 2019 And ISO 27001:2013	Elok Aflakhah, Benfano Soewito	2024	Journal of System and Management Sciences
3	Assessment Capability Level dan Maturity Level Tata Kelola TI Pada Kantor Kementerian Agama Kabupaten Pesawaran Provinsi Lampung Menggunakan Framework COBIT 2019	Herianto, Wasilah	2022	KONSTELASI : Konvergensi Teknologi dan Sistem Informasi
4	Audit Capability Level Sipd Menggunakan Cobit 2019 Domain Align Plan And Organize Di Bappeda Kota Lhokseumawe	Angga Pratama, Ananda Faridhatul Ulva, Sitepu		
5	Audit Sistem Informasi Cobit 2019 Domain Apo11 Dan Dss01 Untuk Evaluasi Kualitas E-Learning (Studi Kasus: Perguruan Tinggi Xyz)	Rahmat Afriyanto, Hadid, Megawati	2025	Pondasi : Journal of Applied Science Engineering
6	Audit Tata Kelola Teknologi Informasi Menggunakan Framework Cobit 2019 terhadap Pencapaian IT Master Plan Lembaga Pelatihan XYZ	Ufan Alfianto, Irman Hermadi, Sri Wahjuni	2022	Syntax Literate: Jurnal Ilmiah Indonesia
7	Audit Tata Kelola Universitas Islam Negara Sultan Syarif Kasim Riau Repository System Menggunakan COBIT 2019	Tita Alisya, Hani Handayani, Sephia Nazwa Auliani, Luthfia Khairani, Megawati	2024	Jurnal Testing dan Implementasi Sistem Informasi
8	Capability Level Assessment of IT Governance in the SIAP KOJA Application Using the COBIT 2019 Framework	Yesya Najwa Widasari, Nabila Rizky Oktadini	2025	Journal of Applied Informatics and Computing (JAIC)
9	COBIT 2019 Framework: Evaluating Knowledge and Quality Management Capabilities in a Printing Machine Distributor	Jonathan Beato, Melissa Indah Fianty	2024	Journal of Information Systems and Informatics
10	COBIT 2019 Implementation for Enhancing IT Governance in Educational Institutions	Gilberth Wattimury, Ahmad Faza	2023	JISKA (Jurnal Informatika Sunan Kalijaga)

11	Enhancing Governance Maturity Assessment in Higher Education Institutions Through Data-Driven Feature Selection and Clustering Techniques	Faradillah , Ermatita , Dian Palupi Rini	2025	Ingénierie des Systèmes d'Information
12	Evaluasi Dan Implementasi Tata Kelola Ti Menggunakan Cobit 2019 (Studi Kasus Pada Dinas Kependudukan Dan Pencatatan Sipil Kabupaten Tabanan)	I Gusti Made Setia Dharmaa1, I Gusti Made Arya Sasmitaa2, I Made Suwija Putraa3	2021	JITTER- Jurnal Ilmiah Teknologi dan Komputer
13	Evaluasi Dan Implementasi Tata Kelola Ti Pada Sma Negeri 4 Pekanbaru Menggunakan Cobit 2019	Hamdi Syukron, Muslim Putera Perdana S, Ali Alamuddin Muzaffar, Mhd. Ilham Zayadi	2024	Jurnal Testing dan Implementasi Sistem Informasi
14	Evaluation and Implementation of IT Governance Using the 2019 COBIT Framework at the Department of Food Security, Agriculture and Fisheries of Balangan Regency	Rini Audia, Bambang Sugiantoro	2022	IJID (International Journal on Informatics for Development)
15	Evaluation of Integration and Human Resources in Information Technology Governance using COBIT 2019: PT. Pelabuhan Indonesia Tanjung Priok Branch	Timotius Ammar Karo Karo, Ahmad Faza	2023	Journal of Information Systems and Informatics
16	Evaluasi Tata Kelola TI Bank Indonesia Provinsi Bengkulu Dengan COBIT 2019	Pieters Nicholas Paradongan Tambunan, Nilo Legowo	2024	Jurnal Teknik Informatika dan Sistem Informasi
17	Identification of IT Governance Capability Level of COBIT 2019 at The KOMINFO City of Bitung, North Sulawesi	Cherry Lumingkewas, Joe Yuan Mambu, Andria K. Wahyudi	2023	Telka
18	Identifikasi Tujuan Tata Kelola Teknologi Informasi PLT FST UIN Jakarta Menggunakan Framework COBIT 2019	Nur Aeni Hidayah, Nurbojatmiko, Mizan Ade Arfani, Yuliwanda Anggi Kusumastuti	2024	Journal Of Applied Computer Science And Technology (Jacost)
19	Implementasi Framework Cobit 2019 Pada Audit Tata Kelola Sistem Infomasi Pada Dinas Penanaman Modal Dan Ptsp Kota X	Ni Luh Putu Yuliandri, I Gede Putu Krisna Juliharta, Ni Made Estiyanti	2023	Jurnal TEKINKOM
20	Information Technology Governance Analysis Using COBIT 2019 Framework in Disdukcapil	Epson Briantama Naibaho, Ariya Dwika Cahyono	2024	Journal of Information Systems and Informatics
21	IT Governance for the University of Cuenca	Rodrigo Padilla-Verdugo, Master in Information Management, Víctor Saquicela-Galarza, PhD in Computer Science and Artificial Intelligence	2020	LACCEI International Multi-Conference for Engineering, Education, and Technology:
22	Leveraging COBIT 2019 to Implement IT Governance in	Diana Utomo, Mahaning Wijaya, Suzanna,	2022	CommIT Journal

	SME Context: A Case Study of Higher Education in Campus A	Efendi, and Noviyanti Tri Mareta Sagala		
23	Measurement of information technology governance capability level: a case study of PT Bank BBS	Punto Widharto, Zaldy Suhatman, Rizal Fathoni Aji	2022	TELKOMNIK A Telecommunication Computing Electronics and Control
24	Measuring the Level of HRIS Governance Capability in the Automotive Financing Company Using COBIT 2019	Muhammad Naufal, Rudi Sutomo	2024	Journal of Information Systems and Informatics
25	Model Hybrid COBIT 2019 dan PLS-SEM untuk Mengukur Determinan Efektifitas Informasi Tata Kelola TI	Meinahen B. Bansoma, Hanna M. Baun	2025	The Indonesian Journal of Computer Science
26	Pengukuran Tingkat Capability IT Governance pada PT. Sarana Citranusa Kabil Menggunakan Framework Cobit 2019 (Measurement of IT Governance Capability Level at PT. Sarana Citranusa Kabil Uses the 2019 Cobit Framework)	Suroto Suroto, John Friadi	2022	Jurnal Ilmu Siber dan Teknologi Digital (JISTED)
27	Penilaian Kapabilitas Tata Kelola Teknologi Informasi Menggunakan Kerangka Kerja Cobit 2019 dengan Fokus Domain APO pada RSPAU dr. Suhardi Hardjolukito	Nurfadhilah Azzahra Arimurti, Widyatasya Agustika Nurtrisha, Falahah	2024	Jurnal Teknologi dan Manajemen Informatika
28	Penilaian Tingkat Kapabilitas Tata Kelola Teknologi Informasi Berdasarkan Kerangka Kerja Cobit 2019 Dengan Metode Scoping Goals Cascade Dan Design Factors: Studi Kasus Pt. Xyz	I Nyoman Sujana Saputra	2025	INSERT: Information System and Emerging Technology Journal
29	Perancangan Peningkatan Tata Kelola Ti Kliping Digital di Instansi Pemerintahan Menggunakan Pendekatan Manajemen Informasi	Andysah Putera Utama Siahaan, Efriansyah Putra Bahari Barus, Muhammad Hasanuddin, Zulfan, Fakhri Rizaldi	2026	Jurnal Komputer Teknologi Informasi Sistem Komputer
30	Perancangan Tata Kelola Teknologi Informasi Menggunakan Framework Cobit 2019 Pada Bps Provinsi Sumatera Selatan	Windri Dwi Novanni, Liana Sukma, Rasmila	2025	JATI (Jurnal Mahasiswa Teknik Informatika)
31	Rencana Audit Teknologi Informasi Menggunakan Cobit 2019 Pada Unit Isti Universitas Telkom	Ruri Fadhillah, Iqbal Santosa, Lukman Abdurrahman	2021	JIKO (Jurnal Informatika dan Komputer)
32	Rencana Audit Teknologi Informasi Menggunakan Cobit 2019 Pada Unit Riyanti Universitas Telkom	Ayta Boangmanalu, Iqbal Santosa, Lukman Abdurrahman	2021	JIPI (Jurnal Ilmiah Penelitian dan Pembelajaran Informatika)
33	Tata Kelola Teknologi Informasi Menggunakan Framework	Anggi Srimurdianti Sukamto, Haried	2021	JEPIN (Jurnal Edukasi dan

COBIT 2019 (Studi Kasus: UPT TIK Universitas Tanjungpura Pontianak)	Novriando, Aldi Reynaldi	Penelitian Informatika)
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4.3 Result of the RQ 1 Analysis (Implementation of APO 11 Managed Quality)

Based on the results of the literature analysis, the implementation of the APO 11 Managed Quality domain in COBIT 2019 has been applied in various types of organizations, such as government agencies, universities, hospitals, educational institutions, companies, and information technology service providers. The implementation of APO 11 is generally carried out through Capability Assessment, IT governance audits, information system evaluations, maturity level measurements, and IT service quality monitoring.

Additionally, several studies indicate that APO 11 is not only implemented independently but is also combined with other COBIT domains such as APO 13, DSS 02, DSS 03, DSS 05, and MEA 01. The integration of these domains aims to support more comprehensive IT service quality management, particularly in aspects of monitoring, information security, service management, and evaluation of IT governance processes.

The implementation of APO11 is also used to ensure that the IT service quality management process runs in accordance with the governance standards established by the organization. With APO11, organizations can achieve continuous improvement in IT services through ongoing monitoring and evaluation processes.

4.4 Analysis Result of RQ 2 (Benefits of Implementing APO 11 Managed Quality)

The research findings indicate that the implementation of APO11 Managed Quality provides various benefits in enhancing the quality of information technology governance within the organization. The most significant benefits identified in the study include improved IT service quality, increased effectiveness and efficiency of business processes, enhanced user satisfaction, and more structured documentation of service quality.

Additionally, the implementation of APO11 assists organizations in conducting continuous service quality monitoring, identifying process gaps (gap analysis), and supporting the evaluation process and the implementation of corrective actions for IT services in a more optimal manner. The implementation of APO11 also enables organizations to establish more consistent and measurable service quality standards, thereby ensuring that IT service quality can be continuously improved.

Several studies also indicate that the implementation of APO11 contributes to improved control over IT governance processes, reduced service quality risks, and enhanced organizational capabilities in meeting the needs of users and stakeholders.

4.5 Analysis of RQ 3 (Challenges in Implementing APO 11 Managed Quality)

Based on the literature review, several key challenges were identified in the implementation of APO11 Managed Quality within the COBIT 2019 framework. The most frequently identified challenges include insufficient service quality documentation, suboptimal quality monitoring, limited IT human resources, a lack of understanding of the COBIT 2019 framework, and suboptimal integration of information systems.

Additionally, some organizations face difficulties in standardizing IT service processes and stakeholder monitoring that is not yet fully operational. Several studies indicate that while quality management processes have been implemented, their execution remains poorly documented, thereby affecting the effectiveness of IT service quality management.

Other challenges identified include limitations in application development, low levels of service quality oversight, and persistent capability gaps in certain IT governance processes. Therefore, organizations need to improve the quality of documentation, service oversight, and human resource competencies to ensure the implementation of APO11 runs more effectively and optimally.

5. Discussion

The SLR results indicate that the implementation of APO11 Managed Quality is relevant across various organizational contexts, as its primary focus is maintaining the consistency of IT service quality, clarifying work standards, and promoting continuous improvement. These findings align with studies that position COBIT 2019 as a flexible framework that can be tailored

to organizational needs, particularly through capability assessments, governance audits, and maturity level evaluations (*COBIT 2019 Framework Governance and Management Objectives*, 2019; Naibaho & Cahyono, 2024; Nuranto et al., 2024b). At the conceptual level, these results confirm that IT governance is not only focused on technical controls but also on value creation, risk management, and resource efficiency, which are managed in a more structured manner through managed quality mechanisms (Arimurti et al., 2024; Beato & Fianty, 2024).

Empirically, the most frequently observed implementation patterns of APO11 are capability level measurement, service process evaluation, and information system audits in the education, government, hospital, and service industry sectors. This pattern is consistent with research findings on academic portals, repository systems, public administration services, and internal information services, which indicate that APO11 is frequently integrated with other domains such as APO13, DSS01, DSS02, DSS05, and MEA01 to strengthen end-to-end service quality oversight (Afriyanto et al., 2025; Hidayah et al., 2024b; Syukron et al., 2024; Yuliandri et al., 2023). Thus, APO11 does not stand alone but functions as a bridge between quality standards, operational processes, and service controls that must be maintained continuously.

In terms of benefits, the synthesis results show that APO11 has a dominant impact on improving service quality, business process efficiency, user satisfaction, and the consistency of documentation. These benefits arise because organizations gain a clearer foundation for conducting gap analysis, establishing quality performance indicators, and formulating more targeted corrective actions (Audia & Sugiantoro, 2022; Karo & Faza, 2023; Naufal & Sutomo, 2024). Practically, this finding is important because many digital organizations often have systems in place but lack consistent quality mechanisms. APO11 helps transform quality management from ad hoc practices into a measurable and evaluable process.

Nevertheless, implementation challenges remain quite prominent. Limited documentation, a lack of understanding of COBIT 2019, suboptimal system integration, and uneven human resource competencies have been repeatedly highlighted in various studies (Bansoma & Baun, 2025; Faradillah et al., 2025; Lumingkewas et al., 2023; Widharto et al., 2022). These findings indicate that the success of APO11 is highly dependent on the readiness of an organization's internal governance, including management support, clear role allocation, and a culture of continuous improvement. Therefore, the results of this study also provide an important limitation: APO11 tends to be easier to implement in organizations that possess sufficiently mature process documentation, service data, and managerial capacity.

6. Conclusion

This study concludes that APO11 Managed Quality in COBIT 2019 is a highly relevant domain for strengthening IT governance, particularly when organizations aim to maintain consistent service quality, enhance user satisfaction, and ensure continuous improvement. The literature synthesis indicates that APO11 implementation is most commonly carried out through capability assessments, governance audits, and maturity level evaluations across various organizational sectors.

The main contribution of this study is to synthesize scattered findings into a more structured overview of APO11's implementation methods, benefits, and challenges. Future research could expand its focus to include cross-sector comparisons, measuring capability level achievements before and after interventions, and integrating APO11 with other COBIT domains to develop a more comprehensive governance model. Thus, the results of this study are expected to serve as an academic and practical foundation for the development of IT governance that is more adaptive and quality-oriented.

References

- Afriyanto, R., Hadid, & Megawati. (2025). Audit Sistem Informasi Cobit 2019 Domain Apo11 Dan Dss01 Untuk Evaluasi Kualitas E-Learning (Studi Kasus: Perguruan Tinggi Xyz). *Pondasi: Journal Of Applied Science Engineering*, 2(1), 14–22.
- Arimurti, N. A., Nurtrisha, W. A., & Falahah, F. (2024). Penilaian Kapabilitas Tata Kelola Teknologi Informasi Menggunakan Kerangka Kerja Cobit 2019 Dengan Fokus Domain Apo Pada Rspau Dr. Suhardi Hardjolukito. *Jurnal Teknologi Dan Manajemen Informatika*, 10(1), 13–23. <https://doi.org/10.26905/Jtmi.V10i1.10939>

- Audia, R., & Sugiantoro, B. (2022). Evaluation And Implementation Of It Governance Using The 2019 Cobit Framework At The Department Of Food Security, Agriculture And Fisheries Of Balangan Regency. *Ijid (International Journal On Informatics For Development)*, 11(1), 152–161. <https://doi.org/10.14421/Ijid.2022.3381>
- Bansoma, M., & Baun, H. M. (2025). Model Hybrid Cobit 2019 Dan Pls-Sem Untuk Mengukur Determinan Efektifitas Informasi Tata Kelola Ti. *The Indonesian Journal Of Computer Science*, 14(2). <https://doi.org/10.33022/Ijcs.V14i2.4754>
- Beato, J., & Fianty, M. I. (2024). Cobit 2019 Framework: Evaluating Knowledge And Quality Management Capabilities In A Printing Machine Distributor. *Journal Of Information Systems And Informatics*, 6(1), 1–12. <https://doi.org/10.51519/Journalisi.V6i1.638>
- Cobit 2019 Framework Governance And Management Objectives*. (2019).
- Faradillah, Ermatita, & Rini, D. P. (2025). Enhancing Governance Maturity Assessment In Higher Education Institutions Through Data-Driven Feature Selection And Clustering Techniques. *Ingénierie Des Systèmes D'information*.
- Herianto, H., & Wasilah, W. (2022). Assessment Capability Level Dan Maturity Level Tata Kelola Ti Pada Kantor Kementerian Agama Kabupaten Pesawaran Provinsi Lampung Menggunakan Framework Cobit 2019. *Konstelasi: Konvergensi Teknologi Dan Sistem Informasi*, 2(2), 229–240. <https://doi.org/10.24002/Konstelasi.V2i2.5553>
- Hidayah, N. A., Nurbojatmiko, Arfani, M. A., & Kusumaatuti, Y. A. (2024a). Identifikasi Tujuan Tata Kelola Teknologi Informasi Plt Fst Uin Jakarta Menggunakan Framework Cobit 2019. *Journal Of Applied Computer Science And Technology*, 5(1), 90–97. <https://doi.org/10.52158/Jacost.V5i1.770>
- Hidayah, N. A., Nurbojatmiko, Arfani, M. A., & Kusumaatuti, Y. A. (2024b). Identifikasi Tujuan Tata Kelola Teknologi Informasi Plt Fst Uin Jakarta Menggunakan Framework Cobit 2019. *Journal Of Applied Computer Science And Technology*, 5(1), 90–97. <https://doi.org/10.52158/Jacost.V5i1.770>
- Industry News 2019 Cobit Design Factors*. (2019). Isaca. <https://www.isaca.org/Resources/News-And-Trends/Industry-News/2019/Cobit-Design-Factors>
- Karo, T. A. K., & Faza, A. (2023). Evaluation Of Integration And Human Resources In Information Technology Governance Using Cobit 2019: Pt. Pelabuhan Indonesia Tanjung Priok Branch. *Journal Of Information Systems And Informatics*, 5(3), 902–914. <https://doi.org/10.51519/Journalisi.V5i3.538>
- Kitchenham, B., Pearl Brereton, O., Budgen, D., Turner, M., Bailey, J., & Linkman, S. (2009). Systematic Literature Reviews In Software Engineering – A Systematic Literature Review. *Information And Software Technology*, 51(1), 7–15. <https://doi.org/10.1016/J.infsof.2008.09.009>
- Lumingkewas, C., Mambu, J. Y., & Wahyudi, A. (2023). Identification Of It Governance Capability Level Of Cobit 2019 At The Kominfo City Of Bitung, North Sulawesi. *Teika*, 13(01), 1–15. <https://doi.org/10.36342/Teika.V13i01.3064>
- Naibaho, E. B., & Cahyono, A. D. (2024). Information Technology Governance Analysis Using Cobit 2019 Framework In Disdukcapil. *Journal Of Information Systems And Informatics*, 6(2), 865–881. <https://doi.org/10.51519/Journalisi.V6i2.734>
- Naufal, M., & Sutomo, R. (2024). Measuring The Level Of Hris Governance Capability In The Automotive Financing Company Using Cobit 2019. *Journal Of Information Systems And Informatics*, 6(1), 228–244. <https://doi.org/10.51519/Journalisi.V6i1.661>
- Novanni, W. D., Sukma, L., & Rasmila, R. (2025). Perancangan Tata Kelola Teknologi Informasi Menggunakan Framework Cobit 2019 Pada Bps Provinsi Sumatera Selatan. *Jati (Jurnal Mahasiswa Teknik Informatika)*, 9(1), 1651–1656. <https://doi.org/10.36040/Jati.V9i1.12818>
- Nuranto, B., Hartomo, K. D., & Wahyono, T. (2024a). Analysis Of The Usm Lecturer Ppkm Application Portal Using Cobit 2019 Framework. *Jurnal Sisfokom (Sistem Informasi Dan Komputer)*, 13(2), 224–229. <https://doi.org/10.32736/Sisfokom.V13i2.2108>

- Nuranto, B., Hartomo, K. D., & Wahyono, T. (2024b). Analysis Of The Usm Lecturer Ppkm Application Portal Using Cobit 2019 Framework. *Jurnal Sisfokom (Sistem Informasi Dan Komputer)*, 13(2), 224–229. <https://doi.org/10.32736/Sisfokom.V13i2.2108>
- Page, M. J., Mckenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., Brennan, S. E., Chou, R., Glanville, J., Grimshaw, J. M., Hróbjartsson, A., Lalu, M. M., Li, T., Loder, E. W., Mayo-Wilson, E., McDonald, S., ... Moher, D. (2021). *The Prisma 2020 Statement: An Updated Guideline For Reporting Systematic Reviews*.
- Sukanto, A. S., Novriando, H., & Reynaldi, A. (2021). Tata Kelola Teknologi Informasi Menggunakan Framework Cobit 2019 (Studi Kasus: Upt Tik Universitas Tanjungpura Pontianak). *Jepin (Jurnal Edukasi Dan Penelitian Informatika)*.
- Syukron, H., S, M. P. P., Muzaffar, A. A., & Zayadi, M. I. (2024). Evaluasi Dan Implementasi Tata Kelola Ti Pada Sma Negeri 4 Pekanbaru Menggunakan Cobit 2019. *Jurnal Testing Dan Implementasi Sistem Informasi*, 2(1), 18–27. <https://doi.org/10.55583/Jtisi.V2i1.782>
- Tambunan, P. N. P., & Legowo, N. (2024). *Evaluation Of It Governance At Bank Indonesia Bengkulu Province Using Cobit 2019*. | *Jatisi*. <https://jurnal.mdp.ac.id/index.php/jatisi/article/view/7707>
- Utomo, D., Wijaya, M., Suzanna, Efendi, & Tri Mareta Sagala, N. (2022). *Leveraging Cobit 2019 To Implement It Governance In Sme Context: A Case Study Of Higher Education In Campus A*.
- Wattimury, G., & Faza, A. (2023). Cobit 2019 Implementation For Enhancing It Governance In Educational Institutions. *Jiska (Jurnal Informatika Sunan Kalijaga)*.
- Widharto, P., Suhatman, Z., & Aji, R. F. (2022). Measurement Of Information Technology Governance Capability Level: A Case Study Of Pt Bank Bbs. *Telkomnika (Telecommunication Computing Electronics And Control)*, 20(2), 296–306.
- Yuliandri, N. L. P., Juliharta, I. G. P. K., & Estiyanti, N. M. (2023). Implementasi Framework Cobit 2019 Pada Audit Tata Kelola Sistem Infomasi Pada Dinas Penanaman Modal Dan Ptsp Kota X. *Jurnal Tekinkom*.