

Electronic Records Management Systems: A Literature Review

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Abstract

The increasing reliance on digital infrastructures has positioned electronic records management systems (ERMS) as critical mechanisms for supporting organisational governance, accountability, transparency, and effective service delivery. This study presents a structured qualitative literature review examining ERMS implementation across developed and developing institutional contexts to identify key determinants, recurring implementation challenges, and contextual variations in adoption patterns. Drawing on studies published between 2012 and 2026, the review adopts a socio-technical analytical framework that categorises implementation determinants into environmental, technological, and organisational dimensions, specifically: governance and policy alignment; technological infrastructure readiness; interoperability and system integration; and human resource capacity and organisational culture. The findings indicate that successful ERMS implementation depends on the alignment and interaction of governance frameworks, technological capabilities, and organisational readiness. The analysis further demonstrates that these determinants are highly interdependent and vary according to levels of institutional and digital maturity. In developing contexts, implementation is primarily constrained by inadequate infrastructure, financial limitations, weak policy enforcement, and shortages of skilled personnel. In contrast, digitally mature environments increasingly focus on interoperability, metadata standardisation, usability optimisation, and long-term digital preservation. This study contributes to the literature by synthesising fragmented empirical findings into an integrated socio-technical framework, thereby advancing a more structured understanding of ERMS implementation across diverse governance environments. The review also identifies major methodological limitations within the existing literature, including limited empirical validation, weak longitudinal analysis, language bias, and the predominance of single-institution case study designs. The findings provide practical implications for policymakers, information managers, and institutions seeking to strengthen electronic records management and information governance practices. Future research should prioritise longitudinal, comparative, and cross-national studies to further advance theoretical and empirical understanding of ERMS implementation.

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1. Introduction

The rapid expansion of digital technologies has significantly transformed how organisations generate, manage, and store information. In both the public and private sectors, digital records increasingly serve as primary evidence of institutional transactions, decisions, and administrative processes. Therefore, the effective management of these records is essential for ensuring transparency, accountability, regulatory compliance, and organisational continuity. Electronic records management systems (ERMS) have emerged as structured technological frameworks for managing records throughout their lifecycle, including creation, classification, storage, retrieval, and eventual disposition or destruction [1]. Scholars have emphasised that ERMS should not be viewed merely as technical storage solutions; rather, they function as governance mechanisms that support organisational memory, regulatory compliance, and informed decision-making within institutions [2,3].

The importance of effective ERMS implementation has increased substantially with the expansion of digital service delivery models adopted by governments worldwide [4,5]. As [6,7] observed, the boundaries between traditional record management and broader data management practices are increasingly blurred. Consequently, digital recordkeeping now plays a strategic role in contemporary information governance frameworks. Despite the growing importance of ERMS, adoption and implementation patterns vary considerably across national contexts [8]. Developed countries generally operate within mature digital ecosystems supported by established regulatory frameworks, advanced technological infrastructures, and strong institutional capacities [9,10]. In contrast, developing countries often encounter significant challenges, including limited technological infrastructure, financial constraints, and shortages of skilled personnel, which complicate both adoption and long-term sustainability [11].

Empirical studies illustrate these contextual differences. For example, ref. [11] identified organisational and technological barriers affecting ERMS implementation in Pakistan. Conversely, research conducted in technologically advanced environments, such as Turkey, has primarily focused on improving system interoperability, usability, and long-term digital preservation rather than addressing fundamental infrastructure deficiencies [12–15]. These findings indicate that contextual technological, organisational, and institutional factors strongly shape ERMS implementation. Understanding these contextual differences is important theoretically and practically, as determinants of implementation may vary with institutional maturity, governance capacity, technological infrastructure, and organisational readiness. Comparative analysis, therefore, enables a more nuanced understanding of whether ERMS implementation challenges reflect universal socio-technical conditions or context-specific institutional constraints.

Although research on ERMS implementation has expanded in recent years, the existing literature remains fragmented. Many studies have focused on individual institutions or sector-specific case studies, limiting opportunities for structured comparative reviews. Ref. [16] observed that empirical findings in records management research are rarely synthesised to enable broader interregional analysis. Similarly, ref. [17] argued that greater conceptual consolidation is required to better understand the systemic mechanisms driving digital transformation in records management.

This study addresses this gap through a structured qualitative literature review of ERMS implementation research. The review synthesises empirical and conceptual studies to identify key determinants influencing ERMS implementation across institutional and national contexts. By applying thematic synthesis to the reviewed literature, this study seeks to provide an integrated analytical perspective on the determinants of ERMS implementation and their implications for digital governance and records management practices.

Although previous reviews have examined aspects of electronic records management and electronic governance, most existing studies remain either institution-specific, technologically focused, or conceptually fragmented [16,18]. Prior reviews have rarely integrated organisational, technological, governance, and interoperability determinants into a single comparative analytical framework that spans both developed and developing institutional contexts [17,19]. Furthermore, limited attention has been given to how these determinants interact within broader socio-technical implementation environments [20,21]. This study advances the literature by providing an integrated thematic synthesis that consolidates fragmented empirical findings into a comparative socio-technical framework capable of explaining contextual variation in ERMS implementation across diverse governance environments.

This study identified the dominant determinants of implementation, examined recurring challenges, and explored contextual variations across national environments. This study seeks to address the following research questions:

1. What key themes and determinants have emerged in the ERMS implementation literature?
2. How do implementation patterns differ between developed and developing contexts?
3. What methodological and theoretical gaps exist in the current body of ERMS research?

This study adopts a structured socio-technical analytical perspective by examining four interrelated determinants of ERMS implementation: governance and policy alignment; technological infrastructure readiness; human resource capacity and organisational culture; and interoperability and system integration, consistent with socio-technical and information systems research. The study organises the identified determinants into broader environmental, technological, and organisational dimensions consistent with socio-technical systems theory.

The remainder of this paper is structured as follows. Section 2 reviews the conceptual foundations of ERMS and summarises the key determinants identified in previous studies. Section 3 outlines the research methodology employed in the structured literature review. Section 4 presents the results of the thematic analysis. Section 5 discusses the implications of the findings for theory and practice, and Section 6 concludes the paper with recommendations for future research.

2. Literature Review

2.1. Conceptual Foundations of ERMS

Electronic records management systems (ERMS) are designed to manage digital records systematically throughout the record lifecycle while ensuring compliance with established governance standards and regulatory frameworks [22]. According to ref. [23,24], record management encompasses processes for the creation, capture, classification, storage, retrieval, and disposition of records. These processes ensure that records remain authentic, reliable, and usable throughout their lifecycle. Beyond technical functionality, ERMS incorporate governance mechanisms, such as policy frameworks, metadata standards, access controls, and audit trails, to ensure the integrity and reliability of records over time [2,25]. These features are essential for maintaining accountability and regulatory compliance in digital information environments.

The transition from paper-based recordkeeping to digital systems has significantly transformed records management practices. Early electronic systems primarily replicated storage functions, whereas contemporary ERMS integrate workflow automation, compliance monitoring, and interoperability capabilities [6,26]. As [27] notes, effective digital

recordkeeping requires alignment between information systems architecture and record-keeping requirements because technological infrastructure influences how records are generated, maintained, and preserved. This transformation has repositioned records management as a strategic component of information governance rather than merely an administrative function [28]. Consequently, ERMS are increasingly conceptualised as sociotechnological systems shaped by interactions among technological infrastructure, organisational culture, institutional capacity, and regulatory environments [21].

Long-term digital preservation, for example, requires not only an appropriate technological infrastructure but also institutional competencies and coherent policy frameworks [29]. Similarly, ref. [19] applied the unified theory of acceptance and use of technology (UTAUT) to demonstrate that performance expectancy, effort expectancy, social influence, and facilitating conditions significantly influence ERMS adoption in organisational settings. These findings suggest that successful ERMS implementation requires alignment between technological capabilities, governance frameworks, and organisational readiness. Therefore, ERMS adoption should be understood as a sociotechnical process in which technological systems, institutional policies, and human capacities interact to shape implementation outcomes.

2.2. Implementation Determinants and Challenges

Empirical research on electronic records management systems (ERMS) consistently identifies multiple determinants influencing successful implementation across different institutional and national contexts. Consistent with socio-technical systems theory, these determinants can be broadly organised into environmental, technological, and organisational dimensions. Within these broader dimensions, four interrelated determinants emerge most prominently in the literature: governance and policy alignment; technological infrastructure readiness; human resource capacity and organisational culture; and interoperability and system integration. Although analytically distinct, these determinants are highly interconnected, and the literature consistently emphasises that effective ERMS implementation requires alignment across all dimensions.

2.2.1. Environmental Determinants: Governance and Policy Alignment

Environmental determinants primarily encompass governance structures, regulatory frameworks, institutional policies, and external pressures that influence ERMS implementation. The literature consistently highlights governance and policy alignment as essential for ensuring accountability, compliance, strategic coordination, and institutional sustainability within electronic records management initiatives. Several studies demonstrate that strong governance frameworks and organisational support mechanisms significantly enhance implementation effectiveness. For example, ref. [30] emphasises the importance of managerial commitment, governance transparency, and organisational readiness in shaping ERMS adoption within Yemen's oil and gas sector. Similarly, other researchers identify facilitating conditions, organisational support, and institutional alignment as significant determinants influencing user acceptance and ERMS utilisation [31–33].

Research conducted in public-sector environments further highlights the role of governance planning and stakeholder engagement in facilitating implementation success. Ref. [34] reports that stakeholder participation, project governance practices, and institutional coordination are critical success factors in EDRMS implementation within the Gambian government sector. Likewise, ref. [35] demonstrates that ERMS implementation improves accountability, service delivery, and administrative efficiency within Tanzanian public institutions. Broader conceptual and review-based studies also emphasise that governance frameworks strengthen transparency, accountability, and strategic information

governance [18,36]. However, in many developing institutional contexts, governance frameworks remain inadequately enforced or insufficiently resourced, limiting their practical effectiveness in supporting implementation outcomes [11,37].

2.2.2. Technological Determinants: Technological Infrastructure Readiness

Technological determinants primarily concern infrastructure readiness, ICT capacity, system architecture, metadata frameworks, digital preservation capabilities, cloud technologies, and technical support required for ERMS operation. The reviewed literature consistently identifies technological infrastructure as a foundational requirement for successful implementation. In developing contexts, inadequate ICT infrastructure, financial constraints, and limited technical capacity remain major barriers to effective implementation [11,38–41]. Similar challenges are reported across Sub-Saharan Africa and other developing institutional environments, where weak technical support and fragmented digital systems continue to hinder ERMS deployment [37,42].

Conversely, studies conducted within more technologically advanced environments increasingly focus on system optimisation, metadata management, digital preservation, and technological integration rather than basic infrastructure provision. Ref. [38] highlights the importance of sustainable digital preservation infrastructures for managing born-digital records within the UK National Archives. At the same time, ref. [15] demonstrates that metadata preservation frameworks improve record authenticity, retrieval efficiency, and long-term preservation within Malaysian government agencies. Emerging technologies also increasingly influence ERMS environments. Ref. [40] reports that cloud computing improves scalability and accessibility in institutional records management, while [43,44] demonstrate how artificial intelligence technologies can enhance document classification, retrieval, and information accessibility.

2.2.3. Technological Determinants: Interoperability and System Integration

Interoperability and system integration represent increasingly important technological determinants as organisations transition toward digitally mature information environments. The literature indicates that effective ERMS implementation increasingly depends on systems' ability to integrate with enterprise platforms, metadata standards, cloud infrastructures, digital archives, and broader e-government architectures. For example, ref. [12] identifies inconsistencies in metadata standards and interoperability limitations among institutional systems within Turkish universities, despite the existence of established ERMS infrastructures. Similarly, ref. [14] emphasises that standardised metadata integration significantly improves interoperability, records preservation, and retrieval efficiency across ERMS environments. Ref. [13] further demonstrates that the evolution of taxonomy development and knowledge organisation practices plays an important role in supporting the classification, retrieval, and interoperability of information within digital information systems.

Studies focusing on digital government and healthcare systems further highlight the importance of system integration in supporting coordinated information governance. Ref. [45] argue that integrated digital government architectures improve institutional coordination and service delivery, while [46] demonstrates that effective information architecture supports records automation within e-government systems. In healthcare contexts, ref. [47] emphasise that policy harmonisation and technical interoperability are necessary for cross-border integration of electronic records, while [48] highlight the role of blockchain technologies in improving interoperability, security, and data integrity within electronic health record systems.

2.2.4. Organisational Determinants: Human Resource Capacity and Organisational Culture

Organisational determinants primarily relate to staff competencies, training, user acceptance, organisational readiness, leadership support, and institutional culture, all of which influence ERMS adoption and utilisation. The reviewed literature consistently demonstrates that human resource capacity and organisational culture significantly shape implementation outcomes. Several studies identify inadequate staff training and shortages of qualified personnel as major barriers affecting ERMS implementation, particularly within developing institutional environments. For example, ref. [49] demonstrates that staff competence significantly improves the effectiveness of records management within Tanzanian local government institutions. At the same time, ref. [50] reports that organisational support, ICT readiness, and staff preparedness significantly influence EDRMS usage within Botswana's public sector.

User acceptance and organisational attitudes toward technological change also play a central role in shaping ERMS adoption behaviour. Several studies demonstrate that organisational readiness, user perceptions, and institutional support significantly influence the successful adoption and utilisation of ERMS. Ref. [19] identifies facilitating conditions and organisational support as important determinants affecting user acceptance and system utilisation, while [51] reports that perceived usefulness and ease of use significantly influence EDRMS adoption within the Namibian public sector. Similarly, ref. [52] emphasises that effective electronic records management requires continuous staff training, organisational preparedness, and the development of digital preservation competencies within institutional environments. Emerging research also highlights the growing importance of digital work culture and organisational adaptability in technology-driven environments. Ref. [53] demonstrates that information technology innovation strengthens organisational adaptability, digital work culture, and operational efficiency, thereby supporting institutional readiness for digital transformation initiatives.

Across the literature, these determinants are highly interdependent. Technological infrastructure alone cannot ensure successful implementation without supportive governance frameworks, institutional readiness, and skilled personnel. Similarly, governance policies remain ineffective without adequate technical capacity and organisational support structures. Despite the growing body of ERMS research, the literature remains fragmented, with many studies relying on single-institution case study designs that limit broader comparative generalisation [16]. As recent studies suggest, greater synthesis of empirical findings across institutional and geographical contexts is necessary to advance theoretical development and strengthen understanding of ERMS implementation dynamics across diverse digital governance environments [47,54].

2.2.5. Synthesis of Implementation Determinants

Although the reviewed studies generally agree that governance, infrastructure, organisational readiness, and interoperability influence ERMS implementation, the literature remains inconsistent in assessing the relative importance of these determinants across institutional contexts. Some studies prioritise governance and managerial commitment as primary drivers of implementation, whereas others emphasise technological readiness or user acceptance conditions. These inconsistencies suggest that ERMS implementation outcomes may depend less on individual determinants in isolation and more on the interaction among institutional, technological, and organisational conditions within specific governance environments.

These inconsistencies further reinforce the need for a comparative socio-technical analytical perspective that integrates fragmented findings across diverse institutional and national contexts. The present study, therefore, adopts a thematic synthesis approach to

examine how these determinants interact within broader digital governance environments.

3. Methodology

3.1. Research Design

This study adopts a structured qualitative literature review design to synthesise existing research on the implementation of electronic records management systems (ERMS). Structured literature reviews enable researchers to organise and interpret existing studies in a structured yet flexible manner, thereby identifying dominant themes, implementation determinants, and research gaps within a field [55]. The study follows a qualitative interpretive approach and employs thematic synthesis to examine patterns across the selected literature. Rather than collecting primary empirical data, the research relies on secondary sources, including peer-reviewed journal articles, conference proceedings, and other relevant academic publications addressing ERMS implementation.

We identified 57 studies through database searches conducted in major academic repositories, including Scopus, IEEE Xplore, Web of Science, and Google Scholar. The identified publications were reviewed and selected for their relevance to ERMS implementation, determinants of adoption, governance frameworks, and organisational challenges in digital record management. After applying the inclusion criteria and reviewing the relevance of the retrieved publications, 57 studies were retained for thematic analysis. These studies constitute the analytical corpus for examining recurring implementation determinants, contextual differences between developed and developing environments, and methodological trends within ERMS research. The review focuses on publications produced between 2012 and 2026, a period characterised by significant growth in digital governance initiatives and the widespread adoption of digital information management systems. This timeframe was selected to capture contemporary developments in ERMS implementation and reflect the evolving role of digital record management within modern information governance frameworks.

While this study does not include primary empirical data collection, the structured thematic synthesis was intended to develop an integrative conceptual understanding of the determinants of ERMS implementation across diverse institutional contexts. The study, therefore, adopts an exploratory and theory-building orientation rather than a hypothesis-testing design. Nevertheless, the conceptual framework developed in this review provides a foundation for future empirical validation through surveys, longitudinal institutional studies, or comparative cross-national research examining the interaction among governance, technological, organisational, and interoperability determinants.

For comparative interpretation, countries discussed in the reviewed literature were broadly categorised as ‘developed’ or ‘developing’ based on the United Nations World Economic Situation and Prospects [56] classification framework and supporting World Bank development indicators [57]. This categorisation was used solely to facilitate analytical comparison of institutional and technological implementation environments rather than to imply fixed economic or political classifications.

Although the study adopts a structured review approach informed by systematic search and screening principles, it does not claim full PRISMA compliance because the objective was interpretive thematic synthesis rather than formal meta-analysis or statistical aggregation.

3.2. Search Strategy and Selection Criteria

The literature search was conducted using major academic databases, including Scopus, IEEE Xplore, Web of Science, and Google Scholar, selected for their broad coverage

of information systems, digital governance, and records management research. The database searches were conducted between September 2025 and May 2026 to ensure inclusion of the most recent studies available at the time of the review. To ensure transparency and reproducibility, the search strategy was operationalised using explicit Boolean search strings. The core search string applied across databases (with minor syntax adaptations depending on database-specific requirements) was as follows: (“electronic records management system” OR “ERMS” OR “electronic document and records management system” OR “EDRMS”) AND (“implementation” OR “adoption” OR “deployment”) AND (“records management” OR “digital governance” OR “information governance”). Additional keywords, including “interoperability”, “public sector digitisation”, and “recordkeeping systems”, were incorporated iteratively to capture variations in terminology and enhance search sensitivity. Where available, database filters were applied to restrict results to English-language publications from 2012 to 2026 in relevant subject areas, including information systems, management, and public administration.

The review was limited to English-language publications to ensure consistency in screening and thematic interpretation. However, this restriction may have excluded potentially relevant ERMS studies published in other languages, particularly from non-English-speaking developing regions, where digital governance and records management practices may differ substantially from those in Anglophone institutional environments. As a result, the review may underrepresent local implementation experiences, regulatory frameworks, and organisational conditions reported in regional academic literature.

The initial search yielded 70 records across the selected databases. All retrieved records were exported to reference management software for organisation and screening. A total of 8 duplicate records were identified and removed through a combination of automated detection and manual verification; also, 5 records were removed because they were books, dissertations, or theses, resulting in 57 unique records for further analysis. Although no studies were excluded at the full-text stage on methodological grounds, all retained studies met the minimum criteria for analytical relevance and methodological transparency established for the review.

The screening process was conducted in two stages. First, title and abstract screening were conducted to exclude studies not relevant to ERMS implementation or adoption. Second, full-text screening was conducted to assess the remaining articles against predefined inclusion and exclusion criteria. To be included in the review, studies were required to address at least one of the following aspects: ERMS implementation, determinants of adoption, governance frameworks, interoperability challenges, or organisational issues related to electronic records management. Only studies published in English between 2012 and 2026 in peer-reviewed journals, conference proceedings, or other academic sources were included. Studies unrelated to ERMS implementation, such as those focusing on unrelated information systems or purely financial or economic modelling, were excluded.

The screening process was conducted manually by the authors to ensure methodological rigour and consistency. All study selection, screening, thematic coding, interpretation, and manuscript preparation processes were conducted solely by the authors, without the use of generative artificial intelligence tools for analytical or editorial decision-making. The study selection process can be summarised as follows: 70 records identified; 8 duplicates removed; 5 records were removed because they were books, dissertations, or theses; 57 records screened; 57 full-text articles assessed; and 57 studies included in the final analysis. This structured process enhances transparency and supports reproducibility. Figure 1 shows the PRISMA-style flow diagram illustrating the study identification, screening, eligibility assessment, and inclusion process used in the structured literature review.

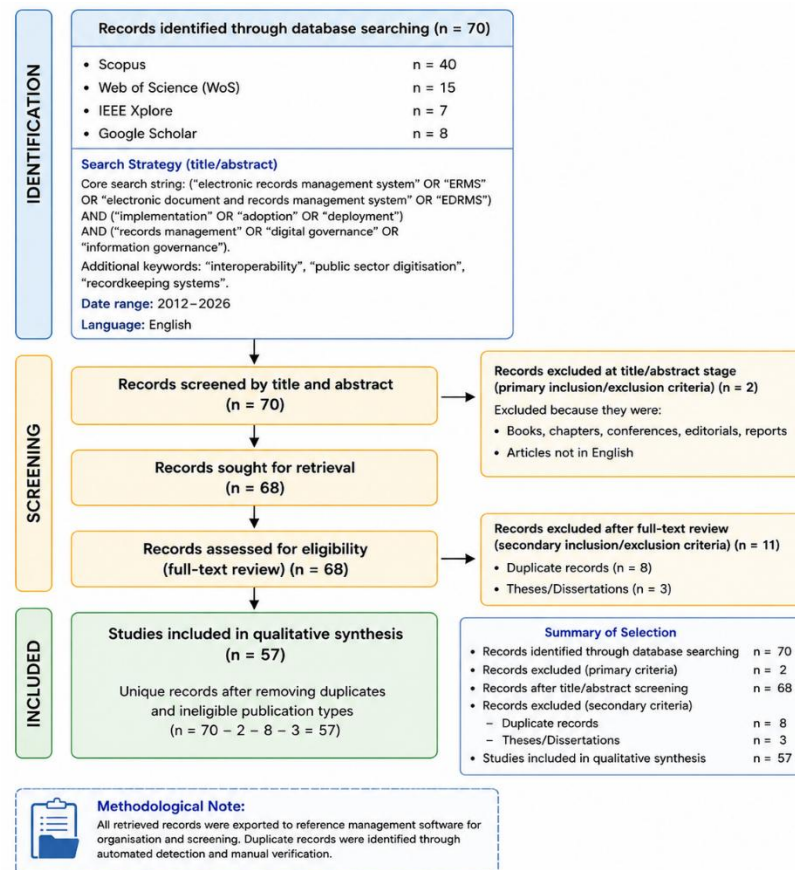


Figure 1. PRISMA-style flow diagram of study identification, screening, eligibility assessment, and inclusion process.

To further improve coverage and minimise the risk of omitting relevant studies, backwards and forward snowballing techniques were applied. Backwards snowballing involved examining the reference lists of selected articles, while forward snowballing used citation tracking (e.g., Google Scholar) to identify studies citing key publications. The search process was iterative and continued until thematic saturation was reached, meaning that additional studies did not yield substantially new themes or insights. Although it is not possible to guarantee complete identification of all relevant literature, the combined use of multi-database searching, explicit search strings, and snowballing strengthens confidence in the comprehensiveness of the review.

Although the review primarily focused on studies explicitly examining ERMS and EDRMS implementation, some studies addressing electronic records, digital government architectures, and broader information governance systems were also included where they provided conceptually relevant insights into digital recordkeeping, interoperability, governance frameworks, or organisational implementation conditions directly applicable to ERMS environments.

Quality Assessment Procedure

In addition to relevance screening, the reviewed studies underwent a qualitative methodological appraisal to assess their analytical credibility and relevance to the review objectives. The appraisal considered factors such as the clarity of research objectives, the transparency of the methodology, the adequacy of data sources, the coherence of the analysis, and the relevance to ERMS implementation determinants. Rather than applying a rigid scoring threshold, the review adopted an interpretive inclusion approach to

synthesise concepts across diverse study designs, including qualitative case studies, conceptual analyses, systematic reviews, and framework-development studies.

Although methodological variation existed across the reviewed literature, no studies were excluded solely on methodological grounds, as all retained studies provided conceptually relevant insights into ERMS implementation processes, governance structures, organisational conditions, or technological challenges. Nevertheless, the authors recognise that including studies with varying methodological depth may affect the overall consistency of the evidence across the review.

3.3. Data Analysis Procedure

The selected studies were analysed using qualitative thematic analysis following the framework proposed by [58]. This approach enables researchers to identify recurring patterns and conceptual themes within existing literature. The analysis followed the six-phase framework proposed by [58], which includes familiarisation with the data, generation of initial codes, identification of themes, review of themes, definition of themes, and interpretation of findings. All 57 selected studies were included in the thematic synthesis. A structured data extraction table was developed to organise key information from each study, including the author, year of publication, study country, institutional sector, research methodology, reported implementation challenges, and key determinants influencing ERMS adoption.

The analysis began with open coding, in which each reviewed study was systematically examined to identify recurring concepts associated with ERMS implementation. These initial codes were inductively derived from the literature and reflected commonly reported issues, including governance structures, technological infrastructure requirements, human resource capacity, and interoperability challenges. Following the initial coding phase, related codes were grouped into broader analytical categories through an iterative comparison process. Consistent with socio-technical systems theory, the study organised the identified determinants into broader environmental, technological, and organisational dimensions. This process resulted in the identification of four dominant themes: governance and policy alignment; technological infrastructure readiness; human resource capacity and organisational culture; and system interoperability and integration. These themes represent the most frequently reported determinants influencing ERMS implementation across the reviewed literature.

To explore contextual differences, the identified themes were further examined across studies conducted in both developed and developing national environments. This comparative approach enabled the identification of structural similarities and contextual variations in implementation patterns across different institutional and geographical settings. To enhance analytical reliability, approximately 20% of the reviewed studies were re-coded after a two-week interval. Any discrepancies identified during the recoding process were resolved by re-examining the original texts to ensure consistency in coding and theme development. The characteristics, methodologies, and thematic classifications of the reviewed studies are presented in Appendix A, Table A1, while the thematic coding matrix used to derive the conceptual framework is presented in Appendix B, Table A2.

4. Results

4.1. Overview of Reviewed Studies

The reviewed literature indicates that research on electronic records management systems (ERMS) is predominantly conducted within public-sector institutions, including government ministries, universities, oil and gas agencies, and central government departments. Many studies examine ERMS implementation in institutional contexts where

records management plays a critical role in supporting governance, regulatory compliance, and public service delivery. Methodologically, a large proportion of the reviewed studies employed qualitative case study designs. These studies commonly relied on interviews, surveys, and document analysis as primary data collection methods. Qualitative approaches are frequently used to explore organisational, technological, and governance challenges associated with ERMS implementation. In contrast, some studies investigating system adoption and user acceptance applied quantitative models, particularly technology adoption frameworks such as the unified theory of acceptance and use of technology (UTAUT) [19,20]. Of the 57 reviewed studies, the majority employed qualitative case study methodologies (approximately 56–61%), while quantitative survey-based studies accounted for roughly 14–18%. A smaller number adopted mixed-methods approaches (approximately 5–9%), whereas conceptual analyses, framework development studies, and literature reviews accounted for approximately 21–26% of the reviewed literature. Geographically, the reviewed literature spans both developed and developing national contexts, illustrating how differences in digital maturity, institutional capacity, governance structures, and technological infrastructure shape ERMS implementation across regions. Studies conducted in countries with relatively advanced digital infrastructures, such as Turkey, Malaysia, and Indonesia, as well as in some international ERMS environments, tend to focus on interoperability, metadata integration, system optimisation, digital preservation, and information architecture [12,14,15,46]. In contrast, research conducted in developing contexts, including Pakistan, Tanzania, Botswana, Namibia, Yemen, and Sub-Saharan Africa, frequently highlights challenges related to limited technological infrastructure, financial constraints, inadequate policy implementation, and insufficient organisational and human resource capacity [11,20,37,41,42]. The predominance of qualitative single-institution case studies within the reviewed literature suggests that cross-national and longitudinal comparative research on ERMS implementation remains limited. Despite variations in geographical contexts, institutional sectors, and levels of digital maturity, several recurring determinants consistently emerge across the reviewed studies, particularly governance and policy alignment, technological infrastructure readiness, human resource capacity and organisational culture, and interoperability and system integration.

The thematic synthesis of the 57 included studies revealed four dominant determinants of ERMS implementation: governance and policy alignment; technological infrastructure readiness; human resource capacity and organisational culture; and interoperability and system integration. Across the reviewed literature, governance emerged as the most consistently reported implementation condition, while technological and organisational readiness frequently interacted to shape adoption outcomes. In addition, a cross-cutting outcome theme was evident across multiple studies, indicating that successful ERMS implementation contributes to broader institutional goals, including accountability, transparency, service efficiency, and organisational resilience. The following subsections present a detailed analysis of thematic determinants identified in the literature. To enhance analytical clarity, the identified determinants are categorised into organisational, technological, and environmental dimensions, as summarised in Table 1.

Table 1. Key determinants of ERMS implementation identified in the literature.

Determinant	Category	Description	Evidence from Literature
Environmental (Institutional)	Governance and Policy Alignment	Institutional policies, regulatory frameworks, managerial commitment, legal compliance structures, and governance mechanisms that	Strong governance frameworks improve accountability, transparency, policy compliance, and implementation stability across

		guide and sustain ERMS implementation.	institutional environments [18–20,36,59].
Technological	Technological Infrastructure Readiness	Availability and adequacy of ICT infrastructure, hardware capacity, cloud systems, metadata frameworks, technical support, digital preservation capabilities, and system architecture required for ERMS operation.	Limited infrastructure, inadequate technical resources, and weak ICT capacity remain major implementation barriers, particularly in developing environments, while technologically mature environments increasingly focus on optimisation, metadata management, and digital preservation [5,11,15,38].
Organisational	Human Resource Capacity and Organisational Culture	Staff competencies, training, digital literacy, user acceptance, leadership support, organisational readiness, and institutional culture influence ERMS adoption and usage.	User competence, organisational support, training, and positive attitudes toward technology significantly influence ERMS adoption and sustainability [9,20,49,60].
Technological	Interoperability and System Integration	Integration of ERMS with enterprise platforms, metadata standards, information architecture, cross-platform compatibility, and interoperability between digital systems.	Interoperability becomes increasingly important as digital systems mature and institutions pursue integrated information governance and cross-platform data exchange [12,14,47,48].

Across the reviewed studies, implementation determinants rarely operated independently. Governance weaknesses frequently co-occurred with infrastructural limitations and inadequate staff preparedness, particularly in developing institutional environments. Conversely, technologically mature contexts more commonly reported challenges with integration, interoperability, and optimisation. This pattern suggests that ERMS implementation follows a layered developmental trajectory in which foundational infrastructural and organisational conditions must stabilise before advanced system integration challenges become dominant.

Several studies have also highlighted that effective ERMS implementation contributes to broader institutional outcomes, such as accountability, transparency, improved record governance, and enhanced organisational efficiency.

4.2. Organisational and Environmental Determinants: Governance and Policy Alignment

Governance and policy alignment emerged as one of the most consistently reported determinants of successful implementation of electronic records management systems (ERMS) in the reviewed literature. Effective ERMS implementation depends not only on technological deployment but also on the existence of institutional policies, regulatory frameworks, leadership commitment, and governance structures that support digital recordkeeping practices. Across both developed and developing contexts, studies consistently identify policy clarity, managerial support, and institutional accountability mechanisms as essential conditions for sustaining ERMS implementation and ensuring compliance with records management standards.

Several studies emphasise the importance of governance mechanisms in shaping ERMS adoption behaviour and implementation outcomes. Ref. [19] demonstrates that organisational support, facilitating conditions, and regulatory alignment significantly influence user acceptance and ERMS adoption within higher educational institutions. Similarly, ref. [20] identifies managerial commitment, governance transparency, and institutional readiness as key drivers of ERMS adoption in Yemen's oil and gas sector. Expanding on

this perspective, ref. [31] report that policy support, institutional coordination, and governance structures are essential enablers of effective electronic records management within government institutions in Oman, while inadequate governance and resistance to change continue to hinder implementation. Ref. [32] further argues that enterprise content management systems strengthen organisational transparency, accountability, and anti-corruption efforts, demonstrating the broader governance value of electronic records management systems. Similarly, ref. [36] conceptualises records management as a strategic corporate governance asset that supports institutional accountability, transparency, and regulatory compliance across organisational environments.

Research conducted in public-sector environments further highlights the significance of governance planning, stakeholder participation, and policy coordination. Ref. [35] reports that ERMS implementation in Tanzanian public institutions contributed to improved accountability, service delivery, and administrative efficiency, demonstrating the broader governance benefits associated with electronic records management. Likewise, ref. [34] emphasises that stakeholder involvement, project governance practices, and institutional coordination are critical success factors in EDRMS implementation within the Gambian government sector. These findings suggest that governance frameworks not only guide implementation processes but also strengthen organisational accountability and administrative performance.

The reviewed literature also demonstrates that governance and policy alignment remain important for the long-term sustainability of ERMS initiatives. Ref. [61] emphasise that implementation guidelines, governance standards, and institutional policy frameworks are necessary to ensure consistency and sustainability in Malaysia's public-sector digital document management initiatives. Similarly, ref. [36] argues that records management functions as a strategic governance asset, enhancing organisational transparency, accountability, and regulatory compliance. In broader regional analyses, ref. [59] identifies governance weaknesses, policy fragmentation, and administrative challenges as persistent barriers affecting institutional performance within South Asian local government systems.

Legal and regulatory considerations also influence the effectiveness of ERMS implementation. Ref. [62] highlights the need for legal frameworks that support electronic documentation and digital administrative processes, particularly in contemporary electronic governance environments. Likewise, ref. [37] notes that inadequate policy enforcement and weak governance structures remain major constraints affecting electronic records management practices in many developing countries.

Taken together, these findings indicate that governance and policy alignment represent foundational determinants of ERMS implementation. Effective governance frameworks provide strategic direction, institutional legitimacy, regulatory compliance, and organisational accountability necessary for sustainable electronic records management. The reviewed studies further suggest that governance preparedness, leadership commitment, and policy coordination become increasingly important as institutions pursue broader objectives in digital governance and information management.

4.3. Technological Determinants: Infrastructure Readiness

Technological infrastructure readiness represents a critical determinant influencing the successful implementation and sustainability of electronic records management systems (ERMS). Across the reviewed literature, studies consistently emphasise that the availability and adequacy of ICT infrastructure, system architecture, hardware capacity, technical support, cloud technologies, metadata frameworks, and digital preservation capabilities significantly shape ERMS implementation outcomes. The effectiveness of ERMS deployment depends heavily on whether institutions possess the technical resources and

infrastructure necessary to support reliable digital recordkeeping processes throughout the records lifecycle.

The reviewed studies indicate that inadequate technological infrastructure remains one of the most significant barriers affecting ERMS implementation, particularly within developing institutional environments. For example, ref. [11] identified limited financial resources, weak ICT infrastructure, and insufficient technical capacity as major constraints affecting ERMS implementation within the Pakistani Water and Power Development Authority. Similar challenges are reported in studies conducted across developing contexts, including Sub-Saharan Africa, Tanzania, Namibia, and Botswana, where unstable ICT infrastructure, fragmented systems, inadequate technical support, and limited digital preservation capabilities continue to hinder effective implementation [37,41,42]. These findings suggest that foundational technological readiness remains essential for enabling organisations to transition effectively from paper-based to digital recordkeeping systems.

Several studies further emphasise the importance of system architecture, cloud computing, web-based systems, and emerging digital technologies in strengthening ERMS implementation. Ref. [63] demonstrates that web-based archival and administrative systems improve document accessibility, administrative efficiency, and institutional information management processes within educational environments. Similarly, ref. [40] reports that cloud computing technologies enhance scalability, accessibility, and institutional records management capabilities, thereby improving the operational flexibility of digital recordkeeping systems. Ref. [64] further demonstrates that cloud-based file management platforms with metadata-driven search functions improve document accessibility, security, and retrieval efficiency. Emerging artificial intelligence technologies also increasingly influence ERMS environments. Refs. [43,44] highlight how AI technologies can improve document classification, retrieval processes, and information accessibility within digital document management systems.

In more technologically advanced institutional contexts, the literature increasingly focuses on system optimisation, metadata management, interoperability support, and long-term digital preservation rather than basic infrastructure provision. Ref. [45] emphasises the importance of standardised digital government architectures for improving system coordination and integration across institutional platforms. Likewise, ref. [15] highlights the role of metadata preservation frameworks in strengthening record authenticity, retrieval efficiency, and long-term preservation within Malaysian government agencies. Ref. [38] further notes that born-electronic records management requires advanced digital preservation strategies and sustainable technical infrastructures to maintain long-term accessibility and authenticity.

The reviewed literature also demonstrates that technological readiness increasingly extends beyond basic ICT infrastructure to include system security, metadata integration, enterprise-level technological coordination, and digital information protection mechanisms. Ref. [39] identifies encryption, authentication protocols, and access control mechanisms as essential technical requirements for securing electronic records and maintaining information integrity in digital environments. Similarly, ref. [14] emphasises that standardised metadata integration enhances interoperability, retrieval efficiency, and the preservation of digital records across ERMS environments.

These findings indicate that technological infrastructure readiness forms the technical foundation upon which successful ERMS implementation depends. However, the nature of technological challenges varies according to institutional and national levels of digital maturity. While developing environments frequently struggle with infrastructure availability, technical support, and financial constraints, more digitally mature environments increasingly prioritise system optimisation, metadata management, cloud integration, digital preservation, and enterprise-wide information governance coordination.

4.4. Organisational Determinants: Human Capacity and Culture

Human resource capacity and organisational culture represent critical determinants influencing the successful adoption, utilisation, and sustainability of electronic records management systems (ERMS). Across the reviewed literature, studies consistently emphasise that staff competencies, training, digital literacy, leadership support, organisational readiness, and user acceptance significantly shape ERMS implementation outcomes. The findings indicate that even where technological infrastructure is available, inadequate human capacity and weak organisational cultures can substantially hinder the effective integration of digital recordkeeping systems into institutional workflows.

Several studies identify insufficient staff training and shortages of qualified personnel as major barriers affecting ERMS implementation, particularly within developing institutional environments. For example, ref. [49] demonstrates that staff competence significantly improves the effectiveness of records management practices within Tanzanian local government institutions. Similarly, ref. [11] identifies shortages of skilled personnel and limited technical expertise as key constraints affecting ERMS implementation and operational sustainability within the Pakistani public sector. Studies conducted in Botswana, Namibia, and Sub-Saharan Africa further report that inadequate digital competencies, insufficient training opportunities, and weak institutional readiness reduce the effectiveness of ERMS adoption initiatives [37,50,65].

In addition to technical skills, user acceptance and organisational attitudes toward technological change play a central role in shaping ERMS adoption behaviour. Ref. [19] demonstrates that perceived usefulness, facilitating conditions, and organisational support significantly influence users' behavioural intentions to adopt ERMS. Likewise, ref. [51] reports that perceived ease of use and user acceptance remain important determinants affecting EDRMS adoption within the Namibian public sector. These findings align with broader technology adoption theories, which emphasise that successful digital transformation depends not only on technological availability but also on users' willingness and readiness to integrate technology into organisational processes.

The reviewed literature also highlights the importance of organisational culture, leadership engagement, digital preparedness, and institutional support in promoting effective utilisation of ERMS. Ref. [30] associates ERMS usage with organisational resilience and business continuity, emphasising that successful implementation requires supportive organisational environments that foster digital transformation and adaptability to remote work. Similarly, ref. [9] demonstrates that organisational culture significantly influences the adoption of electronic medical records and record-keeping behaviour in Indonesian hospitals. At the same time, ref. [60] identifies training, management support, and system usability as key factors influencing user acceptance of electronic medical records in healthcare settings. Ref. [52] further emphasises that effective born-electronic records management depends on continuous staff training, institutional preparedness, and the development of digital preservation competencies within university library environments.

Emerging studies further suggest that digital innovation and artificial intelligence are increasingly shaping organisational readiness and workplace adaptation within records management environments. Ref. [66] highlights the importance of organisational preparedness and AI readiness in supporting digital transformation within records and information management practices. At the same time, ref. [53] demonstrates that technological innovation can strengthen organisational adaptability, digital work culture, and operational efficiency within digitally evolving workplaces. These findings indicate that ERMS implementation depends not only on technological infrastructure and governance frameworks but also on the availability of skilled personnel, continuous training, leadership support, and organisational cultures that encourage technological adaptation and digital recordkeeping practices. Human resource capacity and organisational culture, therefore,

serve as essential organisational conditions that shape user acceptance, system utilisation, and the long-term sustainability of ERMS implementation across institutional contexts.

Several studies also suggest that socio-behavioural barriers, including resistance to organisational change, reluctance to adopt new digital workflows, and internal power dynamics surrounding information control, may further complicate ERMS implementation processes [5,19,20,53]. In some institutional environments, employees may perceive digital recordkeeping systems as mechanisms of increased monitoring or administrative control, thereby influencing user acceptance and implementation behaviour [20,67]. These findings indicate that ERMS implementation involves not only technical adaptation but also organisational negotiation and cultural transformation.

4.5. Technological Determinants: Interoperability and Integration

Interoperability and system integration represent increasingly important determinants influencing the effectiveness, sustainability, and long-term maturity of electronic records management systems (ERMS). As organisations transition toward more advanced digital governance environments, the ability of ERMS platforms to integrate with enterprise information systems, metadata frameworks, cloud infrastructures, digital archives, and cross-platform applications is essential to ensuring coordinated information management and seamless digital recordkeeping. The reviewed literature consistently demonstrates that interoperability challenges emerge more prominently as institutions advance beyond basic system implementation toward enterprise-wide digital integration.

Several studies highlight that interoperability limitations persist even within technologically mature institutional environments. For example, ref. [12] reported that Turkish universities experience inconsistencies in metadata standards and limited interoperability among institutional systems despite the existence of established ERMS infrastructures. Similarly, ref. [14] emphasises that standardised metadata integration is critical for improving interoperability, retrieval efficiency, records preservation, and information exchange across ERMS environments. These findings indicate that metadata harmonisation and enterprise-level system coordination are central requirements for achieving effective digital governance and long-term access to records.

The reviewed literature further demonstrates that system integration increasingly entails coordinating ERMS with broader digital governance architectures and emerging technologies. Ref. [45] argues that integrated digital government architectures are necessary to improve institutional coordination, service delivery, and information governance in digital public-sector environments. Likewise, ref. [46] emphasises that effective information architecture supports records automation and enhances interoperability within e-government systems. Ref. [15] further demonstrates that metadata preservation frameworks strengthen the authenticity and long-term accessibility of digital records, thereby supporting integrated records management practices across institutional platforms. Similarly, ref. [13] argues that evolving taxonomy and knowledge organisation frameworks are increasingly important for supporting information classification, retrieval consistency, and interoperability within digital information environments.

Several studies also identify interoperability as a growing concern within healthcare and cross-border digital record environments. Ref. [47] reports that policy harmonisation and technical interoperability are essential for integrating electronic health record systems across borders. At the same time, ref. [48] highlights the potential of blockchain technologies to improve interoperability, security, and data integrity within electronic health record systems. Similarly, ref. [68] notes that effective health records management increasingly depends on integrated digital systems that support efficient information exchange and coordinated healthcare service delivery.

In developing institutional environments, however, interoperability challenges are often secondary to more immediate constraints related to technological infrastructure, funding, and human resource capacity. Studies conducted in developing contexts consistently report that institutions frequently struggle with inadequate ICT infrastructure, limited technical support, and shortages of skilled personnel, with system integration becoming a primary concern only after these issues are addressed [11,37,42]. Nevertheless, as digital maturity increases, interoperability and enterprise-wide integration become increasingly important for ensuring effective information governance and coordinated digital recordkeeping across institutional systems. The reviewed literature suggests that interoperability and system integration serve as key determinants of ERMS implementation, becoming increasingly significant as organisations progress toward digitally mature environments. While governance frameworks, technological infrastructure readiness, and human resource capacity remain foundational implementation conditions, interoperability increasingly determines whether digital recordkeeping systems can operate cohesively within broader institutional and cross-platform information ecosystems.

Based on the thematic synthesis of the reviewed literature, a conceptual framework was developed to illustrate the key determinants of ERMS implementation. The four determinants are nested within broader environmental, technological, and organisational dimensions consistent with socio-technical systems theory. Within this framework, governance and policy alignment represent environmental determinants; technological infrastructure readiness and interoperability represent technological determinants; while human resource capacity and organisational culture represent organisational determinants.

5. Discussion

5.1. Interpretation of Key Findings

The findings of this study indicate that the implementation of electronic records management systems (ERMS) is shaped by a complex interaction of governance, technological, and organisational factors. However, the relative importance of these determinants varies with the context in which implementation occurs. Among the identified determinants, governance and policy alignment consistently emerge as foundational conditions for successful ERMS adoption. Nevertheless, the effectiveness of governance frameworks is closely linked to the availability of technological infrastructure and institutional capacity [69]. Evidence from studies conducted in developing environments suggests that policy frameworks alone are insufficient to ensure successful implementation. Although many institutions formally establish record management policies, implementation often remains ineffective due to limited financial resources, inadequate ICT infrastructure, and insufficient staff training [11]. In such contexts, challenges to ERMS adoption are largely structural, reflecting broader institutional limitations in technological capacity and human resource development.

In contrast, research conducted in more digitally mature environments indicates that once basic technological infrastructure and institutional capacity are established, implementation challenges tend to shift toward system optimisation. In these contexts, the focus shifts from infrastructure provision to issues such as interoperability, usability, and long-term digital preservation [12,29,70]. This pattern suggests that ERMS implementation follows a developmental trajectory in which the nature of implementation challenges evolves with the level of digital maturity in a given institutional or national context. The findings also reinforce the conceptualisation of ERMS as sociotechnical systems. Successful implementation depends not only on technological capabilities but also on organisational culture, user acceptance, and leadership commitment. Empirical studies applying technology adoption frameworks further support this interpretation. For example, ref. [19] drawing on the Unified Theory of Acceptance and Use of Technology (UTAUT), demonstrates that

performance expectancy, effort expectancy, social influence, and facilitating conditions significantly influence ERMS adoption. Similarly, [20] highlights the role of perceived usefulness and organisational readiness in shaping user intentions to adopt ERMS.

These findings align with the broader information governance literature, which emphasises the need to integrate technological infrastructure, policy frameworks, and human capacity to achieve effective digital record management [3]. The interaction among these elements highlights the importance of adopting a holistic approach to ERMS implementation that recognises both technical and organisational dimensions.

Finally, the analysis reveals an important methodological gap within the existing literature. Much of the current research on ERMS implementation relies on single-institution qualitative case studies conducted within specific public-sector or organisational environments. Although these studies provide valuable contextual insights into implementation challenges and institutional practices, they limit opportunities for broader cross-contextual comparison and reduce the generalisability of findings across governance environments. Consequently, the ERMS literature remains heavily context-dependent, with limited cumulative theory development based on comparative institutional evidence. Cross-national and cross-sector comparative studies remain particularly underdeveloped despite the increasing global importance of digital governance and information management.

Although the reviewed studies span more than a decade of ERMS research, the present review synthesises the literature cross-sectionally rather than longitudinally. Consequently, the analysis cannot fully capture how implementation priorities, governance models, technological capabilities, and organisational readiness evolved. For example, earlier studies tended to focus primarily on infrastructure limitations and basic digitisation challenges. In contrast, more recent studies increasingly emphasise interoperability, the integration of artificial intelligence, metadata harmonisation, and digital preservation. A dedicated temporal or longitudinal review design would therefore be necessary to systematically examine how ERMS implementation dynamics change across different phases of digital governance maturity.

Compared with earlier reviews that primarily examined records management challenges within specific institutional or regional settings, the present study contributes a broader comparative synthesis that integrates governance, organisational, technological, and interoperability determinants within a unified socio-technical analytical framework. The study, therefore, extends prior literature by demonstrating how implementation priorities evolve across different levels of digital maturity and institutional development.

5.1.1. Conceptual Framework Description

Based on the thematic synthesis of the reviewed literature, a conceptual framework was developed to illustrate the principal determinants influencing the implementation of electronic records management systems (ERMS). The framework identifies four interrelated determinants influencing ERMS implementation: governance and policy alignment; technological infrastructure readiness; human resource capacity and organisational culture; and interoperability and system integration. Figure 2 presents a conceptual framework in which these four determinants collectively influence ERMS implementation, which in turn contributes to broader implementation outcomes, including accountability, transparency, organisational efficiency, and strengthened digital governance. Rather than depicting a rigid chronological sequence, the framework reflects a multi-determinant socio-technical model in which implementation success depends on the alignment of institutional, technological, organisational, and integrative conditions.

The framework conceptualises ERMS implementation as an institutional transformation process shaped by governance structures, technological capacity, user readiness,

and information-system compatibility rather than merely the installation of a technical platform. Recent studies support this interpretation by demonstrating that digital record systems perform most effectively when policy support, technical readiness, and organisational capability are jointly present and tend to underperform when one or more of these conditions are weak or misaligned [5,9,26,69]. This categorisation aligns the framework with established socio-technical and information systems perspectives, highlighting that ERMS implementation depends on the interaction of institutional, technological, and organisational conditions. The framework should therefore be interpreted as a theoretically synthesised explanatory model requiring future empirical validation across diverse institutional contexts.

Conceptual Relationships and Determinant Interactions

The framework assumes that each determinant exerts a conceptual influence on ERMS implementation while simultaneously interacting with the others. Governance and policy alignment provide the institutional foundation for implementation by establishing regulatory expectations, leadership commitment, compliance structures, and policy direction [7,69,71]. Technological infrastructure readiness determines whether institutions possess the ICT infrastructure, technical support, and system architecture necessary for reliable digital recordkeeping. Studies conducted in developing-country settings consistently demonstrate that weak infrastructure constrains implementation, even where policy intentions exist. In contrast, more digitally mature environments increasingly focus on improving system performance and integration [5,24,26].

Human resource capacity and organisational culture influence implementation through staff competencies, digital literacy, user acceptance, organisational preparedness, and change readiness. Recent research demonstrates that user competence and organisational recordkeeping culture remain central to sustained implementation, particularly in institutions undergoing digital transformation [9,69,72]. Interoperability and system integration further influence implementation by determining whether ERMS platforms can operate effectively within broader digital governance and enterprise information environments. Metadata standards, enterprise compatibility, cross-platform integration, and digital preservation capabilities are essential to ensuring that records remain accessible, authentic, and usable across institutional systems [12,14,47].

The findings further indicate that these determinants are highly interdependent. Governance frameworks influence infrastructure investment, implementation coordination, training priorities, and change-management strategies, while technological usability and system stability shape user acceptance and organisational adaptation [9,69]. Similarly, interoperability depends not only on technical integration capabilities but also on governance support, metadata standardisation, infrastructure readiness, and staff competencies [12,47]. The framework, therefore, conceptualises ERMS implementation as a mutually reinforcing socio-technical process in which implementation effectiveness depends on the alignment rather than the isolation of these determinants.

Theoretical Grounding and Implementation Outcomes

The framework is theoretically grounded in socio-technical systems theory and broader information governance perspectives, which conceptualise ERMS implementation as the interaction of technologies, organisational practices, governance structures, and human capabilities rather than technology alone [21,70]. This perspective further recognises digital recordkeeping systems as governance mechanisms that support accountability, compliance, transparency, organisational continuity, and institutional control [7,73].

The emphasis on staff training, user acceptance, and organisational readiness is also consistent with technology adoption and organisational readiness approaches, which

suggest that implementation depends not only on system availability but also on users' willingness and capacity to integrate technology into organisational workflows. Recent ERMS and digital health record studies similarly demonstrate that facilitating conditions, competencies, and organisational culture remain decisive for successful implementation and sustained usage [5,9,24,72].

The framework further proposes that when governance alignment, technological readiness, organisational capacity, and interoperability are sufficiently coordinated, ERMS implementation contributes to broader institutional outcomes. These outcomes include improved accountability through stronger record control, enhanced transparency through reliable access to organisational information, greater organisational efficiency through streamlined record lifecycle management, and strengthened digital governance through improved standardisation and compliance practices [7,73,74]. The framework, therefore, advances the central argument of this review: successful ERMS implementation depends on the convergence and interaction of multiple socio-technical determinants operating within broader institutional and governance environments.

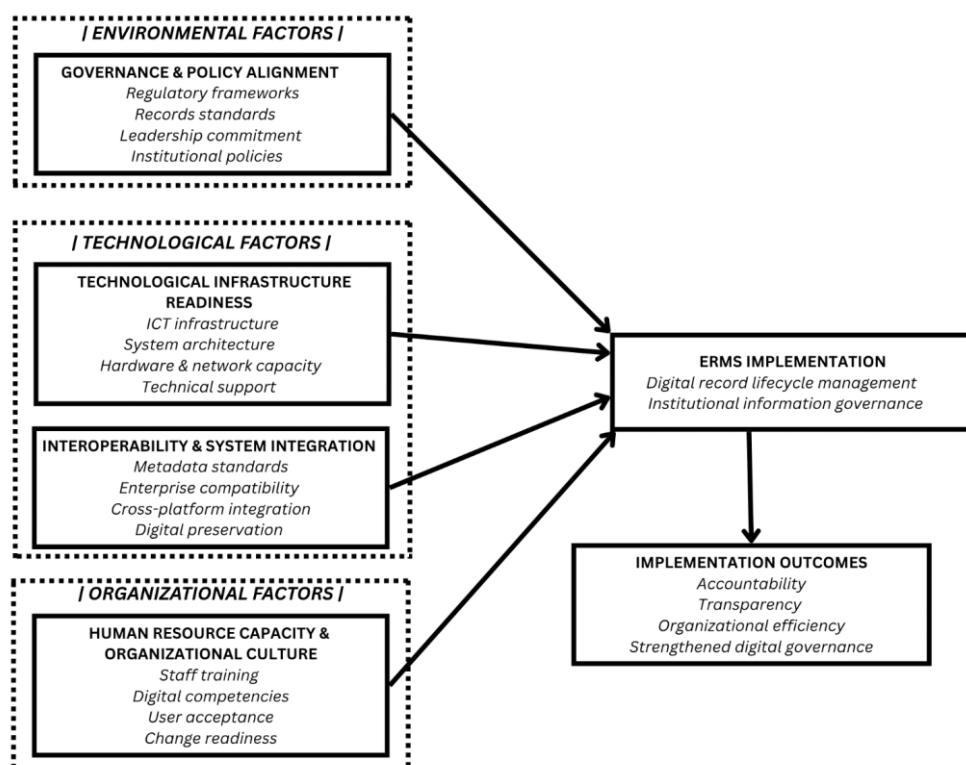


Figure 2. Conceptual framework of ERMS implementation derived from a thematic synthesis of the reviewed literature.

5.2. Implications for Theory and Practice

The findings of this study have important implications for both theory and practice in the field of electronic records management and digital governance. From a theoretical perspective, the results suggest that ERMS adoption should be conceptualised through a socio-technical governance framework that integrates technological infrastructure, institutional capacity, and organisational culture. Successful ERMS implementation cannot be achieved through technological solutions alone; rather, it requires alignment between technical systems, policy frameworks, and organisational capabilities [2,3]. Previous research also emphasises that effective ERMS adoption depends on enabling conditions, including governance structures, management support, and institutional readiness [19,20]. These findings reinforce the broader information governance literature, which argues that

digital recordkeeping systems operate within complex socio-technical environments in which technology, policy, and human factors interact to influence implementation outcomes [6,18].

From a practical perspective, the findings highlight the importance of contextualising ERMS implementation strategies based on the level of digital maturity in institutional environments. In developing contexts, policymakers and institutional leaders should prioritise investments in technological infrastructure, staff training, and organisational capacity building before pursuing more advanced system capabilities, such as interoperability and enterprise integration [11,24]. Studies conducted in developing environments repeatedly demonstrate that inadequate infrastructure, limited financial resources, and insufficient technical skills significantly constrain the effective implementation of ERMS initiatives [5,22]. In contrast, institutions operating in more digitally mature environments should focus on system integration, metadata standardisation, and usability optimisation to enhance the efficiency and sustainability of existing ERMS platforms. Research conducted in technologically advanced settings indicates that once foundational infrastructure is established, implementation challenges increasingly shift toward interoperability, metadata harmonisation, and long-term digital preservation [12,29].

These findings emphasise the importance of adopting context-sensitive implementation strategies that account for the varying institutional conditions under which ERMS are deployed. Aligning governance frameworks, technological infrastructure, and organisational capabilities remains essential for achieving sustainable digital record management systems and strengthening institutional accountability and information governance practices [7,16].

6. Conclusions

This study presents a structured qualitative literature review examining the implementation of electronic records management systems (ERMS) across diverse institutional and national contexts. Through a systematic synthesis of the existing literature, the study identifies the principal determinants of ERMS implementation and explores how these determinants vary across governance and technological environments. The findings indicate that governance and policy alignment, technological infrastructure readiness, human resource capacity, organisational culture, and system interoperability and integration represent the dominant factors shaping ERMS implementation outcomes. However, the relative importance of these determinants varies with the level of institutional and digital maturity in specific national and organisational settings.

In developing environments, implementation challenges are primarily associated with structural constraints, including inadequate technological infrastructure, limited financial resources, weak policy enforcement, and shortages of skilled personnel. In contrast, institutions operating in more digitally mature environments increasingly focus on system optimisation, such as interoperability, usability, metadata standardisation, and long-term digital preservation. The review further demonstrates that these determinants are highly interdependent, reinforcing the need to conceptualise ERMS implementation as a socio-technical process shaped by the interaction of governance structures, technological capabilities, and organisational readiness.

In addition to synthesising implementation determinants, this study identifies several structural limitations within the existing ERMS research landscape, including limited empirical validation, insufficient longitudinal analysis, language-restricted evidence bases, and the predominance of single-institution case study designs. Addressing these limitations is essential to advancing theoretical maturity and strengthening evidence-based research in digital governance and records management.

This study contributes to the ERMS literature by integrating fragmented empirical findings into a comparative socio-technical analytical framework that highlights both structural implementation constraints in developing environments and system-refinement challenges in technologically advanced contexts. By identifying recurring implementation barriers and contextual variations, the study provides practical insights for policymakers, information managers, and organisational leaders seeking to strengthen electronic records management and information governance practices within their institutions.

Nevertheless, several limitations of this review should be acknowledged. First, the study relies exclusively on secondary data derived from the published literature and therefore does not provide direct empirical validation of the proposed conceptual framework. Although the thematic synthesis enables analytical integration across diverse studies, the relationships identified among governance alignment, technological readiness, organisational culture, and interoperability should be interpreted as theoretically derived rather than empirically tested. Future research should therefore employ primary empirical methods, including surveys, interviews, longitudinal case studies, and structural equation modelling, to validate and refine the proposed framework.

Second, the review was limited to English-language publications, which may have introduced language and regional publication bias. Consequently, potentially relevant studies published in languages such as Chinese, Arabic, Spanish, French, Portuguese, or Turkish may have been excluded, particularly those examining ERMS implementation in non-English-speaking developing contexts. This limitation may reduce the comprehensiveness of the review and underrepresent context-specific implementation experiences across diverse governance environments.

Future research should prioritise longitudinal and comparative investigations examining how ERMS implementation determinants evolve across institutions and national contexts over time. Such studies would provide deeper insight into how digital maturity, governance reforms, technological innovation, and organisational adaptation shape the long-term evolution of ERMS implementation strategies. Comparative cross-institutional and cross-national research designs are also needed to strengthen theoretical generalisability and improve understanding of how contextual conditions influence ERMS implementation across diverse governance environments. Studies involving institutions in both developed and developing countries would be particularly valuable for distinguishing universal determinants of implementation from context-specific challenges.

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Appendix A

Table A1. Characteristics of the reviewed studies.

Author(s) & Year	Context (Country/Sector)	Study Objective	Methodology	Key Findings	Thematic Category
[66]	Records and Information Management sector	To propose a conceptual framework for AI technology readiness and adoption intention in records and information management practices	Propose conceptual framework	AI readiness, organisational preparedness, and adoption intention are critical for successful AI integration in RIM practices.	Human Resource Capacity & Organisational Culture
[38]	UK National Archives	To examine the challenges of born-electronic records management at the UK National Archives	Exploratory study	Managing born-digital records requires updated archival strategies, digital preservation, and technical infrastructure.	Technological Infrastructure Readiness
[52]	Nigeria/University Libraries	To investigate strategies for managing born-digital records in university libraries	Case study	Effective born-digital management requires staff training, policies, and digital preservation strategies.	Human Resource Capacity & Organisational Culture
[75]	Malaysia/Public Sector	To identify issues affecting EDRMS implementation in Malaysia	Preliminary exploratory study	Organisational resistance, lack of training, and inadequate ICT infrastructure hinder implementation.	Governance & Policy Alignment; Technological Infrastructure Readiness; Human Resource Capacity & Organisational Culture
[39]	Healthcare/Electronic records	To review security techniques for electronic records	Literature review	Encryption, authentication, and access controls are essential for EHR security.	Technological Infrastructure Readiness
[31]	Oman/Government Institutions	To identify enablers and barriers to electronic records management in Oman	Qualitative institutional study	Policy support, training, and infrastructure enable effective electronic records management, while resistance and poor governance hinder progress.	Governance & Policy Alignment; Human Resource Capacity & Organisational Culture
[43]	Nigeria/Banking Sector	To assess the impact of AI on document management in banking	Quantitative study	AI improves efficiency, accuracy, and accessibility in document management.	Technological Infrastructure Readiness
[63]	Indonesia/Education Sector	To develop a web-based administration and archival information system	System development study	Web-based archival systems improve administrative efficiency and document accessibility.	Technological Infrastructure Readiness

[54]	Organisational Context	To review the adoption of ERMS in organisations	Systematic literature review	Successful ERMS adoption depends on technological, organisational, and human factors.	Governance & Policy Alignment; Technological Infrastructure Readiness; Human Resource Capacity & Organisational Culture
[76]	Libya/Oil Industry	To analyse barriers to environmental management systems implementation	Analytical study	Organisational culture, lack of management support, and resource limitations impede implementation.	Human Resource Capacity & Organisational Culture
[77]	Organisational Context	To explore socio-technical issues in the implementation of electronic recordkeeping systems	Exploratory study	Social and technical factors jointly influence successful ERKS implementation.	Technological Infrastructure Readiness; Human Resource Capacity & Organisational Culture
[4]	Healthcare	To identify challenges and facilitators of EHR implementation	Scoping review	Leadership support, interoperability, and user training are major facilitators; resistance and cost are major barriers.	Technological Infrastructure Readiness; Human Resource Capacity & Organisational Culture; Interoperability & System Integration
[35]	Tanzania/Public Institutions	To examine the effects of ERMS on service delivery	Case study	ERMS improve efficiency, accountability, and public service delivery	Governance & Policy Alignment
[34]	Gambia/Government Sector	To identify critical success factors for EDRMS implementation	PMBOK-based study	Project management practices, stakeholder involvement, and training are critical to successful implementation.	Governance & Policy Alignment; Human Resource Capacity & Organisational Culture
[64]	General Organisational Context	To develop a cloud-based file management platform with RBAC and metadata search	System development study	Cloud-based systems improve document security, accessibility, and retrieval.	Technological Infrastructure Readiness; Interoperability & System Integration
[32]	Enterprise Content Management	To review the ECM system adoption for combating corruption	Systematic literature review	ECM systems enhance transparency, accountability, and anti-corruption measures	Governance & Policy Alignment
[44]	Intelligent Document Management	To develop an AI-enabled personal document management system	Developmental study	AI technologies improve document classification, retrieval, and personalisation.	Technological Infrastructure Readiness
[49]	Tanzania/Local Government	To examine the influence of office supervisors' competence on records management	Quantitative study	Staff competence significantly improves the effectiveness of personnel records management.	Human Resource Capacity & Organisational Culture

[74]	Oil and Gas Industry	To assess ERMS usage for business continuity and off-site working	Narrative review	ERMS enhance business continuity and remote work effectiveness	Technological Infrastructure Readiness
[20]	Yemen/Oil and Gas Sector	To investigate factors influencing ERMS adoption	Empirical study	Technology readiness, organisational support, and user acceptance influence ERMS adoption.	Technological Infrastructure Readiness; Human Resource Capacity & Organisational Culture
[60]	Australia/Healthcare	To understand nurses' perceptions of barriers and enablers to EMR use	Qualitative study	User training, management support, and usability influence EMR adoption	Human Resource Capacity & Organisational Culture
[65]	Namibia/Public Sector	To examine change management in EDRMS implementation	Case study	Effective change management is crucial for successful EDRMS implementation.	Human Resource Capacity & Organisational Culture
[67]	Namibia/Public Sector	To explore the challenges and opportunities of EDRMS adoption	Exploratory study	Infrastructure limitations and resistance hinder adoption, while digitisation improves efficiency.	Technological Infrastructure Readiness; Human Resource Capacity & Organisational Culture
[51]	Namibia/Public Sector	To examine factors affecting EDRMS adoption using TAM	Technology Acceptance Model study	Perceived usefulness and ease of use significantly influence EDRMS adoption.	Human Resource Capacity & Organisational Culture
[68]	Nigeria/Healthcare	To evaluate health records management systems	Evaluation study	Digital health records improve service efficiency but require better management and infrastructure.	Technological Infrastructure Readiness; Interoperability & System Integration
[50]	Botswana/Public Sector	To investigate factors influencing EDRMS adoption and usage	Empirical study	Organisational support, ICT infrastructure, and staff readiness affect EDRMS usage.	Technological Infrastructure Readiness; Human Resource Capacity & Organisational Culture
[78]	Yemen/Educational Institutions	To examine ERMS and institutional competency	Empirical study	ERMS improve institutional competency, efficiency, and decision-making	Human Resource Capacity & Organisational Culture
[23]	Higher Education Institutions	To develop a taxonomic framework for ERMS adoption factors	Framework development study	Organisational, technological, and environmental factors shape ERMS adoption.	Governance & Policy Alignment; Technological Infrastructure Readiness; Human Resource Capacity & Organisational Culture
[79]	Higher Learning Institutions	To examine ERMS adoption and decision-making processes	Empirical study	ERMS improve institutional decision-making and information accessibility	Interoperability & System Integration

[24]	Developing Countries/Healthcare	To identify critical success factors for EHR implementation	Systematic review	Leadership, user training, funding, and interoperability are key success factors.	Governance & Policy Alignment; Human Resource Capacity & Organisational Culture; Interoperability & System Integration
[14]	International ERMS Practice	To compare metadata integration practices in ERMS	Comparative study	Standardised metadata enhances interoperability, retrieval, and records preservation.	Interoperability & System Integration
[46]	Botswana/e-Government	To examine the role of information architecture in records automation	Qualitative study	Effective information architecture supports automation and digital governance.	Interoperability & System Integration
[18]	General Organisational Context	To review the state of electronic records management	State-of-the-art review	ERM enhances organisational efficiency, accountability, and compliance	Governance & Policy Alignment
[41]	Namibia and Zimbabwe/Public Sector	To assess EDRMS implementation status	Comparative study	Limited infrastructure and policy gaps affect EDRMS implementation	Governance & Policy Alignment; Technological Infrastructure Readiness
[40]	Educational Institutions	To identify the role of cloud computing in institutional management	Review study	Cloud computing enhances scalability, accessibility, and records management.	Technological Infrastructure Readiness
[80]	Public Sector Organizations	To examine big data and ERMS competency	Conference paper	Integration of big data with ERMS enhances organisational competency and analytics.	Technological Infrastructure Readiness; Interoperability & System Integration
[42]	Botswana/Public Sector	To examine EDRMS implementation in a developing country context	Case study	Successful implementation depends on policy, training, and ICT readiness	Governance & Policy Alignment; Technological Infrastructure Readiness; Human Resource Capacity & Organisational Culture
[81]	South Africa/Health Sector	To examine EDRMS implementation and maturity models in eHealth	Analytical study	Maturity models can guide successful EDRMS implementation in healthcare	Governance & Policy Alignment; Technological Infrastructure Readiness
[61]	Malaysia/Public Sector	To develop implementation guidelines for digital document management systems	Expert review	Clear policies, standards, and governance structures support implementation success.	Governance & Policy Alignment
[28]	Healthcare	To review trends, issues, and future directions in EMR management	Review study	EMRs improve healthcare efficiency but face security and	Technological Infrastructure Readiness; Human Resource Capacity &

				interoperability challenges.	Organisational Culture; Interoperability & System Integration
[37]	Sub-Saharan Africa	To examine the challenges of managing electronic records in developing countries	Review study	Poor infrastructure, inadequate policies, and a lack of skills hinder ERM practices.	Governance & Policy Alignment; Technological Infrastructure Readiness; Human Resource Capacity & Organisational Culture
[62]	Administrative Contracts/Legal Systems	To examine the legal challenges of electronic writing in administrative contracts	Comparative legal study	Legal frameworks must evolve to support electronic documentation and contracts.	Governance & Policy Alignment
[82]	Malaysia/Public Sector	To propose a conceptual model for EDRMS adoption	Conceptual study	Technological, organisational, and environmental factors influence EDRMS adoption.	Governance & Policy Alignment; Technological Infrastructure Readiness; Human Resource Capacity & Organisational Culture
[45]	Digital Government	To review digital government architectures	Systematic literature review	Integrated digital architectures improve government records and service delivery.	Governance & Policy Alignment; Interoperability & System Integration
[83]	Pakistan/Public Universities	To identify barriers to the implementation of the digital record management system	Case study	Infrastructure, funding, and user resistance are key barriers	Technological Infrastructure Readiness; Human Resource Capacity & Organisational Culture
[15]	Malaysia/Government Agencies	To model preservation of electronic records metadata	Model development study	Metadata preservation supports authenticity and long-term access to records.	Interoperability & System Integration
[11]	Pakistan/WAPDA	To examine the potential and challenges of ERMS implementation	Case study	ERMS improve efficiency but face technical and organisational barriers	Technological Infrastructure Readiness; Human Resource Capacity & Organisational Culture
[5]	Developing Countries/Healthcare	To review EHR implementation and adoption	Review study	Successful EHR implementation depends on policy, funding, and training	Governance & Policy Alignment; Human Resource Capacity & Organisational Culture
[12]	Turkey/Universities	To evaluate interoperability in ERMS	Evaluation study	Interoperability challenges limit the effective exchange of records across universities.	Interoperability & System Integration

[9]	Indonesia/Hospitals	To explore EMR implementation and recordkeeping culture	Exploratory study	Organisational culture significantly affects EMR adoption and usage	Human Resource Capacity & Organisational Culture
[47]	Cross-border Healthcare	To examine the integration of EHR systems across borders	Analytical review	Policy harmonisation and technical interoperability are essential for cross-border EHR integration.	Governance & Policy Alignment; Interoperability & System Integration
[36]	Corporate Governance	To examine records management as a corporate governance asset	Conceptual analysis	Effective records management supports accountability, transparency, and governance.	Governance & Policy Alignment
[48]	Healthcare/Blockchain	To review blockchain interoperability requirements in EHRs	Scoping review	Blockchain can enhance EHR interoperability, security, and data integrity	Technological Infrastructure Readiness; Interoperability & System Integration
[16]	General Organisations	To review records management practices in organisations	Literature review	Effective records management improves organisational efficiency and compliance.	Governance & Policy Alignment
[59]	Pakistan, India, and Bangladesh/Local Government Systems	To review research priorities and gaps in local government systems in South Asia	Literature review	Identified governance gaps, policy weaknesses, and administrative challenges affecting local government systems	Governance & Policy Alignment
[13]	Library and Information Science	To examine the evolution of taxonomy development in Library and Information Science over the past fifty years	Historical and bibliometric review	Taxonomy development has evolved to support better knowledge organisation, classification, and information retrieval systems.	Interoperability & System Integration
[53]	Indonesia/Human Resource Management	To examine the impact of information technology innovation in human resource management using the Ishikawa method	Case study using Ishikawa analysis	IT innovation improves HR management efficiency, organisational adaptability, and digital work culture.	Human Resource Capacity & Organisational Culture

Appendix B

Table A2. Thematic coding matrix of the reviewed studies.

Study	Governance & Policy Alignment	Technological Infrastructure Readiness	Human Resource Capacity & Organisational Culture	Interoperability & System Integration
[28]		✓	✓	✓
[61]	✓	✓	✓	
[31]	✓	✓	✓	
[43]		✓	✓	

[44]		✓	✓	
[37]	✓	✓	✓	
[62]	✓			
[45]	✓	✓		✓
[54]	✓	✓	✓	
[83]	✓	✓	✓	
[15]		✓		✓
[11]	✓	✓	✓	
[5]	✓	✓	✓	✓
[4]	✓	✓	✓	✓
[12]		✓		✓
[38]		✓	✓	
[20]	✓	✓	✓	
[74]	✓	✓	✓	
[9]		✓	✓	✓
[14]	✓	✓		✓
[47]	✓	✓		✓
[34]	✓	✓	✓	
[60]		✓	✓	
[65]	✓		✓	
[81]	✓	✓	✓	✓
[39]		✓		✓
[64]		✓		✓
[46]	✓	✓		✓
[50]	✓	✓	✓	
[23]	✓	✓	✓	
[79]	✓	✓	✓	✓
[78]	✓	✓	✓	
[80]		✓	✓	
[24]	✓	✓	✓	✓
[40]		✓		✓
[41]	✓	✓	✓	
[42]	✓	✓	✓	
[18]	✓	✓	✓	
[52]		✓	✓	
[77]		✓	✓	✓
[36]	✓		✓	
[48]		✓		✓
[63]		✓	✓	✓
[66]	✓	✓	✓	
[49]			✓	
[16]	✓	✓	✓	
[35]	✓	✓	✓	
[75]	✓	✓	✓	
[32]	✓	✓	✓	
[76]	✓	✓	✓	
[68]	✓	✓	✓	✓
[59]	✓		✓	
[13]		✓	✓	✓
[53]		✓	✓	
[67]	✓	✓	✓	
[51]		✓	✓	
[82]	✓	✓	✓	

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