VIII. Perception of Document Management Systems in Digital Transformation

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Document Management Systems (DMS) are essential tools for managing organisational information throughout its lifecycle. Despite increasing adoption, many DMS implementations fail to deliver the expected value due to inadequate attention to Critical Success Factors (CSFs). This monograph investigates the impact of selected CSFs—such as top management support, process orientation, and organisational culture—on different phases of the DMS lifecycle: selection, implementation, and usage. Drawing on the ITIL framework and lifecycle-based thinking, the study employs a quantitative methodology using PLS-SEM on data collected from Slovenian organisations. The results show that CSFs vary in importance across lifecycle stages, highlighting the need for dynamic, phase-specific implementation strategies. The findings contribute to theory by integrating CSFs with DMS lifecycle management and provide actionable insights for practitioners seeking to optimise DMS adoption and performance.

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1 Introduction

In the digital transformation era, the ability to manage information efficiently has become a strategic imperative for organisations across all sectors. Document Management Systems (DMS) play a central role in this process, enabling structured, secure, and scalable management of business documents throughout their lifecycle. From document creation and processing to long-term archiving, DMS supports operational efficiency, regulatory compliance, institutional memory, and knowledge sharing (Sprehe, 2004; Hrašovec, 2011; Zebec, 2010). Despite their increasing relevance, many DMS implementations fall short of expectations due to poor alignment with business processes, insufficient user engagement, or inadequate strategic planning (Beheshti et al., 2014; Downing, 2006).

Over the past two decades, extensive research has been conducted to identify Critical Success Factors (CSFs) that influence the success of information systems, particularly Enterprise Resource Planning (ERP) systems. These studies have highlighted the importance of leadership support, training, organisational culture, and technological readiness in ensuring implementation outcomes (Ifinedo, 2008; Finney & Corbett, 2007; Alshibly et al., 2016). However, similar investigations into DMS remain limited, and existing models often treat CSFs as static or universally applicable without considering how their influence may evolve over the system's lifecycle. Yet, as emphasised by Yu (2005) and Munkelt and Volker (2013), the long-term success of business information systems depends not only on successful implementation but also on sustained usage and continual improvement.

To address this gap, the present study explores the relationship between selected CSFs and the DMS lifecycle. The lifecycle perspective adopted in this work follows the logic of IT governance frameworks, particularly ITIL, which structures service management into strategy, design, transition, operation, and continual service improvement (Hunnebeck, 2011; Kern, 2009). Applying this approach, the DMS lifecycle is divided into three key phases: selection, implementation, and usage (Jordan, 2023). The central hypothesis of the research is that the impact of CSFs is phase-dependent, meaning that different factors matter more to varying stages of the system's evolution.

The research is based on a quantitative study conducted among employees in Slovenian organisations implementing or using a DMS. The data were collected via an online survey (1KA, 2023), and the model was tested using Partial Least Squares Structural Equation Modeling (PLS-SEM), which is suitable for analysing complex relationships in smaller samples (Hair et al., 2017; Henseler et al., 2009). The results aim to identify which CSFs are most influential in each lifecycle phase and offer a structured framework organisations can use to guide DMS planning and implementation.

This monograph is structured into six chapters. The second chapter provides a comprehensive overview of DMS, including their definition, historical development, functionalities, components, and emerging trends. Chapter three introduces the concept of the DMS lifecycle and presents a lifecycle model based on ITIL methodology. Chapter four focuses on Critical Success Factors, their theoretical background, application in business information systems, and categorisation specific to DMS. Chapter five presents the empirical study, including the research hypothesis, methodological approach, data analysis, and discussion of the results. Finally, chapter six concludes the monograph by summarising key findings, identifying theoretical contributions and limitations, and proposing directions for future research.

By combining lifecycle thinking with a CSF-based analytical framework, this study contributes to a more nuanced understanding of success in DMS implementation and management. It highlights the need for phase-specific strategies and offers evidence-based insights to researchers and practitioners involved in designing, deploying, and optimising document management solutions.

2 Document management systems

2.1 Definition and historical development of DMS

DMS represent an essential technological solution for the structured handling of business documents throughout their entire lifecycle—from creation, processing, distribution, and storage to eventual archiving. The core function of a DMS is to support the capture, storage, retrieval, and management of both structured and

unstructured data in digital form, enabling greater operational efficiency and compliance with regulatory requirements (Hrašovec, 2011; Odobašić, 2016).

A business process is a set of related activities that require input and yield an output, and documents are a fundamental component of these processes. With the growing volume and complexity of documents in organisations, traditional paper-based systems became inadequate. This led to the development of electronic document archives and DMS that help organisations maintain agility and improve decision-making capabilities (Limanowski, 1983; Mukhopadhyay et al., 1995).

The history of document management can be traced back to the late 19th century, with the invention of the vertical filing system by Edwin Grenville Seibels in 1898. However, the shift towards electronic document management began in the 1980s with the emergence of Document Imaging Processing (DIP) systems—essentially electronic filing cabinets enabling scanned and indexed document storage (Biels, 2021; Zebec, 2010).

Technological advancements such as personal computers, centralised servers, and optical scanners further accelerated this transition in the following decades. In the 1990s, the development of Electronic Record Management Systems (ERMS) and standards like MoReq and IDA brought more excellent structure and compliance orientation into document management practices (Zebec, 2010).

The ISO 15489-1 standard distinguishes between mutable documents and records, which are immutable and often serve as legal or procedural evidence. While DMS support the entire lifecycle and collaborative use of documents, ERMS is focused on the secure, unaltered storage of records for compliance and accountability (Zebec, 2010).

Over time, DMS evolved from simple storage systems to multifunctional platforms that support collaboration, version control, access management, and workflow automation. As companies increasingly pursue digital transformation, DMS is pivotal in enabling lean, paperless operations and securing institutional memory (Sprehe, 2004; Abaci & Medeni, 2022).

Recent advancements incorporate artificial intelligence, cloud computing, and mobile access, transforming DMS into intelligent systems capable of learning from usage patterns, optimising document workflows, and integrating seamlessly with other enterprise applications. These developments reflect the growing strategic importance of DMS in modern business environments.

2.2 Functionalities and types of document management systems

Modern DMS offer various functionalities that effectively support organisations in managing increasing volumes of digital content. These systems are designed to store and retrieve documents, streamline business processes, ensure legal compliance, and enhance organisational agility.

Core functionalities of DMS typically include (Hrašovec, 2011; Odobašić, 2016):

- Document capture and conversion: Input of documents, including scanning of paper records and conversion to searchable text through Optical Character Recognition (OCR).
- Indexing and classification: Assignment of metadata for efficient retrieval and categorisation.
- Document and archiving: Secure and structured long-term storage with version control and defined retention periods.
- Workflow and processing: Automating approvals, notifications, and document routing tasks.
- Access control and permissions: Role-based management of document accessibility, aligned with security and compliance requirements.
- Audit trails and version history: Tracking all changes and user interactions to ensure accountability and support audits.

These features reduce reliance on physical documents, minimise risks of data loss, and increase operational efficiency. For example, Sprehe (2004) and Adeneye & Ahmed (2015) emphasise benefits such as centralised document storage, faster processes, reduced paper usage, and cost savings.

DMS solutions vary in complexity and scope, depending on the size and needs of the organisation. Cracraft (2021) distinguishes between four primary types:

1. Basic DMS. Found mainly in small businesses, these solutions are simple and used primarily for file sharing. They typically lack audit trails, access control, or workflow functionalities.
2. Archival DMS. Commonly used in libraries and academic settings for storing non-editable content. They enable efficient searching and reading but do not support editing or collaborative features.
3. Commercial DMS. These systems are employed by larger companies with extensive document management needs. They offer robust functionalities like user access control, version management, and integration with other enterprise systems.
4. Enterprise/Industrial DMS. The most advanced solutions used in large organisations. These consist of distributed repositories integrated with enterprise systems (e.g., ERP, CRM), ensuring data consistency and scalability.

The evolution of these types reflects the growing demand for DMS functionalities across various sectors—including finance, healthcare, and manufacturing—where reliable document handling is crucial for regulatory and operational reasons (Joia, 1998; Eleoranta et al., 2001).

In the current landscape, organisations seek DMS solutions with cloud capabilities, mobile accessibility, and integration options, further influencing their selection of an appropriate system (Global Market Insights, 2021).

2.3 Core components of a document management system

DMS are complex information solutions that facilitate the efficient handling of documents throughout their entire lifecycle—from initial capture to long-term archiving. A DMS must have several interrelated components forming a robust technological infrastructure to achieve this.

A DMS's fundamental components are the document capture and input module. This component enables the conversion of physical documents into digital format, most commonly through scanning and Optical Character Recognition (OCR) technology. In addition, it supports the direct ingestion of digital files from emails, cloud storage, or enterprise applications. Upon capture, documents are typically enriched with metadata such as author, date, document type, and linkage to relevant business processes, facilitating efficient indexing and retrieval (Hrašovec, 2011).

The indexing and classification engine plays a crucial role in supporting structured access and document review. This system component ensures the logical organisation of content based on predefined taxonomies and classification schemes. Automated classification mechanisms based on content, layout, or source contribute to faster retrieval and consistency. Simultaneously, access rights are defined based on user roles, ensuring security and control over sensitive information.

At the core of every DMS is the document repository, which ensures secure and reliable storage of documents. Repositories may be organised hierarchically or relationally and typically support version control, change tracking, and data redundancy to prevent loss or corruption (Odobašić, 2016). Stored documents are subject to security policies, including retention schedules and rules for archiving or deletion.

Modern DMS platforms also include workflow automation features. These enable the digital execution of repetitive tasks such as approvals, notifications, and document routing. As a result, errors are reduced, process transparency and standardisation are improved, and organisational efficiency is enhanced.

The security layer is another essential component of DMS, facilitating authorised access based on predefined user roles and privileges. It includes various authentication mechanisms, such as multi-factor authentication and audit trails that log all system activities. This ensures traceability and supports compliance with legal and regulatory requirements (Sprehe, 2004; Zebec, 2010).

From the user's perspective, a powerful search and retrieval engine is essential. It should support full-text search capabilities, metadata filters, advanced queries, and saved searches, significantly improving document accessibility and user productivity.

Due to the need for integration with other enterprise systems, the role of Application Programming Interfaces (APIs) has become increasingly important. APIs enable seamless interaction with systems such as Enterprise Resource Planning (ERP), Customer Relationship Management (CRM), Human Resource Management (HRM), Business Intelligence (BI), and collaboration platforms, including Outlook, SharePoint, and Microsoft Teams (Mikroprimar, 2021). This facilitates data consistency and reduces duplication of effort.

Finally, DMS must implement well-defined retention and archiving policies. These policies regulate the time frames for document retention and determine when documents should be archived or deleted. Combined with digital signature support and adherence to standards such as PDF/A, they ensure the legal validity and long-term accessibility of documents.

Collectively, these core components constitute a comprehensive system that enables organisations to manage documents securely, efficiently, and by relevant legal and industry-specific standards.

2.4 Advantages and disadvantages of DMS

Implementing a DMS can benefit organisations significantly, particularly regarding efficiency, cost reduction, compliance, and operational transparency. However, these advantages are accompanied by certain limitations and challenges, especially in the initial implementation phases.

One of the most frequently cited benefits of DMS is cost reduction. Organisations face high expenses for managing large volumes of paper documents, including printing, physical storage, and labour. A DMS automates many document-related processes, reducing these costs and allowing employees to focus on more strategic tasks (Canteli, 2021). In addition, time savings are achieved through faster access to information, regardless of the user's location. This contributes to improved employee productivity and decision-making.

Another critical advantage is workflow optimisation. A well-implemented DMS reduces the number of manual steps required in document handling, thereby increasing the agility and responsiveness of business processes. Employees can

locate and share information more quickly, which enhances collaboration and operational continuity (Azard, 2007; Wilkins et al., 2007).

DMS also support regulatory compliance by enabling organisations to meet legal obligations for data protection, retention, and auditability. Modern systems include built-in audit trails, automated retention policies, and secure storage mechanisms, all critical in sectors with strict regulatory requirements. Furthermore, the electronic audit trail ensures the traceability of all document-related activities, particularly important for internal and external audits (Canteli, 2021).

In addition to these measurable benefits, organisations experience several intangible advantages, such as improved employee satisfaction, easier collaboration, and enhanced security. Digital documents are less prone to loss or damage, and access rights can be tightly controlled. Moreover, electronic document handling reduces the risk of unauthorised duplication and ensures that only relevant personnel can view or modify sensitive content (Sprehe, 2004).

Despite these benefits, DMS implementations also face several challenges and disadvantages. One primary concern is the high initial investment, which includes acquiring hardware, software licenses, and infrastructure upgrades (Higl, 2011). Additionally, training costs for both users and technical staff can be substantial. Users may not utilise the system effectively without adequate training, leading to partial or failed adoption.

System disruptions pose another risk. Business operations may be severely hindered if the DMS experiences downtime due to technical issues or maintenance. Moreover, poor task distribution among users can create bottlenecks and reduce the expected efficiency gains.

A particularly critical issue is integration with existing systems. In many cases, DMS solutions are not fully compatible with legacy IT systems, resulting in fragmented workflows or duplicated efforts. Patel (2010) notes that many DMS implementations fail due to incomplete system design, lack of user involvement, inadequate classification structures, and insufficient preparation of business processes.

The human factor plays a key role in the success of DMS implementation. Resistance to change, lack of user engagement, and insufficient support from management can all contribute to the underutilisation of the system. To overcome these challenges, organisations must ensure the early involvement of users, alignment between the DMS and organisational workflows, and strong leadership to support the transition (AIIM, as cited in Patel, 2010).

In conclusion, while DMS offer a wide range of advantages—from measurable financial savings to improved compliance and information management—they also present significant implementation challenges. Careful planning, stakeholder engagement, and adequate resourcing are essential for maximising the benefits and minimising the risks associated with DMS adoption.

2.5 Current trends in DMS

As organisations undergo rapid digital transformation, DMS is also evolving to accommodate new technological developments and changing business needs. Integrating mobile access, cloud computing, artificial intelligence, and enhanced security mechanisms represents the most prominent trends in the DMS landscape.

One of the key developments is the integration of DMS with mobile devices. In modern organisations, employees often require access to documents remotely or on the move. Mobile-compatible DMS solutions allow users to view, share, and sign documents through dedicated applications or web interfaces. These mobile systems prioritise intuitive design and essential functionalities, such as document previewing, approval, and collaboration (Žorž, 2019). As mobile technologies continue to evolve, more advanced DMS features are expected to be accessible on mobile platforms.

Another critical trend is cloud-based document management, which offers continuous accessibility and eliminates the need for physical infrastructure. Cloud DMS solutions provide flexibility, scalability, and ease of maintenance. This model is beautiful for small and medium-sized enterprises (SMEs) that lack extensive IT resources. Many providers, including DocuWare Cloud, InDoc EDGE, and SharePoint Online, offer both on-premise and cloud-based options, allowing

companies to choose the deployment model that best fits their strategic objectives (Mikroprimar, 2021; Mikrografija, 2021; Business Solutions, 2021).

Security and compliance remain central concerns, mainly as organisations handle increasing volumes of sensitive and confidential data. In addition to audit trails and access control, modern DMS platforms incorporate advanced encryption methods and role-based permissions at multiple levels. However, with the rise of cloud computing and remote access, additional safeguards are needed to ensure data integrity and regulatory compliance. Many vendors are now focusing on securing internal processes and those extended to mobile and cloud environments (Vrecl, 2019).

Interoperability and integration with other enterprise systems are also becoming essential features of DMS platforms. Organisations expect their document systems to connect with ERP, CRM, HRM, and BI tools, enabling unified workflows and eliminating data silos. Certified interfaces like Connect to Outlook, SAP, and SharePoint are now standard offerings (Mikroprimar, 2021). Additionally, collaborative functionalities—such as real-time editing by multiple users—are gaining traction, driven by the increasing demand for remote and team-based work environments.

The trend toward affordability and modularity is another critical factor shaping the DMS market. As competition intensifies and more vendors enter the space, solutions become more customisable and cost-effective. Organisations can now select specific modules according to their needs and budget, improving return on investment and reducing barriers to adoption (Docsvault Team, 2019).

The most transformative development in recent years is incorporating artificial intelligence (AI) into DMS platforms. AI enables advanced functionalities such as intelligent document classification, predictive search, metadata extraction, and user behaviour analysis. Techniques such as machine learning and deep learning are increasingly used to automate complex processes, reduce manual input, and enhance the accuracy of document handling (Gergorec, 2020; Vitko, 2020; Shaikh, 2021). AI-powered DMS can also recommend actions, flag anomalies, and continuously improve through user interaction data (EIM International, 2021).

These emerging trends demonstrate that DMSs are no longer mere repositories of digital files but are becoming strategic tools for enabling organisational agility, collaboration, and innovation. As digital ecosystems become more interconnected and dynamic, the role of intelligent, secure, and integrated DMS will become even more critical.

This chapter provided a comprehensive overview of DMS, outlining their definition, historical development, core functionalities, system components, types, and emerging trends. The evolution of DMS from simple document repositories to intelligent, cloud-based platforms has significantly transformed how organisations handle information assets. Through functionalities such as document capture, indexing, storage, workflow automation, and secure access control, DMS contribute to greater efficiency, regulatory compliance, and collaboration. Moreover, integrating artificial intelligence and mobile access reflects the growing strategic importance of DMS in supporting digital transformation. Despite numerous advantages, organisations must also be mindful of potential limitations, such as high initial costs, integration challenges, and user adoption issues. By understanding DMS's structural components and trends, businesses can make informed decisions when selecting, implementing, and scaling these systems as part of their broader information strategy.

In the following chapter, we explore the DMS lifecycle in greater detail and examine how IT governance methodologies, particularly ITIL, can support each phase of its implementation and use.

3 DMS lifecycle based on ITIL methodology

3.1 Lifecycle of DMS as a business information system

Implementing DMS represents a significant organisational undertaking with long-term implications for business efficiency, data governance, and digital transformation. While many organisations view DMS primarily as an archival tool, its value enables the structured, secure, and efficient handling of information assets throughout the enterprise. As Abdulkadhim et al. (2015) emphasised, document-related data are essential for operational support, strategic planning, and market responsiveness.

The lifecycle of a DMS—as with any business information system (BIS)—extends beyond initial deployment. It encompasses interconnected phases, from identifying business needs and system selection through implementation to long-term use, optimisation, and eventual system retirement. According to Adam and Sammon (2004), neglecting any phase of this lifecycle can compromise the effectiveness of the entire solution. They argue that companies often focus excessively on implementation while failing to monitor performance during usage, ultimately determining the return on investment.

The lifecycle of DMS closely aligns with established models of BIS lifecycle management, as synthesised by Huang and Yasuda (2016), Sternad Zabukovšek et al. (2020), and Munkelt and Volker (2013). These models generally consist of three major phases:

1. Selection – In this phase, the organisation identifies its functional, technical, and strategic requirements for a document management solution. It includes stakeholder analysis, business case development, market analysis, and vendor evaluation.
2. Implementation – This phase involves system customisation, process alignment, data migration, training, and go-live. It also includes technical setup and the formalisation of document governance policies.
3. Usage and Optimization – The most extended and impactful phase includes stabilisation, continuous support, user training, upgrades, integration with other systems, and, eventually, the phase-out or replacement of the DMS.

Table 1 illustrates a simplified representation of the DMS lifecycle based on the abovementioned models.

Table 1: Key lifecycle phases of a document management system

Lifecycle Phase	Key Focus Areas	Examples of Activities
Selection	Needs assessment, vendor choice	Requirements gathering, project team setup, request for proposals
Implementation	System deployment and process alignment	Training, migration, pilot testing, go-live, policy development
Usage & Optimization	Continuous use, support, improvement, decommission	

As noted by Yu (2005), the completion of implementation should not be regarded as the final objective but rather as the starting point for system utilisation and value creation. Research by Panorama Consulting (2022) shows that 72% of BIS projects are terminated at the go-live stage, resulting in unrealised potential. Organisations must invest in post-implementation evaluation, advanced usage, and long-term process improvement to fully benefit from a DMS.

Given the strategic role of DMS, its lifecycle must be managed with the same rigour and governance as other enterprise information systems. Therefore, it is essential to adopt a structured lifecycle model supported by an appropriate IT governance methodology. In the following sections, we evaluate relevant IT governance frameworks and justify the selection of ITIL as the most suitable foundation for mapping the DMS lifecycle.

3.2 IT governance methodologies and justification for ITIL

As organisations increasingly depend on information systems to support core business processes, applying standardised governance frameworks becomes crucial for managing complexity, reducing risk, and ensuring strategic alignment. Over the past decades, several well-established methodologies for IT governance have emerged, including COBIT, PRINCE2, TOGAF, and ITIL, each with a distinct focus and scope.

COBIT (Control Objectives for Information and Related Technology), developed by ISACA, is a comprehensive framework designed primarily for auditing, control, and compliance within IT environments. It defines a set of domains, processes, and metrics to assess the performance and maturity of IT governance. COBIT is widely used in large and regulated organisations that require formalised procedures and risk controls (ISACA, 2011).

PRINCE2 (Projects IN Controlled Environments) is a process-based methodology for managing all types of projects, including IT implementations. Originating in the UK, it emphasises business justification, structured project phases, precise role definitions, and risk management (Wideman, 2002). Its strength lies in its versatility and focus on project lifecycle control, making it suitable for managing the introduction of new IT systems such as DMS.

TOGAF (The Open Group Architecture Framework) is an enterprise architecture methodology used to design, plan, implement, and manage information systems architecture. TOGAF supports strategic alignment by integrating business, application, data, and technology architectures and is particularly effective in large organisations undergoing digital transformation (Ferlih, 2016).

Despite the strengths of these frameworks, ITIL (Information Technology Infrastructure Library) stands out as the most appropriate methodology for managing the lifecycle of a Document Management System. Initially developed by the UK's Central Computer and Telecommunications Agency (CCTA), ITIL provides a service-oriented approach to IT management, focusing on the entire lifecycle of IT services—from strategy to continual improvement (Adams, 2009).

Unlike COBIT, which focuses on auditing, or PRINCE2, which centres around project execution, ITIL offers a comprehensive view of the service lifecycle. Its five key phases—Service Strategy, Service Design, Service Transition, Service Operation, and Continual Service Improvement—closely reflect the stages of a DMS implementation and usage process.

As Kern (2009) summarised, ITIL's advantages include improved service quality, reduced long-term costs, better communication and workflows, and enhanced adaptability to change. These benefits align directly with the challenges faced during DMS deployment, especially in ensuring cross-functional integration, standardising document workflows, and maintaining long-term operational stability.

The strategic applicability of ITIL to DMS was further validated through comparative analysis. While PRINCE2 and COBIT cover certain relevant domains—such as planning, control, and compliance—ITIL is the only methodology explicitly addressing post-implementation optimisation and continuous service improvement. As shown in Table 2, ITIL covers all five critical categories necessary for DMS lifecycle governance, while the other frameworks lack coverage in areas such as ongoing enhancement and service design.

Given its comprehensive lifecycle perspective, process orientation, and practical alignment with the DMS implementation and usage phases, ITIL has been selected as the most suitable governance framework for this research. In the following

section, we apply the ITIL model to the DMS lifecycle, demonstrating its relevance and effectiveness in supporting strategic, operational, and continuous improvement goals.

Table 2: Comparison of IT governance methodologies for DMS lifecycle

Key Category	COBIT	PRINCE2	ITIL
Project Preparation	✓	✓	✓
Planning and Organization	✓	✓	✓
Strategy and Governance	✓	✓	✓
Service Design and Transition		✓	✓
Continuous Improvement			✓

3.3 DMS lifecycle according to ITIL: model and discussion

Implementing ITIL's service lifecycle model to DMS offers a structured and holistic approach to managing the various stages of DMS implementation and operation. ITIL consists of five interrelated phases—Service Strategy, Service Design, Service Transition, Service Operation, and Continual Service Improvement—each of which can be mapped to specific lifecycle phases of DMS within an enterprise context (Hunnebeck, 2011; Kern, 2009).

Service strategy

The Service Strategy phase plays a fundamental role throughout the entire lifecycle of a DMS. It involves defining the organisational vision, identifying business needs, analysing cost-benefit factors, and developing a strategic plan for the system's introduction and long-term use. In the context of DMS, this phase encompasses both the definition of requirements and the selection of vendors. It ensures that the investment in DMS is aligned with the organisation's goals, regulatory obligations, and digital transformation agenda (Levart, 2012). Strategic planning should include a thorough project charter, timeline, budgeting, and governance structure (Raynes, 2002).

Service design

This phase addresses the architecture, functionality, and processes of the DMS. It includes the design of workflows, classification schemes, metadata models, access control policies, and integration with existing systems. During the requirements and vendor selection phases, organisations must establish detailed service specifications and expectations, ensuring consistency between user needs and the capabilities of the selected system (Sternad Zabukovšek et al., 2020). Service Level Agreements (SLAs), availability planning, information security, and capacity management are key components of this phase (itSMF, 2020).

Service transition

The Service Transition phase focuses on the planning and execution of the implementation. It includes change management, configuration and asset management, release management, and user training. In the DMS lifecycle, this corresponds to system deployment, data migration, pilot testing, and initial training. Organisations must manage risks related to legacy system integration, user resistance, and process gaps (Munkelt & Volker, 2013). Smooth knowledge transfer and stakeholder engagement are essential to ensure a successful go-live.

Service operation

Once the system is live, the focus shifts to ensuring stable operation and responsive user support. The Service Operation phase involves incident and problem management, event monitoring, request fulfilment, and access management. This includes helpdesk support, troubleshooting, change tracking, and user access governance for DMS. Stabilisation is critical at this stage, as users adapt to the new system and any misalignments between expected and actual behaviour are revealed (Rehage, 2006).

Continual service improvement

The final ITIL phase—Continual Service Improvement (CSI)—emphasises the need for regular evaluation and enhancement of DMS functionality and usage. It includes performance monitoring, user feedback collection, process optimisation,

and implementing new features or modules. The Deming cycle (Plan–Do–Check–Act) is often used to guide these improvements (Švarc, 2010). Long-term DMS success depends on the organisation's ability to evolve the system in response to changing business needs, regulatory environments, and technological advancements.

Table 3 presents DMS lifecycle phases regarding ITIL phases.

Table 3: Mapping ITIL categories to DMS lifecycle phases

DMS Lifecycle Phase	Service Strategy	Service Design	Service Transition	Service Operation	Continual Improvement
Needs Definition	✓	✓			
Vendor Selection	✓	✓			
Implementation	✓	✓	✓		
Usage	✓			✓	✓

This alignment demonstrates that the ITIL framework provides complete coverage of the DMS lifecycle, offering a consistent and comprehensive structure for governance and management. While other methodologies may emphasise planning or control, ITIL's unique strength is its attention to post-implementation performance, service quality, and continuous value delivery.

From a practical standpoint, ITIL helps organisations avoid common pitfalls in DMS projects, such as short-term focus on deployment, lack of performance monitoring, and insufficient stakeholder involvement. It encourages long-term thinking, clear role assignments, and measurable service outcomes. As such, ITIL supports DMS implementation and ensures that the system evolves as a living, strategic asset integrated with broader business objectives.

This chapter examined the lifecycle of DMS through the lens of IT governance, focusing on the ITIL framework. It highlighted the three fundamental lifecycle phases of DMS—selection, implementation, and usage—while emphasising that post-implementation performance and continuous improvement are often overlooked. Through a comparative analysis of leading methodologies such as COBIT, PRINCE2, and TOGAF, ITIL emerged as the most comprehensive and practical approach for managing DMS across all lifecycle phases. The alignment of ITIL's five stages—Service Strategy, Service Design, Service Transition, Service

Operation, and Continual Service Improvement—with the DMS lifecycle ensures strategic coherence, operational stability, and long-term value realisation. The discussion underscored the importance of adopting a lifecycle-based governance approach to maximise the effectiveness and sustainability of DMS implementations.

In the next chapter, we identify and analyse the critical success factors (CSFs) that influence DMS implementation across these lifecycle stages.

4 Critical success factors in the implementation and use of DMS

4.1 Understanding critical success factors in business information systems

Critical Success Factors (CSFs) originated in the 1960s as a strategic management approach for identifying key areas that require ongoing attention to ensure organisational success. Rockart (1978) defined CSFs as a limited number of key areas where satisfactory results are essential for a business to thrive. This notion was later refined by Bullen and Rockart (1984), who emphasised that these are areas in which "things must go right" for the organisation to achieve its goals. CSFs are viewed as managerial tools that help decision-makers focus on what matters most and proactively steer the organisation toward its objectives (Boynton & Zmud, 1984).

The CSF framework quickly gained popularity across industries for its practical applicability in strategy formulation, performance measurement, and project management. Over time, the concept was extended into the field of information systems (IS), particularly in the context of large-scale implementations such as Enterprise Resource Planning (ERP) systems (Finney & Corbett, 2007; Ifinedo, 2008). Research in this domain sought to identify and classify those factors that most significantly influence the success or failure of ERP initiatives, especially during the selection and implementation stages (Nah et al., 2001).

Despite its broad adoption, the CSF concept has not been without criticism. Researchers have pointed out several limitations related to the subjectivity and variability of CSF identification. For instance, different studies have produced divergent sets of CSFs based on varying methodologies, industry contexts, or researcher perspectives (Karuppusami & Gandhinathan, 2006; Amoako-Gyampah

& Salam, 2004). This inconsistency complicates the development of universally applicable CSF models and raises concerns about the theoretical robustness of the concept.

Moreover, empirical studies have highlighted that many CSFs identified in literature lack a validated causal relationship with system success. Robey et al. (2002) and Sammon and Adam (2007) questioned whether the so-called "critical" factors are genuinely critical, arguing that existing CSF research often provides descriptive lists without theoretical grounding. Some scholars have also noted the absence of established procedures for identifying CSFs, which can reduce their practical utility and lead to decision-making based on intuition rather than evidence (King & Burgess, 2006; Rahmatian, 1999).

Nevertheless, the CSF approach remains a widely used and valuable framework for supporting complex IS initiatives. Its relevance is particularly evident in ERP projects characterised by organisational change, resource intensity, and technological complexity. Numerous studies have demonstrated that identifying the right CSFs can significantly improve the likelihood of successful implementation and long-term system utilisation (Ram et al., 2013; Maguire et al., 2010; Soja & Paliwoda-Pekosz, 2009).

Given the similarities in implementation dynamics, the CSF framework is increasingly being applied to other business information systems, including DMS. Like ERP, introducing DMS often requires adjustments to workflows, user behaviour, IT infrastructure, and organisational culture. As such, a contextualised understanding of CSFs for DMS is essential for managing the complexity of implementation and ensuring value realisation over the system's lifecycle. In the following section, we examine existing research on CSFs specifically related to DMS and categorise them into key thematic areas.

4.2 CSFs for DMS

While the concept of CSFs has been extensively explored in the context of Enterprise Resource Planning (ERP) systems, its application to DMS is increasingly recognised as equally essential. Although DMS projects may be narrower in scope than full-scale ERP implementations, they similarly require organisational

transformation, process redesign, and user adaptation. Therefore, identifying the CSFs specific to DMS implementation and use is critical for ensuring project success and maximising return on investment.

Several empirical studies have investigated the factors influencing successful DMS adoption. Beheshti et al. (2014) identified twelve CSFs most relevant to DMS projects. These include top management support, effective project management, user training and education, clear strategy and objectives, internal communication, business process reengineering, a well-defined change management plan, vendor support, minimal system customisation, project team expertise, organisational culture, and active involvement of service providers. This list reflects technical and organisational dimensions, indicating that DMS success depends on structural readiness and human-centred change management.

Alshibly et al. (2016) extended this work by categorising thirty-seven CSFs into six broader domains: (1) technological readiness, (2) top management support, (3) training and engagement, (4) resource availability, (5) system-related factors, and (6) organisational environment and culture. This classification offers a holistic view of the multi-layered nature of DMS implementation. For example, technological readiness includes infrastructure and architecture preparedness, while the system-related category encompasses the DMS's usability, integration, and effectiveness.

User-related factors are also emphasised in the literature. Downing (2006) argues that transparent communication, early user involvement, and realistic expectation setting are crucial for mitigating resistance to change. User buy-in is more likely when the new system's benefits are clearly demonstrated—such as faster access to documents, simplified collaboration, better data protection, and time savings. According to Downing, selecting enthusiastic and credible internal champions to support the implementation can help build momentum and spread acceptance across the organisation.

Another critical theme is process orientation. Since DMS directly affects how documents are created, routed, stored, and retrieved, aligning the system with real-world processes is essential. Engaging users in process redesign ensures that the DMS reflects actual workflows and contributes to operational efficiency. Moreover,

user training must go beyond technical instruction and include broader education on the strategic purpose of the DMS and its relevance to organisational goals.

Table 4 presents a synthesised overview of the main categories and examples of DMS-specific CSFs based on the work of Alshibly et al. (2016).

Table 4 Categorization of CSFs for DMS Implementation

Category	Key Factors
Technological Readiness	Architecture, infrastructure, system compatibility, process integration
Top Management Support	Leadership commitment, clear mission, communication, strategic alignment
Training and Engagement	Comprehensive user training, stakeholder involvement, cross-level inclusion
Resource Availability	Financial, technical, and human resources; vendor support
System-related Factors	Usability, system functionality, integration, perceived usefulness
Organisational Environment	Change management, culture, collaboration, alignment with business goals

These findings consistently reinforce the centrality of human and cultural dimensions in DMS implementation. While technical aspects such as system configuration and infrastructure matter, leadership, communication, training, and user inclusion often determine the initiative's overall success. Moreover, the relative importance of individual CSFs may vary depending on the phase of the DMS lifecycle.

In the next section, we examine how these critical success factors relate to the different stages of the DMS lifecycle—selection, implementation, and usage—drawing on the ITIL framework to explore their dynamic roles across the system's evolution.

4.3 CSFs across the DMS lifecycle and key implications

DMS implementation does not occur in a single moment but unfolds across several stages, each with its challenges and requirements. Understanding how Critical Success Factors (CSFs) vary in importance across the DMS lifecycle is essential for effective project planning, risk mitigation, and performance monitoring. The ITIL framework defines service lifecycles in terms of strategy, design, transition,

operation, and continual improvement (Hunnebeck, 2011); the DMS lifecycle can be broadly divided into three practical phases: selection, implementation, and usage.

Within each phase, specific CSFs take on greater or lesser significance. For example, leadership support, strategic alignment, and process awareness are critical during the selection phase. These elements ensure that the decision to adopt a DMS is embedded in the broader organisational strategy, with clear expectations about outcomes and scope (Kern, 2009; Raynes, 2002).

In the implementation phase, the focus shifts toward effective project management, training, change management, and technological readiness. This includes setting up infrastructure, configuring the system, migrating data, and preparing users for new processes. Communication, end-user involvement, and the project team's composition play critical roles in ensuring that implementation does not encounter resistance or misalignment (Munkelt & Volker, 2013; Downing, 2006).

The usage phase encompasses the ongoing operation and refinement of the DMS. Here, factors such as organisational culture, user engagement, system usability, and continuous training become central. The system's long-term success depends on its integration into daily workflows, user satisfaction, and adaptability to future changes. Alshibly et al. (2016) emphasise that continued support from management, investment in user competence, and a culture encouraging innovation are all key to sustained DMS effectiveness.

Table 5: Mapping of CSFs Across the DMS Lifecycle (ITIL Perspective)

CSF	Selection (Strategy)	Implementation (Design & Transition)	Usage (Operation & Improvement)
Top Management Support	✓	✓	
Organisational Culture	✓	✓	✓
Time Efficiency	✓	✓	
Cost Efficiency	✓		✓
Process Orientation	✓	✓	✓
Project Team / Support		✓	✓

Table 5 illustrates the mapping of selected CSFs across the DMS lifecycle phases, following the ITIL-aligned structure of service strategy (selection), service design and transition (implementation), and service operation and improvement (usage).

This matrix highlights that while some CSFs—such as organisational culture and process orientation—are relevant throughout the entire lifecycle, others (e.g., cost efficiency) may be more crucial in specific phases. Such differentiation enables more precise resource allocation and targeted interventions by project managers and organisational leaders.

The implications of this lifecycle-based CSF mapping are twofold. First, organisations must avoid the common pitfall of applying a one-size-fits-all approach to success factors. Instead, they should dynamically align CSFs with the maturity and phase of their DMS project. Second, early identification and proactive management of these factors are essential to mitigate risks and maximise the value of the DMS investment.

Furthermore, the influence of CSFs is not isolated from the organisational context. Factors such as enterprise maturity, available competencies, and change readiness can significantly modulate how success factors manifest in practice. Therefore, in the subsequent chapter, we turn to the concept of organisational maturity models, exploring how maturity levels interact with DMS lifecycle phases and CSFs to influence the trajectory and outcomes of implementation efforts.

5 Empirical research on the impact of CSFs on the DMS lifecycle

5.1 Research focus and hypotheses

The previous chapters provided a conceptual and theoretical foundation for understanding the role of CSFs in the implementation and long-term use of DMS. Building on these insights, this chapter presents an empirical study focused specifically on examining the impact of selected CSFs on the various phases of the DMS lifecycle—selection, implementation, and usage. This focus aligns with the ITIL-based lifecycle model introduced earlier and seeks to identify which factors most significantly influence DMS success at different stages.

The empirical part of this monograph is based on the doctoral dissertation by Jordan (2023), which explores the relationships between critical success factors, organisational maturity, and the lifecycle of DMS. In this monograph, we focus specifically on the impact of CSFs on the DMS lifecycle.

The research addresses the hypothesis (H1) that CSFs statistically significantly influence the effectiveness of DMS implementation and usage across the lifecycle. The aim is to operationalise this general hypothesis through a model that captures the relationships between individual CSF categories and each phase of the DMS lifecycle. The structure of the model and the formulation of hypotheses are adapted from Jordan (2023), who proposed an integrated research model addressing multiple dimensions of DMS success.

The following dimensions of CSFs were selected based on the prior literature review (see Chapter 4) and validated constructs in similar studies of ERP and information systems adoption (Beheshti et al., 2014; Alshibly et al., 2016; Ifinedo, 2008). Each dimension was measured using multiple items on a Likert scale in the survey instrument:

- Top Management Support (SUPP)
- Organizational Culture (CULT)
- Time Efficiency (TIME)
- Cost Efficiency (COST)
- Process Orientation (PROC)
- Project Team and Support (TEAM)

Each CSF was hypothesised to influence at least one of the three DMS lifecycle stages, namely:

- Selection (SEL)
- Implementation (IMPL)
- Usage (USE)

This led to the formulation of the following sub-hypotheses:

H1a: CSFs significantly impact the selection phase of the DMS lifecycle.

H1b: CSFs significantly impact the implementation phase of the DMS lifecycle.

H1c: CSFs significantly impact the usage phase of the DMS lifecycle.

The research model and hypotheses were tested using partial least squares structural equation modelling (PLS-SEM), which is well suited for exploratory studies with relatively complex models and moderate sample sizes (Hair et al., 2017). The goal of this empirical analysis is not only to validate the theoretical assumptions but also to derive practical recommendations for organisations planning to adopt or optimise DMS.

In the following section, the methodological approach used in the study is explained in greater detail, including the design of the survey instrument, data collection process, and sample characteristics.

5.2 Research Methodology

The empirical study was a quantitative research project using a structured online questionnaire to collect data on perceptions of critical success factors (CSFs) and their impact on different phases of the Document Management System (DMS) lifecycle. Given the objective of testing a structural model and the need to identify statistically significant relationships among latent constructs, a positivist research paradigm was applied.

The survey instrument was developed based on validated items from previous studies focused on ERP, EDMS, and information system success factors (Beheshti et al., 2014; Alshibly et al., 2016; Ifinedo, 2008). It included items measuring six CSF dimensions—top management support, organisational culture, time efficiency, cost efficiency, process orientation, and project team/support—and three outcome constructs representing the DMS lifecycle phases: selection, implementation, and usage.

Each item was measured on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The questionnaire was pre-tested with a small group of experts to ensure clarity and content validity. Minor linguistic and layout modifications were made before full deployment.

The data was collected using the 1KA online survey platform (1KA, 2023), enabling efficient distribution and data capture. The target population consisted of employees in Slovenian organisations that had implemented or were in the process of implementing a DMS. Respondents included IT professionals, project managers, administrative personnel, and business users with direct experience using or managing DMS solutions.

A total of 146 valid responses were obtained, providing a sufficient sample size for exploratory factor analysis (EFA) and partial least squares structural equation modelling (PLS-SEM), both of which are robust to moderate sample sizes (Hair et al., 2017). Descriptive statistics of the sample show a balanced representation of organisation sizes, sectors, and respondent roles, supporting the generalizability of the results within the studied context.

The data analysis proceeded in two stages. First, exploratory factor analysis (EFA) was conducted to examine the dimensionality and internal consistency of the measurement scales. Factors with eigenvalues greater than one and factor loadings above 0.6 were retained. The reliability of each construct was assessed using Cronbach's alpha and composite reliability (CR), with thresholds of 0.7 indicating acceptable reliability.

Second, PLS-SEM was used to test the structural model and evaluate the relationships between CSFs and the lifecycle phases of DMS. The method was chosen due to its suitability for predictive modelling, tolerance of non-normal data, and ability to handle reflective constructs with limited indicators (Hair et al., 2017; Henseler et al., 2009). The bootstrapping technique (5,000 resamples) was applied to assess the statistical significance of the path coefficients, and model fit was evaluated using standard PLS criteria such as R^2 values, average variance extracted (AVE), and the Fornell-Larcker criterion for discriminant validity.

The following section presents the results of the measurement and structural model assessment, highlighting which CSFs had statistically significant effects on the different phases of the DMS lifecycle.

5.3 Measurement and structural model assessment

The evaluation of the empirical model proceeded in two phases: first, by assessing the quality of the measurement model (i.e., the reliability and validity of the constructs), and second, by estimating the structural model to test the hypothesised relationships between CSFs and the phases of the DMS lifecycle.

The measurement model was evaluated using several established criteria based on recommendations by Hair et al. (2017). All latent constructs were specified as reflective and assessed through multiple indicators derived from the survey.

Internal consistency reliability was confirmed through Cronbach's alpha and composite reliability (CR). All constructs exceeded the minimum threshold of 0.7, indicating acceptable reliability. Convergent validity was evaluated using average variance extracted (AVE), with all AVE values above the recommended 0.5 threshold, indicating that the constructs adequately explained the variance of their indicators.

Discriminant validity was assessed using the Fornell–Larcker criterion, which requires that each construct's AVE's square root be more significant than its correlations with other constructs. This condition was met for all constructs, supporting the discriminant validity of the measurement model.

Following the confirmation of measurement quality, the structural model was tested using Partial Least Squares Structural Equation Modeling (PLS-SEM). Path coefficients between CSF constructs and the three DMS lifecycle stages (selection, implementation, and usage) were estimated, and statistical significance was determined through bootstrapping with 5,000 subsamples.

The results partially confirmed the overarching hypothesis (H1), showing that certain CSFs had statistically significant effects on specific phases of the DMS lifecycle while others did not. Key findings include:

- Top management support (SUPP) and organisational culture (CULT) significantly positively affected the selection phase.
- Process orientation (PROC) and project team/support (TEAM) were strongly associated with successful implementation.
- Cost efficiency (COST) was found to significantly influence the usage phase, while time efficiency (TIME) showed no significant effect across phases.

The explained variance (R^2) was moderate across the three dependent constructs: R^2 for Selection: 0.37, R^2 for Implementation: 0.41, and R^2 for Usage: 0.29.

These values indicate that the model explains a substantial proportion of the variance in DMS lifecycle outcomes, especially during the implementation phase. The effect sizes (f^2) of significant paths ranged from small to medium, further supporting the relevance of selected CSFs.

Table 6 summarises the structural path results for hypothesis H1 and its subcomponents.

Table 6: Summary of structural model results for hypothesis H1

Path	β Coefficient	p-Value	Significance
SUPP → Selection	0.218	0.014	✓
CULT → Selection	0.194	0.027	✓
PROC → Implementation	0.256	0.004	✓
TEAM → Implementation	0.241	0.011	✓
COST → Usage	0.213	0.019	✓
TIME → All Phases	n.s.	> 0.05	✗

These findings confirm the context-dependent nature of CSFs, illustrating that their influence varies across different lifecycle stages. The following section discusses these results in more detail, comparing them with insights from previous literature and highlighting practical implications for organisations planning DMS implementations.

6 Discussion

The results of this study provide strong empirical support for the notion that CSFs play different roles across the phases of the DMS lifecycle. As hypothesised, several CSFs had statistically significant effects on the success of the selection, implementation, and usage phases. This reinforces the importance of adopting a dynamic and lifecycle-sensitive perspective when planning, deploying, and sustaining DMS solutions.

In the selection phase, the significance of top management support (SUPP) and organisational culture (CULT) underlines the strategic nature of the early decision-making process. Similar to findings in ERP literature (e.g., Ifinedo, 2008; Finney & Corbett, 2007), leadership commitment and a supportive culture are necessary to ensure that the chosen system aligns with the organisation's values, needs, and long-term goals. The culture factor is particularly relevant in environments where hierarchical communication, digital readiness, and openness to change vary widely between departments or user groups.

Process orientation (PROC) and project team/support (TEAM) were critical in the implementation phase. These findings align with Beheshti et al. (2014), who argue that process-based thinking and competent, interdisciplinary teams are fundamental for configuring systems to reflect actual workflows. Organisations that invest in training, coordination, and internal support networks tend to experience smoother transitions and fewer post-implementation issues.

The usage phase was primarily influenced by cost efficiency (COST). This suggests that once the system becomes operational, perceptions of ongoing value—mainly related to cost savings and performance—become key to sustained usage. These findings support Sprehe's (2004) view that long-term adoption is contingent on demonstrable benefits, which must be periodically communicated to users. Interestingly, time efficiency (TIME) did not have a statistically significant impact on any lifecycle phase. This contradicts prior assumptions and warrants further investigation. One explanation may be that perceived time savings are often intangible or difficult to attribute directly to the DMS, especially in complex or multi-system environments.

These results emphasise the need for a phase-aware CSF strategy. It is insufficient to adopt a static checklist approach to success factors. Instead, CSFs should be continuously reassessed and prioritised based on the evolving phase of the project and the organisation's maturity. For example, strategic alignment may be essential in the early stages, while user empowerment and performance monitoring gain importance during operational use.

This study contributes to the theoretical advancement of DMS research by linking CSFs to lifecycle phases using a structured model inspired by the ITIL framework. Applying PLS-SEM allows for a more nuanced understanding of causal relationships and offers a replicable approach for future researchers. The findings also provide practical guidelines for project managers, system integrators, and organisational leaders seeking to improve DMS adoption outcomes by identifying which factors matter most—and when—organisations can allocate resources more effectively and avoid common implementation pitfalls.

As with any empirical study, several limitations should be acknowledged. The sample was limited to organisations in Slovenia, which may influence generalizability due to cultural, legal, or technological differences. Furthermore, the model did not include potential mediating or moderating variables, such as organisational size, digital maturity, or system complexity. Future research could expand on these findings by integrating maturity models (e.g., CMMI, BPMM) and sustainability dimensions, thereby exploring how readiness levels influence the strength or presence of CSFs over time.

In conclusion, the study confirms that CSFs should not be viewed as static or universally applicable. Their influence depends on the timing, context, and alignment with the organisation’s goals and capacities. The next chapter further explores this dynamic by introducing a maturity-based view of DMS implementation, providing an additional lens for understanding outcome variability.

7 Conclusion

This chapter concludes the monograph's empirical part by summarising the research's key findings and contributions, highlighting its theoretical and practical implications, and outlining limitations and future research directions.

The study explored the relationship between CSFs and the lifecycle phases of DMS, focusing on hypothesis H1. Using a PLS-SEM approach on a sample of 146 respondents, the analysis confirmed that the influence of CSFs is not uniform across the DMS lifecycle. Specifically, top management support and organisational culture significantly affected the selection phase; process orientation and project team competence influenced implementation, and cost efficiency was a key factor during system usage.

These findings support the central assumption of the research—that CSFs must be evaluated and managed in a phase-specific manner. The mapping of CSFs to the DMS lifecycle using the ITIL framework provided a structured approach to identifying which factors are most critical at each stage. This has important implications for organisations seeking to optimise DMS planning, deployment, and long-term adoption.

From a theoretical perspective, the study contributes to the growing literature on DMS implementation by offering an integrated model that links CSFs with lifecycle phases, a topic that has received limited attention compared to ERP systems. It demonstrates the value of combining insights from CSF research, lifecycle management, and IT governance frameworks such as ITIL. Moreover, it validates the utility of PLS-SEM in capturing the complexity of IS success dynamics in mid-sized organisational samples.

Nevertheless, the study has certain limitations. The sample was drawn exclusively from Slovenian organisations, which may limit the generalizability of the findings to other national or cultural contexts. In addition, the model did not account for potential moderating variables such as organisational size, digital maturity, or DMS type. Finally, only one dimension of the broader research model was examined (H1), while other factors—such as sustainability orientation or maturity level—were left for future research.

Future studies could expand the model by incorporating and testing these additional dimensions in cross-cultural settings. Longitudinal studies may also offer more profound insights into how the impact of CSFs evolves and interacts with organisational learning and system maturity.

In conclusion, this study highlights the importance of contextual and lifecycle-based approaches to DMS implementation success. By recognising that different CSFs matter at various stages, organisations can tailor their strategies, allocate resources more effectively, and increase the likelihood of achieving operational efficiency and strategic alignment through their DMS initiatives.

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