

Challenges in ERP System Transitions from On-premises to cloud: Migrating from Unibis to Microsoft Dynamics 365 Business Central

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This thesis investigates the organizational, technical, and process-related implications of migrating from the legacy Unibis system to Microsoft Dynamics 365 Business Central. While ERP projects are often perceived as technical endeavors, the findings of this study demonstrate that successful migration requires a broader organizational transformation involving governance structures, business process redesign, user readiness, and knowledge management. Through a qualitative case study supported by semi-structured interviews and a review of ERP implementation literature, the research identifies key challenges associated with the migration, including limited end-user involvement, insufficient top-management support, inadequate organizational readiness, and a lack of structured change-management practices.

The study also identifies several critical success factors that influence migration outcomes. These include active end-user participation, strong managerial commitment, effective team composition, cross-functional cooperation, robust testing and start-up environments, and early attention to data analysis and conversion. Based on these insights, the thesis proposes five preparation actions to support the transition from Unibis to Business Central: establishing change management and governance early, evaluating and standardizing business processes, prioritizing knowledge transfer and training, conducting early data and integration assessments, and utilizing phased implementation and pilot projects to reduce risk.

Overall, the research concludes that the Unibis–Business Central migration should be understood not as a technical upgrade but as a comprehensive modernization initiative. The findings contribute to the broader understanding of ERP migration in SMEs by highlighting the interplay between organizational readiness, legacy system dependencies, and cloud-based ERP adoption. The thesis also outlines research limitations and suggests directions for future studies, including ERP governance in cloud environments, knowledge-transfer practices in legacy contexts, and comparative analyses of migration strategies across organizations.

Key words: ERP, implementation, on-premises, cloud

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1 Introduction

Enterprise Resource Planning (ERP) system implementation is widely recognized as a complex, high-risk, and high-cost endeavour [1]. It affects not only an organization's technological infrastructure but also its core business processes, support functions, organizational structure, and the roles and responsibilities of personnel. Implementing or replacing an ERP system can disrupt established workflows, introduce substantial technical and organizational challenges, and demand significant change management efforts. These risks are increased when transitioning from an existing legacy system to a modern platform, especially in environments where systems have been heavily customized or in use for a long period [2].

Case Company is an Australian wholesale trade and distribution business. The company is in a phase of rapid growth, primarily through the acquisition of other businesses. As a result of these acquisitions, the organization has inherited multiple ERP systems, each with unique configurations, functionalities, and limitations. Due to this, Case Company would like to evaluate the possibility of replacing its existing ERP system with a goal to potentially reduce the number of ERP systems in use across the organization. As with many enterprises, consolidating ERP platforms is seen to improve efficiency, reduce maintenance costs, and enhance data consistency across business units.

In this context, the goal of this thesis is to explore the challenges associated with migrating from one ERP system to another and to identify the key factors that lead to a successful ERP implementation. By combining findings from existing literature and insight from interviewed professionals with practical knowledge and experience, the research aims to provide an understanding of the technical, organizational, and human aspects of ERP system transitions. The findings can be used to support planning for a potential migration from the current Unibis system to Microsoft Dynamics 365 Business Central.

1.1 Research Questions

The thesis aims to explore the transition from legacy on-premises ERP system to modern cloud-based solutions. The focus of the study is on understanding the technical and organizational factors that have an impact on the success of such migration. This study uses both theoretical and real-world perspectives gathered through interviews with ERP professionals, and is guided by the following three questions:

RQ 1: What challenges are involved in replacing an on-premises ERP system with a cloud-based ERP system?

RQ 2: What are the factors of successful migration?

RQ 3: How can these findings be used to prepare migration from Unibis to Microsoft Dynamics 365 Business Central?

The first question investigates the technical, organizational, and operational barriers that organizations typically face during ERP transitions. It focuses on risks related to system integration, data migration, user resistance, infrastructure readiness, and vendor dependencies.

The second question seeks to identify the enablers that contribute to a successful ERP implementation. These include best practices from literature as well as insights from practitioners regarding change management, training, planning, and stakeholder engagement.

The third and last question applies the findings from *RQ1* and *RQ2* to a case migration scenario. It explores how identified challenges can be mitigated and how success factors can be leveraged to support a transition from the legacy Unibis system to a modern cloud-based ERP platform.

1.2 Thesis Structure

The overall research approach and methodology are presented in Chapter 2. The chapter outlines the qualitative research design, which combines a literature review and semi-structured interviews with ERP professionals. It describes how relevant academic and industry sources were selected, as well as how interview participants were identified, and data was analysed. This mixed-methods approach allows for a comprehensive understanding of the topic by integrating theoretical knowledge with practical experience.

Chapter 3 introduces the concept of ERP systems. It defines what ERP system is, what its purpose is and what are its key functionalities that support business operations. This chapter will also describe briefly the history of ERP systems, how their lifecycles look, and the two deployment models and their key differences.

After this, the thesis will move on to conducting of the literature review in Chapter 4. The chapter will the research method and results on common risks and obstacles that organizations

face as well as success factors that have been identified in prior research. This chapter aims to find answers to RQ1 and RQ2 from the literature.

Chapter 5 presents interview process and its findings. Interviews were conducted with professionals that have hands-on experience with ERP systems, implementations, and migrations. The results presented here will focus mainly on RQ1 and RQ2.

Chapter 6 compares findings from literature and the interviews, presents the systems in question and answers to RQ3 based on findings from previous chapters. This chapter uses both literature and interview findings to identify and answer the research question. It applies research findings to specified case scenario. This chapter proposes practical preparation steps, detailing how Case Company should prepare for Unibis-Business Central migration.

The thesis concludes with Chapter 7, which summarizes the key findings from the study. It reflects on the research limitations and provides suggestions for future research. The final chapter considers the implications of the study for organizations planning similar migrations and discusses areas where further investigation could yield valuable contributions to ERP system research and practice.

2 Research Design

This chapter outlines the overall research strategy and methodology used in the thesis. It describes the process followed to collect and analyse data, and the rationale behind the chosen methods. Since the aim of this thesis is both explanatory and interpretive, the research adopts a qualitative approach that relies on combination of literature review and semi-structured interviews.

2.1 Environment

In order to understand the context of this research, it is essential to define the environment in which the study has been conducted. This begins with a brief introduction to Case Company and the operational challenges it faces. After introduction, the thesis outlines the specific problem the company is encountering with its current ERP systems. This section also clarifies the research focus and what the study aims to answer. The context of this section serves as the foundation for evaluating ERP migration risks and success factors.

Case Company is an Australian wholesale trade and distribution business that offers a comprehensive one-stop sourcing and supply solution. The company is in a phase of rapid growth, primarily through the acquisition of other businesses. As a result of these acquisitions, the organization has inherited multiple ERP systems, each with unique configurations, functionalities, and limitations.

In an effort to centralize and streamline its operations, Case Company has initiated a long-term strategy to migrate acquired businesses onto a smaller number of standardized ERP platforms. However, at the time of writing, the company is still operating three distinct ERP systems, all of which require ongoing maintenance, support, and licensing costs. This situation creates technical and operational complexity and limits the potential for data integration, process standardization, and cost efficiency.

The purpose of this thesis is to provide a comprehensive overview of the risks and success factors associated with ERP implementation and migration. By comparing the characteristics of the two different ERP deployment models, the research aims to identify which systems could potentially be phased out and to support future decision-making regarding system consolidation within Case Company.

2.2 Data Collection

This thesis employs two primary data collection methods: (1) a literature review of research related to ERP systems and (2) semi-structured interviews with professionals involved in ERP implementation projects. The purpose of this dual approach is to build an understanding of existing academic knowledge while also capturing real-world experiences and perspectives on ERP migrations.

2.2.1 Literature review

The foundation of this thesis is established through a structured literature review designed to identify academic research on ERP systems, their implementation, migration challenges, and success factors. Two academic databases, ScienceDirect and IEEE Xplore, were selected as the primary sources. Both provide peer-reviewed research across relevant fields such as computer science, information systems, and engineering. Initial searches confirmed that both databases contain a substantial number of publications relevant to the thesis topic.

The literature review begins by defining ERP systems, their purposes, and the various deployment models available. Differences between these deployment models are also examined to establish a conceptual baseline. Building on this foundation, the review then explores documented ERP implementation challenges and success factors. The detailed methodology and analytical approach used in the literature review are presented in Chapter 4.1.

2.2.2 Interviews

To complement the literature review, empirical data was collected through semi-structured interviews with individuals actively engaged in ERP implementation projects. The purpose of this was to gain practical insights, gather first-hand experiences, and incorporate context-specific knowledge. This data complements and deepens the understanding gained from literature review as interviews offer the opportunity to access unique perspectives, professional reflections, and nuanced observations that may otherwise be left out in the academic literature.

Particular emphasis was placed on interviewing employees of Company X to capture the organization's internal perspective on a potential ERP migration. This approach situates the findings within the practical context of the case organization and highlights company-specific

expectations, concerns, and readiness related to a transition from Unibis to Microsoft Dynamics 365 Business Central.

A qualitative research approach was applied by using a semi-structured interview format. This method allows for a consistent structure across interviews through predefined questions and thematic areas, while still giving interviewees the freedom to elaborate and bring in new ideas. This flexible structure is useful in exploratory research where the goal is to uncover underlying issues, motivations, and success factors. The interview process, participant profiles, and analysis methods are described in more detail in section 5.1.

3 ERP System

An Enterprise Resource Planning (ERP) system is software solution that is designed to collect, record, integrate, manage, and deliver data and information across all functional areas of an organization. It can be extended to include parties outside the organization and is key element of an infrastructure that delivers a solution to the business. [3]

ERP systems are typically structured as integrated software packages built on a common database. This allows organizations to streamline workflows, eliminate data silos, and gain holistic view of business operations. [4], [5] Each ERP system is composed of multiple functional modules that reflect the departmental structure of the enterprise. [5]

Additionally, ERP systems can extend beyond internal departments to include external stakeholders such as suppliers and customers. This integration promotes broader supply chain integration and collaboration. [3]

Each ERP system typically consists of modular components that reflect the functional structure of the enterprise. For example, separate modules may be used for inventory management, accounting, payroll, procurement, or customer relationship management (CRM), all interacting within a shared ecosystem. [5]

3.1 History of ERP systems

The development of ERP systems has happened gradually and shaped by the evolving needs of businesses and advancements in information technology. The origins of ERP can be tracked back to the 1970s, with the emergence of its predecessor Material Requirements Planning (MRP) systems [4], [6]. These early systems were mainly developed to support manufacturing organizations by calculating the materials and components needed for production. These calculations were based on forecasted demand and inventory levels. Emerging of MRP systems marks a shift from manual planning methods to automated scheduling and inventory control processes. [6]

During 1980s, MRP systems evolved into Manufacturing Resource Planning (MRP II) systems due to businesses growing in complexity. MRP II extended its predecessor beyond material planning by incorporating additional functions such as capacity planning, shop floor control, quality management, and financial management [6]. This development reflected on companies increased need for integrating production planning with broader operational and

financial activities. MRP II also introduced the concept of cross-functional coordination and provided companies with a broader view of manufacturing operations.[6]

ERP system as we know it today did not emerge until early 1990s as organizations sought to unify their business processes and data flows across all departments [6]. The main difference between ERP and its predecessors is that it covers the operations of the whole organization and supports all of the key business processes at the various business functions, whereas earlier systems focused on manufacturing and inventory related functions. Major advancement that made this development possible was the use of centralized database architecture. This made it possible for companies to share real-time data across different functions and departments, which in turn improved data consistency, streamlined workflows and enhanced decision-making. Furthermore, ERP solutions provided the infrastructure to reduce redundancy, eliminate data silos and promote collaboration across the organization [7].

ERP systems have continued to evolve over the past few decades. It has particularly been affected by the rise of cloud computing [6], [8]. Because of it, modern ERP solutions are no longer restricted to on-premises installations and are more often delivered through Software as a Service (SaaS) models [2]. This offers organizations greater scalability, accessibility, and cost-efficiency [5]. Movement towards cloud-based ERP systems has made them also more accessible for small and medium-sized enterprises (SMEs) that previously lacked the resources to implement large-scale ERP systems.

3.2 ERP Life-cycle

The ERP life-cycle refers to the various stages an ERP system undergoes throughout its lifespan within an organization. Understanding these phases is essential for managing ERP systems effectively, anticipating critical transitions and planning for both short- and long-term system needs. According to Esteves and Pastor, the life-cycle can be divided into six key phases which are adoption decision phase, acquisition phase, implementation phase, use and maintenance phase, evolution phase and retirement phase. [8], [9]

The adoption decision phase involves the organization recognizing the need for an ERP system. This includes evaluating business requirements, identifying process inefficiencies and determining whether ERP can support strategic objectives. This phase is followed by the acquisition phase in which the organization selects suitable ERP vendor and deployment model and prepares for implementation. [6]

Third phase is the implementation phase which is often the most resource-intensive and complex part of the life-cycle. This is the part where ERP project fails or succeeds. The phase includes activities such as business process re-engineering, system configuration, data migration, end-user training and change management. Once the system is operational, the ERP enters the use and maintenance phase. This forth phase activities include supporting daily business operations and receiving regular updates, minor customizations and user support. [6]

As the organization evolves, so has to its ERP system. This leads into the next phase which is evolution phase. This phase is where new functionalities may be added, integrations extended, and modules upgraded to meet changing business needs. Technological advancements and shifts in organizational strategy often drive this phase, as companies seek to adapt their ERP platforms to remain competitive.[6]

Eventually, every ERP system reaches its retirement phase. This occurs when the system is no longer able to adequately support the business due to technical limitations, outdated architecture, lack of vendor support, or misalignment with modern business processes.[8] In many cases, the ERP is replaced either by a newer version of the same system or by a completely different solution. The retirement phase can also be prompted by the emergence of disruptive technologies, such as cloud-based ERP platforms, that offer greater scalability, lower maintenance costs, or improved functionality. [6], [9]

According to research by Demi and Haddara [6], cloud-based ERP systems may exhibit longer life-cycles than their on-premises counterparts, due to more frequent updates and better adaptability to changing business environments. Interestingly, the retirement planning period for cloud ERP solutions is often shorter than that of traditional systems, likely because cloud systems are more modular and easier to transition between, allowing for faster system replacement and modernization.

One particularly important thing to note is that the retirement of an ERP system is not solely a technical decision. It involves organizational, social, and strategic considerations like user adaptation, business continuity, cost-benefit analysis, and change management. As such, effective planning for each phase is critical for maximizing the long-term value and sustainability of ERP investments. [6]

3.3 Deployment Models

ERP system can be deployed two ways; as on-premises system or in cloud as System as a Service (SaaS). This section dives into these two deployment models, describes their key areas and key differences. We will start with on-premises model, move onto cloud-based one, and then review how these two differ from each other.

3.3.1 On-premises

Traditionally, ERP systems were implemented as on-premises, meaning the software and its associated data were hosted locally within the organization's own IT infrastructure. These systems were treated as capital investments, requiring the purchase of licenses, servers, and dedicated IT support staff. [10], [11]

While on-premises solutions offer full control over customization, security, and performance, they come with high initial implementation costs, significant infrastructure demands, and infrequent, costly update cycles. Organizations are solely responsible for maintenance, backups, and system upgrades. This model can also lead to vendor lock-in and high complexity if the system is heavily customized. [2], [10]

Despite these limitations, on-premises ERP still stays relevant for companies with strict data sovereignty requirements or limited internet connectivity. For example organizations operating in highly regulated sectors, or in regions where reliable cloud infrastructure is not yet available, may continue to rely on locally hosted systems to maintain full control over their data, ensure compliance with jurisdiction-specific regulations, and safeguard operational continuity. [10]

3.3.2 Cloud-based

Technological advancements in cloud computing have led to a growing shift toward cloud-based ERP, particularly through the Software as a Service (SaaS) model. The most important disparities between ERP in SaaS and installed in-house ERP applications are, that ERP in SaaS is accessed through Internet.[2], [3]

Cloud ERP significantly reduces the infrastructure burden for the customer. The vendor is responsible for hosting, system maintenance, security, data backups, and software updates. These systems are typically offered on a subscription basis, with fees charged per user or per

usage period. This cost model allows for flexible scaling as business needs change and avoids the large upfront costs associated with on-premises deployment. [2], [12]

SaaS ERP systems offer several advantages. They are faster to implement and roll-out, they get updated frequently, internal IT workload decreases, they are more accessible, and much easier to integrate with modern applications and APIs. Additionally, they usually have built-in analytics and reporting capabilities. [2], [10], [13]

According to Johansson and Ruivo [5], the value propositions of SaaS-based ERP systems fall into ten key categories: cost, security, availability, usability, implementation speed, ubiquity, flexibility, compatibility, analytics, and adherence to best practices. Of these, cost-efficiency, high system availability, and data security were identified as the most influential factors in the decision to adopt cloud ERP. [3], [12]

While security and confidentiality are valid concerns given that sensitive organizational data is handled by external party, these risks are often cited as barriers to cloud adaptation. However, cloud providers typically employ robust security protocols and industry-standard compliance measures to mitigate such concerns.[3]

3.3.3 On-premises versus cloud-based ERP: key differences

Cloud-based ERP offers several advantages over traditional on-premises solutions. These include lower implementation and maintenance costs, increased scalability, improved system availability, and more frequent and less disruptive updates. [2], [10] Regular updates ensure that organizations stay technologically current, allowing them to respond more effectively to changes in market conditions and customer needs. [2], [13]

According to explanatory interviews conducted by Johansson and Ruivo [5], the value propositions of ERP systems delivered through the Software-as-a-Service (SaaS) model can be grouped into ten key factors: cost, security, availability, usability, implementation speed, ubiquity, flexibility, compatibility, analytics, and adherence to best practices. [12]

One of the most significant differences between SaaS-based ERP and traditional on-premises ERP is the cost structure [2], [12]. On-premises ERP solutions are treated as capital investments, with organizations purchasing the software and hardware infrastructure outright. These systems involve high initial implementation costs and expensive, often infrequent updates. In contrast, cloud-based ERP operates on a subscription-based model, where the cost

scales with usage. This allows businesses to align their ERP expenses more closely with operational needs. Additionally, updates in cloud ERP systems are more frequent, easier to deploy, and significantly cheaper, enabling companies to stay technologically current without major financial outlays. [2], [3], [10]

Security and confidentiality of business data were raised as significant concerns by the experts interviewed. Because cloud-based ERP systems involve third-party service providers managing sensitive company information, users often express apprehension regarding data privacy and vendor trustworthiness. Nonetheless, many providers offer high-level security protocols, monitoring, and compliance frameworks to mitigate these concerns. [3], [5]

Availability emerged as one of the most critical factors for ERP delivered via SaaS. Cloud ERP systems are accessible from any location, provided there is a stable and reliable internet connection. This global accessibility enhances operational continuity and supports mobile or distributed workforces.[2], [3], [5]

The experts also emphasized usability, ubiquity, and flexibility as important drivers of cloud ERP adoption. Modern SaaS solutions are generally more user-friendly and easier to integrate with other enterprise applications than their on-premises counterparts. Their accessibility from various devices further supports a flexible and mobile workforce. The scalability of cloud services allows organizations to dynamically adjust their ERP capabilities based on current needs, optimizing both performance and cost-efficiency.[3], [12]

In terms of implementation, cloud-based ERP systems are typically faster and less complex to deploy. As the SaaS model supports short development cycles, testing, and proof-of-concept validations, the roll-out process is faster. Moreover, the responsibility for implementation risk shifts from the customer to the provider which lowers the risk burden for adopting organizations.[2], [3]

Compatibility is another advantage of cloud ERP systems as they tend to integrate more easily with a wide range of external systems and platforms. This reduces technical barriers to broader digital transformation efforts. Moreover, SaaS-based ERP solutions often come equipped with integrated analytics tools, enhancing visibility, supporting data-driven decision-making, and reinforcing adherence to industry best practices. [2], [3], [12]

Table 1: Key Differences of On-Premises and cloud ERP [2], [3], [5], [12]

Aspect	On-Premises ERP	Cloud-Based ERP (SaaS)
Deployment	Installed on local servers	Hosted on vendor's cloud infrastructure
Cost Model	One-time license, upfront investment	Subscription-based, operational expense
Maintenance	Handled by in-house IT	Managed by the service provider
Updates	Manual, infrequent, costly	Automatic, frequent, low-disruption
Accessibility	On-site access only	Accessible anywhere with internet
Scalability	Hardware-constrained	Scales easily with business growth
Customization	Highly customizable	Configurable with limited core changes
IT Resource Demand	High internal workload	Lower internal burden
Integration	May require custom connectors	Supports modern APIs and third-party tools
Security Responsibility	Organization's responsibility	Shared with provider

3.4 Summary

Overall, among all value propositions, cost-efficiency, data security, and system availability were highlighted by users as the most influential factors when considering the adoption of ERP systems in a cloud-based SaaS model [12]. These considerations reflect both practical operational priorities and broader organizational concerns related to risk, performance, and long-term sustainability.

At the same time, ERP systems continue to serve as a foundational digital infrastructure for modern enterprises. By centralizing business processes and enabling integrated, enterprise-wide data access, they support improved productivity, reduced operational costs, and more informed decision-making across organizational units. As a result, ERP solutions, whether deployed on-premises, in the cloud, or through hybrid models, remain a critical enabler of organizational efficiency and strategic agility in increasingly data-driven environments [14].

4 ERP Implementation Challenges and Success Factors

This chapter presents the literature review conducted for the study. Section 4.2 examines the challenges associated with replacing an on-premises ERP system with a cloud-based ERP, while Section 4.3 reviews the factors that contribute to successful migration.

4.1 Research Methodology

This section outlines the methodology used to conduct the literature review. It is divided into three parts: the literature search process, the resulting set of articles, and the approach used for analysing the selected literature.

4.1.1 Literature search

The purpose of the literature search was to identify and review existing research related to ERP implementation challenges and critical success factors, as well as to map the central themes and concepts used in previous studies. The search focused on peer-reviewed articles and academic reports published between 2020-2026.

The search process was guided by the research questions:

RQ 1: What challenges are involved in replacing an on-premises ERP system with a cloud-based ERP system?

RQ 2: What are the factors of successful migration?

The literature search was carried out using digital databases Science Direct and IEEE Xplore. Search terms were selected based on the research questions and combined using Boolean operators.

Search string S1: [ERP] AND [Implementation OR Adaptation] AND [Challenges]

Search string S2: [ERP] AND [Implementation OR Adaptation] AND [“Success”]

The search was refined step-by-step using the following criteria:

1. Publication Years: 2020-2026
2. Language: English or Finnish
3. Keyword list includes word “ERP”

After applying these filters, the first 50 results of each search string were screened using predefined inclusion and exclusion criteria. These criteria were developed to ensure relevance to the research questions and to maintain academic quality. Table 2 summarises the criteria.

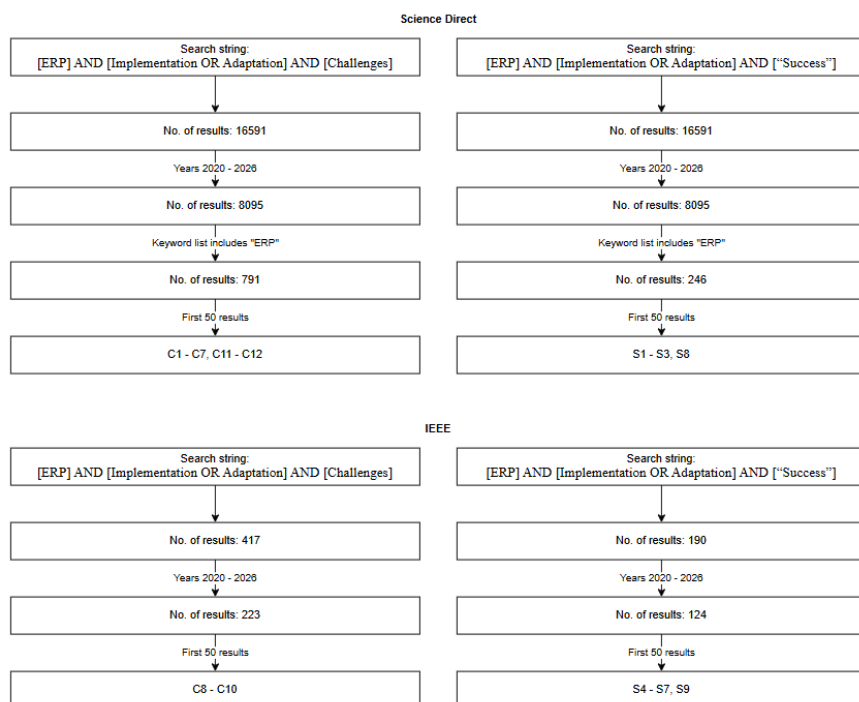
Table 2 - Inclusion and exclusion criteria

Exclude	Include
E1. Does not have a title, abstract or author	I1. Title, abstract or full text offers relevant answer to RQ1 or RQ2
E2. Cannot obtain the paper	I2. Peer reviewed and is credible
E3. Written in language other than English or Finnish	I3. Keyword list includes "ERP"
E4. Does not constitute a research paper – articles, books, book chapters, review paper, thesis	I4. Published between 2020-2026
E5. The paper is duplicate	

After screening for relevance and quality, twelve articles were in the final analysis for RQ1, and nine articles for RQ2. Each selected article was assigned custom reference code (C# for challenge-related papers and S# for success-factor papers). These codes were used throughout Sections 4.2 and 4.3 to support the analysis.

The overall search process and the results of each stage are illustrated in Figure 1.

Figure 1 - Literature search process



The final sets of articles are presented in Table 3 and Table 4, grouped according to the research question they address.

Table 3 – Articles reviewed for RQ1

	Title	Platform	Year	Reference
C1	The role of organizational culture in ERP implementation – The case of replacing an old ERP in a retail organization	Science Direct	2024	[15]
C2	Challenges of Cloud-ERP Adoptions in SMEs	Science Direct	2022	[16]
C3	Replacing on-premises ERP with cloud ERP solutions – Reasons and Drivers	Science Direct	2025	[2]
C4	Cloud ERP systems architectural challenges on cloud adoption in large international organizations: A sociomaterial perspective	Science Direct	2023	[17]
C5	Challenges and opportunities of ERP implementation in Indian SMEs: A case study of Jharkhand	Science Direct	2023	[18]
C6	Overcoming the Challenges of Enterprise Resource Planning (ERP)	Science Direct	2022	[19]
C7	ERP failure: A systematic mapping of the literature	Science Direct	2022	[1]
C8	Assessing Enterprise Resource Planning Systems Implementation Challenges in Namibian Industries: A Survey	IEEE Xplore	2021	[20]
C9	An empirical study of Moroccan industrial data: challenges and benefits of an ERP system	IEEE Xplore	2023	[21]
C10	Critical success factors and challenges for cloud ERP system implementations in SMEs: A vendors' perspective	IEEE Xplore	2021	[22]
C11	Identification of challenges and their ranking in the implementation of cloud ERP	Science Direct	2025	[23]
C12	Implementation of cloud ERP in the SME: evidence from UAE	Science Direct	2020	[24]

Table 4 – Articles reviewed for RQ2

	Title	Platform	Year	Reference
S1	Identifying Critical Success Factors (CSF) in ERP Implementation Using AHP	Science Direct	2024	[25]
S2	Critical Success Factors for ERP Implementation: Two directions Focusing on employee Perceptions in Qatar	Science Direct	2022	[26]
S3	Key Success Factors for Integration of Blockchain and ERP Systems: A Systematic Literature Review	Science Direct	2024	[27]
S4	Exploring Critical Success Factors for Enterprise Resource Planning Implementation: A Telecommunication Company Viewpoint	IEEE Xplore	2022	[28]
S5	Analysis of Critical Success Factors on ERP Implementation in PT. Toyota Astra Motor Using Extended Information System Success Model	IEEE Xplore	2020	[29]
S6	Navigating SAP ERP Implementation: Identifying Success Drivers and Pitfalls	IEEE Xplore	2025	[30]
S7	Impact of Critical Success Factors in Oracle EBS Enterprise Resource Planning Post Go Live Implementation:A Case Study on SriLankan Airlines	IEEE Xplore	2022	[31]
S8	Post ERP implementation issues and challenges: exploratory case studies in the context of Saudi Arabia	Science Direct	2024	[32]
S9	Critical success factors and challenges for cloud ERP system implementations in SMEs: A vendors' perspective	IEEE Xplore	2021	[22]

4.1.2 Literature analysis

The material gathered through the literature search was analysed using qualitative content analysis, which focuses on the systematic and structured examination of textual data.

Although qualitative in nature, this method also supports the quantification of patterns, allowing the researcher to identify frequencies, distributions and relationships between concepts across the selected studies. This combination of qualitative interpretation and numerical categorisation made the method suitable for mapping recurring themes related to ERP implementation challenges and success factors.

The analysis began with an initial familiarization phase. During this, all selected articles were read thoroughly and preliminary notes were taken to capture early impressions, recurring ideas and potential thematic directions. This step provided an overview of the central themes and the general structure of the material, which helped to establish an analytical foundation for more detailed examination.

Following familiarization, the analysis proceeded to identifying recurring patterns, concepts and observations across studies. Each article was reviewed to extract relevant findings, which were then documented in structured summary tables. These tables captured how often specific concepts appeared, enabling the identification of dominant themes as well as less frequently discussed but still relevant issues.

Next, the extracted findings were grouped into broader context categories. Several studies classified challenges and success factors according to organizational, technological and regulatory dimensions. As these categorizations appeared repeatedly throughout the material, they were adopted as the conceptual foundation for this study's own categorisation process.

Building on these established dimensions, the findings were further refined into six context categories that more precisely reflected the themes emerging from the selected articles. These categories were: organization and strategy, process and change, project management, people and team, technology, and data and information quality. This expanded categorisation enabled a more nuanced comparison of findings across studies while still maintaining alignment with established research conventions. By organising the material into these six categories, the analysis could systematically highlight where challenges and success factors were concentrated, how they related to one another, and where gaps or inconsistencies appeared within the research field.

The final stage of the analysis involved comparing and integrating findings across studies to identify both consistencies and differences within the research field. This allowed for the recognition of dominant trends as well as areas where perspectives did not meet. These contrasts provided valuable insight into the complexity of ERP migration and helped identify gaps that future research may address.

The use of quantitative content analysis approach enabled a structured and a replicable analysis of the literature. The method highlighted measurable variations within the research field and provided clear foundation for further interpretation in Sections 4.2 and 4.3.

4.2 Implementation Challenges

This section addresses research question RQ1 by identifying and analysing the key challenges associated with ERP implementation and migration. Table 5 summarizes identified challenges from existing literature. C6, C7 and C8 are secondary sources and are therefore bolded to mark their difference.

Table 5 - Challenges in ERP implementation

Challenge	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12
Over-reliance on heavy customization		X				X					X	X
Vendor lock-in		X		X								
Low technological competency					X	X	X	X			X	
Insufficient user education and training		X				X		X	X	X	X	
Lack of organizational readiness						X	X					
Lack of top management support	X					X	X	X	X	X	X	
Inefficient project management						X	X	X				
Underestimated timeline and budget			X		X	X		X	X	X	X	
Misfit of the ERP system with corporate culture and structure						X		X				
Users' resistance to change	X					X		X	X		X	
Low user engagement						X			X			
Unrealistic expectations						X				X		X
Weak transfer of knowledge						X	X			X		
Poor Vendor Selection								X				
Poor IT infrastructure		X				X		X	X		X	
Poor system testing						X						
Network dependency		X		X								
System mobility				X								
Scalability				X								
Lack of change management	X	X				X						
Data Quality		X			X	X			X		X	
Data Extraction		X										
Data Privacy				X								X
Data Protection/Security		X		X								X

C1 presents a case study on ERP implementation and how organizational culture impacts and influences the implementation [15]. The study aims to generate further knowledge on importance of the soft values such as organizational culture for the IT implementations. The study concludes that since organizational culture is based on basic assumptions, norms and values as well as artefacts, it can be stated that the view of change is part of the organizational

culture. As implementation of new ERP involves changes in systems and work processes, the reception of implementation can be assumed to depend on how receptive the organizational culture is to change. The results of the study indicate that if the management stands behind the implementation, it makes organizational members more receptive to the change. Additionally, top management support increases the importance of the project and thus gets more likely prioritized by the members.

C2 is a research on challenges of cloud ERP system adaptation in Small- and Medium-sized Enterprises. It identifies the most common challenges from literature and maps them to their respective ERP lifecycle phases[16].

C2 raises customization limitations as one of the critical barriers for ERP implementation. The limitations themselves are not often the problem, but the resulted unclarity and unrealistic expectations associated with them may raise conflicts between system vendor and customer. Therefore, the company should be aware of the constraints if they plan to undertake complicated modifications to the cloud-based ERP.

Another raised concern with ERP implementation is quality of existing data and systems, as well as how they fit the new system. This impacts the whole process such as timetable, effectiveness, quality, and accuracy. Difficulties and delays with data integration may lead to escalation of project's costs. Data security and vendor integrity were also raised up as a point of concern for the implementation as vendor will possess users' information and data.

C3 explores reasons and drivers for replacing on-premise ERP systems with cloud-based solutions [2]. It does not present challenges regarding ERP implementation, but rather pros and cons of switching from on-premises ERP over to cloud-ERP. The interviewees raise up cost reduction as a driving force for switching over from on-premises to cloud-ERP. It is noted that on-premises implementation has high short-term cost since large resources are required in from of money and time. The cost is affected also by need for IT knowledge within the organization and resources for managing servers and storing data. With cloud-ERP, the implementation cost may be cheaper since implementation and continuous updates happen with ease. Since ERP work is carried out by the supplier, IT knowledge does not need to be within the organization. According to interviewee, tasks can be redistributed and resources allocated to other things of more important nature within IT staff since all maintenance of the system is done by supplier.

Another point raised is adaptation. According to one of the interviewees, an organization might be hesitant on switching over to cloud-ERP if adaptations that they are asking are declined. Other interviewees are on same track saying that organizations should prefer standard system over making too many adaptations. It is better to align processes with the ERP instead of adapting ERP to the processes.

C4 is combined literature review and case that explores architectural challenges and countermeasures that should be considered in decision to adopt ERP system. It identifies six challenges that are data security, data privacy, network dependency, system mobility, vendor lock-in and scalability. [17]

Data security and privacy are highlighted as top two concerns for ERP implementation. The concern stems from giving up all controls of data to cloud vendor as part of implementation. C4 notes that even though this is raised as concern and challenge, it is not necessarily bad thing. In most cases cloud vendors manage security aspects better than most organizations.

System mobility further adds on to the data security concern as ERP system is made available through mobile devices and can be accessed anywhere, anytime. Even though mobility enhances business decision-making capabilities and business performances, it represents a new kind of risk on many fronts. Lost or stolen devices compromise the security and privacy of data, and habit to install work related apps on personal devices further leads to risk for sensitive data.

As cloud-ERP system requires a constant access to the internet for real-time data transactions, usability of cloud-ERP is dependent on quality of internet. Operating a cloud-ERP system with questionable network dependency would run performance risk and be a challenge for the whole business operations.

Scalability is sought-after characteristic offered by cloud-ERP model, but it has its own challenges as C4 brings up. Scalability is dependent on well designed and implemented cloud infrastructures, and it will collapse if these fundamental aspects of cloud infrastructure are not met. It is also something that is easily taken for granted even though cloud providers are also subject to limited processing and storage capabilities. Scalability is also dependent on how well cloud providers can use additional technology to efficiently and effectively allocate resources to where they are needed.

C5 aims to identify beneficial implementation aspects for ERP packages for Indian corporations. The data is based on survey and results show that implementation time, vendor support, data migration, consult competency, good IT infrastructure, and interdepartmental link to have greatest influence on ERP deployment. [18]

C6 is comprehensive literature review conducted between 2005-2020 to identify ERP challenge, discover the divisions in which these challenges can be clustered, and provide general strategies to resolve these challenges [19]. It identifies 65 ERP challenges of which 16 were raised as critical challenges. The critical challenges are 1) lack of top management support, 2) weak BPR quality, 3) poor IT infrastructure, 4) insufficient user education and training, 5) poor coordination between members of the ERP project team and organizational stakeholders, 6) underestimated timeline and budget, 7) low efficiency of project management, 8) lack of IT expertise, 9) over-reliance on heavy customization, 10) low user engagement, 11) lack of understanding of the need for change management, 12) weak transfer of knowledge, 13) misfit of the ERP system with corporate culture and structure, 14) the resistance of users to reform, 15) unrealistic expectations from ERP top management and 16) unreliable data.

C7 is a study that examines why ERP projects continue to fail despite decades of accumulated experience and research. The authors map the existing body of ERP-failure literature to identify recurring patterns, categorize failure factors, and highlight gaps in current knowledge. One of the results of this is ranking of failure factors. The study goes more into detail with the top three ERP failure factors which are project management problems, lack of top management support, and poor project team. [1]

The study results indicate problems in project management to be biggest ERP failure factor. The authors highlight that ERP projects are specialized projects with long-term and serious project management needs. According to authors, many analysed articles show that project management is handled as project cooperation. This leads to conclusion that project management problem includes unrealistic project scheduling, implementation strategy, and change management.

Closely following, there is lack of top management support. Study notes that management forced into a large project might view the ERP project as secondary job and therefore be unable to adequately allocate valuable human resources to the project. Project managers job is to keep top management informed on resources and what is needed. Study highlights that only

20-30% of projects are related to IT, the rest is about interpersonal relationships and dedication to the project. It is important to clearly indicate how much time participants will need to devote to the project. Failure to allocate resources, will lead to the failure of the project. Study indicates to cases where limited financial support contributed to a rushed ERP implementation, that in turn lead to overloaded team members and then to high staff turnover rate, ineffective knowledge transfer, and political problems that hindered implementation process.

On third place is poor project team. According to the authors, project team's responsibilities consist of setting high-level goals, creating requirements and key performance indicators, ensuring the project stays on time and within budget, daily project management, and measuring results. During implementation, the team should be able to resolve conflicts and mediate between different groups within the organization. Team might also be responsible of making decisions about midstream changes in ERP implementation based on user feedback and input. This all requires team members to be knowledgeable and highly respected within organization.

C8 assesses different challenges that are experienced in the process of ERP implementation in Namibia. Study used secondary sources for data collection. A central theme in the study is the limited maturity of ERP adoption in Namibia. Because ERP systems are relatively new in the country, many organizations lack the foundational structures and experience needed to support such large-scale technological change. This immaturity manifests in several organizational challenges that are hidden costs, poor IT infrastructure, user resistance, organizational culture, employee and top management involvement and lack of IT skills from personal. [20]

C9 is empirical study on Moroccan industrial data that aims to shed light on the challenges and benefits experienced by Moroccan companies in adopting and implementing ERP systems. 40 companies of different sizes participated in this study. Questionnaire results highlight high cost, staff training, system complexity, integration with existing systems, and improvement of operational efficiency as biggest ERP challenges. [21]

According to C9 questionnaire results, 37.5% claimed that cost of setting up ERP system is high. This is because there are many types of costs to consider which can cause problems for SMEs. ERP implementation cost consists of software, consulting, data migration, training, customization and integration costs. 22.5% of participants raise staff training as a challenge. It

affects ERP system usage and is considered one of the critical success factors for ERP implementation. 20% indicates challenges in integrating ERP with existing systems, and 10% found ERP system to be complex. Remaining 10% is marked as other challenges.

C10 studies ERP success factors and challenges from vendors' perspective. It conducts in-depth interviews with six ERP vendors from business information system industry in New Zealand. The study identified seven challenges in implementing ERP systems for SMEs. These challenges are 1) cost overruns, 2) lack of information between departments, 3) project team changing during the implementation process, 4) lack of governance inside the organization, 5) ERP vendor or consultant becoming unavailable, 6) lack of budget for training, and 7) overestimating cloud ERP efficiency. [22]

C11 paper identifies critical challenges in cloud ERP implementation. It uses and analyses online survey results in order to identify challenges. The challenges identified were customization, organizational change, long-term costs, business complexity, loss of information technology competencies, legal issues, integration, data extraction, monitoring, migration, security, network dependency, limited functionality, awareness, performance, integrity of provider, perception, and subscription costs. [23]

C12 aims to answer question why company should implement cloud ERP system. The study does not provide primary data towards identifying implementation challenges, but its results raise contradicting views towards data privacy and security. In C12 literature review, these two are mentioned as main obstacles for the use of Cloud ERP since use of cloud ERP can increase security concerns due to the shared multi-tenant environment, and due to data being available anywhere over network. During interviews however, interviewee does not see this as a problem since organization's data is insured through cloud ERP system. Company strongly believes that its data is comprehensively secured and reserved, and such issues might be linked to inefficient providers rather than the system itself. [24]

4.3 Implementation Success Factors

This subchapter targets RQ2 and aims to determine what are critical success factors for ERP implementation. Summary of findings is presented in Table 6. S3 and S6 are secondary sources and thus bolded to mark their difference.

Table 6 RQ2 - ERP Implementation Critical Success Factors

Critical Success Factor (CSF)	S1	S2	S3	S4	S5	S6	S7	S8	S9
Project team competence	X	X		X		X			
Vendor and consultant quality	X				X				
ERP fit	X				X				
Choice of ERP modules and package		X		X					
Top management support	X	X		X	X	X	X	X	
Hardware and software selection	X								
Effective project management	X	X		X	X	X		X	X
System quality	X				X				
End-user involvement	X			X	X			X	
Team composition	X			X		X			
Organizational change management	X	X		X				X	
Education and training	X	X	X	X	X	X	X	X	X
Information quality	X				X				X
Cooperation between team members	X			X		X			
Clear goals and objectives	X	X	X	X					X
Business project re-engineering		X			X		X		
Testing and start-up system	X			X					
Company readiness			X						
Innovative culture									X
Keeping on timeline									X
User's attitude and willingness to change									X
Appointing an internal champion		X							X
Sufficient capability and resources		X							X
Users' tech competency									X
Data analysis and conversion		X							
Interdepartmental communication and cooperation		X							
Vendor support		X		X					
Use of consultants		X		X					
Minimal customization		X							
Architecture choices available		X							

S1 study aims to identify critical success factors that influence ERP implementations in social insurance companies in Indonesia. It used analytic hierarchy process methodology to analyse critical success factors and gathered primary data through questionnaire. Study resulted to 15

success factors which ranked from highest importance to lowest are 1) project team competence, 2) vendor and consultant quality, 3) ERP fit, 4) top management support, 5) hardware and software selection, 6) Effective Project Management, 7) System quality, 8) End-user involvement, 9) Team composition, 10) Organizational change management, 11) Education and training, 12) Information quality, 13) Cooperation between team members, 14) Clear goals and objectives, and 15) Testing and start-up system.

S2 paper investigates the factors that affect success and failure of ERP systems in Qatar. Study collected primary data from Qatari employees through online-based questionnaire. According to the results, the most important CSF is “Top management support” followed by “User training on software”, “Project management process”, and “Clear goals and objectives of system” respectively.

In contrast, the lowest ranked CSFs are mostly controversial factors. These are “Architecture choices available”, “Partnership with vendor”, and “Change management”.

S3 paper conducts a systematic literature review to investigate the key success factors for ERP and blockchain integration. Even though this paper does not purely concentrate on ERP system implementation, the study findings are in line with other studies regarding ERP implementation. [27]

S3 notes that organizational factors such as company readiness, sufficient digital infrastructure, timing decision, scale of implementation, and sustainability will be crucial to the success of the integration. Authors highlight that as a cost and time intensive investment, the right time to implement will be when the company is most prepared for a technological disruption. The cost associated with the implementation should match the financial return. The paper also notes that training of workforce though the integration is crucial.

S4 study goal is to identify crucial success factors and assess their impact on ERP implementation in the telecommunication industry. It uses qualitative research through semi-structured interviews where 14 CSF are ranked based on responses.[28]

The results of the survey rank clear goals and objectives as most important CSF. Choice of ERP modules is ranked second, and effectiveness of project leader is on third place. Ranked lowest is Organizational change management.

S5 examines the effectiveness of ERP system implementation within a large organization. The study evaluates CSFs by using an extended model developed from both company insights and prior research. Data were collected through questionnaires distributed to the employees at PT. Toyota Astra Motor. [29]

The findings indicate that the success of the ERP implementation is significantly influenced by individual-level factors such as user acceptance of the system, the contributions of key users, effective project management, and the quality of information provided during the implementation phase. In contrast, factors such as workgroup impact, organizational impact, top management support, vendor and consultant quality, system quality, training and education, business process reengineering, and ERP fit were not found to have a significant effect on implementation success.

S6 is a study that provides a comprehensive analysis of ERP implementations. Its focus is on factors that determine success or failure of ERP implementations, as well as identifying them and the challenges faced during ERP adoption. Data samples were collected from a combination of surveys, case studies, and publicly available datasets. The features used for success prediction include project scope clarity, stakeholder involvement, training effectiveness, and system reliability metrics. The study revealed that the primary causes of failed SAP implementations differ from the factors required for a successful implementation. [30]

S7 is a study which goal is to determine the impact of Critical Success Factors that influence for a successful post go live ERP implementation in the context of the national airline of Sri Lanka which is Sri Lankan Airlines. The study identified and verified that the ERP implementation success is influenced by top management support, business process management and adequate end user trainings. [31]

S8 investigates the post-ERP issues and challenges in the context of Saudi Arabia. Research findings show that for successful ERP implementation, identified factors are top management support, integration, strategy, employee resistance, BPR, change management, vendor selection, team formation and culture. [32]

The study has two research cases. Case A is company that has been using ERP for a while now and Case B is one that stopped shortly after implementation. The case studies discuss the management approach for the implementation of ERP systems and further post-

implementation issues and challenges. The results highlight the importance of the top management engagement and support, change management, and effective communication.

S9 study investigates critical success factors and challenges for cloud ERP systems with focus on vendor perspective in the New Zealand environment. The study uses qualitative methodology to identify CSFs and conducted in-depth interviews with six vendors based on their knowledge and experience. The study revealed 15 CSFs that are 1) willingness to adopt cloud ERP systems, 2) willingness to learn about the system and undergo training, 3) technology-enhanced skillsets in users, 4) innovative culture, 5) good governance, 6) knowledge of requirements, 7) capability and resources, 8) users' behaviour, 9) clear understanding of implementation objectives, 10) appointing an internal champion, 11) commitment to training, 12) good documentation, 13) keeping to a timeline, 14) good project management and 15) general attitude. [22]

One of the informants of the study highlighted that the clients/users must be proactive people who are likely to absorb a new technology because the cloud ERP systems are more advanced than a basic computer application. Since ERP systems are complex, companies must train employees before deploying and utilising the systems. Training will ensure that employees can comfortably work with the cloud ERP systems and assist to improve their understanding and capabilities. This was backed by another informant as well who stated that the users' understanding can improve the ability and effectiveness of cloud ERP systems. When users have a good understanding of the system, the business outcomes are improved.

Another participant emphasised the importance of technology-enhanced skillsets for users and innovative culture are critical factors for success. A skilled user who has prior experience on how to install and use cloud ERP, can support others who have less understanding on how to set up and use cloud ERP systems. An innovative culture on other hand can help users to have an open mind about learning and changing to cloud ERP systems as a new technology. This is somewhat related to other informant's comment on how general positive attitude, meaning user's willingness to accept new ideas, has significant effect on transition from old ERP to the new ERP.

4.4 Summary

The findings of this literature research highlight set of critical success factors that enable effective ERP adoption and a range of challenges that frequently hinder progress.

Understanding both of these dimensions is essential in order to maximize the value of ERP systems while minimizing risks. Table 7 below displays summary of findings.

Table 7 - Summary of selected papers

Context	Factors	Reference(s)
Organization and strategy	Company readiness	C6, C7, S3
	Top management support	S1, S2, S4, S5, S6, S7, S8
	Innovative culture	S9
	Sufficient capability and resources	C3, C5, C6, C8, C9, C10, C11, S2, S9
	Organizational change management	S1, S2, S4, S8
Process and change	Business process re-engineering	C6, C8, S2, S5, S7
	Organizational change management	S1, S2, S4, S8
Project management	Effective project management	C6, C7, C8, S1, S2, S4, S5, S6, S8, S9
	Keeping on time	S9
	Clear goals and objectives	C6, C10, C12, S1 S2, S3, S4, S9
	Testing and start-up system	S1, S4
	Use of consultants	S2, S4
	Vendor and consultant quality	S1, S5
	Vendor support	S2, S4
People and team	Project team competence	S1, S2, S4, S6
	Team composition	S1, S4, S6
	Cooperation between team members	S1, S4, S6
	End-user involvement	C6, C9, S1, S4, S5, S8
	User's attitude and willingness to change	C1, C6, C8, C9, C11, S9
	Appointing an internal champion	S2, S9
	Users' tech competency	C5, C6, C7, C8, C11, S9
	Education and training	C2, C6, C8, C9, C10, C11, S1, S2, S4, S5, S6, S7, S8, S9
Technology	ERP fit	S1, S5
	Quality of current system	C2, C6, C8, C9, C11, S1, S5
	Architecture choices available	S2
	Hardware and software selection	S1
	Choice of ERP modules and packages	S2, S4
	Extent of customization	C2, C6, C11, C12, S2
Data and information quality	Data analysis and conversion	S2
	Information quality	C6, C7, C10, S1, S5, S9

Organizational support is highlighted as critical factor in determining ERP outcomes. When leadership provides clear direction, adequate resources, and a culture that embraces innovation, ERP systems are far more likely to succeed. Effective change management is particularly important, as it enables the organization to adapt its structures, workflows, and cultural norms to the new system. In contrast, a lack of readiness, insufficient leadership commitment, and misalignment between the ERP system and the organization's culture create significant barriers. Vendor lock-in and weak change management strategies further complicate long-term sustainability and highlight the need for strategic alignment throughout the ERP lifecycle.

Another theme in ERP implementation is the alignment between business processes and system functionality. ERP solutions are typically designed around industry best practices, and very plain by standard. It is recommended that organizations adjust their workflows rather than customize the system extensively as extent of customization can affect success of ERP implementation. When this alignment is not achieved, a gap emerges between system capabilities and operational reality which reduces system effectiveness and makes user adoption more challenging. Organizations that proactively redesign processes and minimize unnecessary customization tend to achieve better integration, lower costs, and improved efficiency. On the other hand, excessive customization, weak change management, and poor process alignment can lead to system misfits that lower the value of the ERP investment.

ERP system's effectiveness depends heavily on the competence and engagement of the people who use them. Successful implementations rely on skilled project teams, balanced team composition, strong interdepartmental collaboration, and active end-user involvement. Training, users' willingness to adapt, and presence of an internal champion further support adoption and knowledge transfer. ERP environments introduce additional demands on employees, who must adapt to new interfaces, workflows, and digital competencies. Without adequate training and support, users may resist change which can reduce system usage. This may lead to company reverting back to legacy practices. Challenges such as low technological competency, insufficient training, weak knowledge transfer, and low user engagement can make even the most technically robust ERP system un-useful. This further reinforces that ERP success depends as much on people as on technology.

Project management and governance form another cornerstone of ERP success. Clear goals, realistic timelines, structured planning, and rigorous testing contribute to smoother

implementation, while vendor support and selection of ERP modules affect on project outcomes. Many ERP failures stem from inefficient project management, including underestimated timelines and budgets, poor vendor selection, inadequate testing, and unrealistic expectations. Heavy customization adds to complexity, cost, and long-term maintenance burdens.

Technical and infrastructural considerations further shape ERP outcomes. Current system's quality, ERP fit, hardware and software selection, and architectural choices all influence usability and performance. Organizations encounter technical challenges such as poor IT infrastructure, network dependency, and scalability limitations. As cloud ERP systems rely heavily on stable internet connectivity, they are vulnerable to performance issues like latency and service outages. This particularly can affect SMEs due to their limited access to high-quality network infrastructure. The migration from on-premises to cloud ERP introduces additional complexities, including differences in database structures, integration mechanisms, and system architectures. Successful transitions require careful planning, comprehensive testing, and effective integration strategies.

Data quality, security, and governance also play a role in ERP success. Good data quality is essential for accurate reporting, decision-making, and system reliability. Many organizations however struggle with poor data quality, fragmented legacy systems, and inconsistent data structures. These complicate migration efforts and increase implementation costs. Cloud ERP environments introduce additional concerns related to data privacy, security, and regulatory compliance, as sensitive organizational data is stored and managed by third-party providers. Trust in the vendor is therefore essential as well as internal data governance practices to ensure long-term reliability and compliance.

5 Interviews

This chapter presents the empirical findings gathered through semi-structured interviews with professionals involved in ERP implementation projects. The purpose of these interviews is to complement the literature review by providing practical insights, organizational perspectives, and first-hand experiences related to ERP migration. The first section presents the research methodology, while the second section presents the findings of the interviews.

5.1 Research Methodology

This section outlines the research methodology adopted to address the research questions concerning the migration from an on-premises ERP system to a cloud-based ERP system. Specifically, the study investigates the challenges involved in such transitions, the factors contributing to successful migration, and how these insights can be applied to support the migration from Unibis to Microsoft Dynamics 365 Business Central.

A qualitative research approach was selected, with semi-structured interviews serving as the primary data collection method to enable an in-depth exploration of participants' experiences and perspectives. This approach is particularly suitable for examining complex organizational and technological processes such as ERP system migration, as it allows the study to capture detailed insights into the challenges, success factors, and practical considerations identified by individuals with relevant experience.

The research follows an exploratory and applied design. The exploratory aspect addresses RQ1 and RQ2. The applied aspect addresses RQ3 by translating findings into actionable insights for the migration from Unibis to Microsoft Dynamics 365 Business Central.

Data were collected through semi-structured interviews with professionals who have experience in ERP implementation, migration, or management. This method was chosen because it enables detailed exploration of ERP migration challenges (RQ1), captures expert insights on success factors (RQ2), and allows participants to provide practical recommendations relevant to real-world cases (RQ3).

Semi-structured interview approach was selected because it allows little movement with the questions. Predefined framework was created for the interview in form of questionnaire. Using predefined framework allows the interviewer and interviewee to stay focused on the task and encourages two-way communication [33].

To allow participants time to prepare for the interview, the questionnaire form was sent out to informants beforehand. This provided more focused answers and helped with keeping on the task at hand.

5.1.1 Sampling strategy

The study employed purposive sampling, targeting individuals with relevant expertise in ERP systems. Majority of the participants worked under Case Company which provided case relevant insights.

Total of six participants with varying levels of expertise were interviewed. Interviews were conducted through Teams and Google Meets, recorded, and then analyzed. Overview of the participants can be seen in Table 8.

Table 8: Overview of participants

ID	Role	Date	Method	Duration
I1	Project Manager	24.3.2026	Teams	60 min
I2	Escalation Engineer	24.3.2026	Teams	20 min
I3	Business System Analyst	7.4.2026	Google Meet	30 min
I4	Business System Analyst	8.4.2026	Google Meet	30 min
I5	Business System Analyst	9.4.2026	Google Meet	30 min
I6	Business System Analyst	15.4.2026	Google Meet	30 min

5.1.2 Interview framework

The interview questions were developed based on a literature review presented in Chapter 4 of this study. Key themes and variables identified in prior research on ERP migration and cloud adoption were used to construct the questionnaire.

The framework ensures that the data collection is theory-driven, linking empirical findings directly to existing knowledge. By grounding the interview framework in existing literature, the study ensures that the investigation is not only exploratory but also analytically connected to established research, thereby strengthening both the rigor and relevance of the findings.

The questionnaire was structured into three main sections aligned with the research questions. A structured list of ERP implementation factors, derived from the literature review, was presented to participants for evaluation. While participants rated each factor using a Likert

scale, the primary purpose was not quantitative measurement but to stimulate discussion. Follow-up questions were used to explore the reasoning behind the ratings, enabling deeper qualitative insights.

The literature review indicated that challenges and success factors in ERP implementation are closely interconnected. Factors that contribute to successful implementation often represent areas where failure or weakness leads to significant challenges. Therefore, the study examines these dimensions jointly rather than as separate constructs.

The final section of the interview focused on applying the identified challenges and success factors to a specific case context: the migration from Unibis to Microsoft Dynamics 365 Business Central. These questions were designed to translate general findings into practical recommendations, thereby addressing the applied nature of the third research question.

5.2 Results

This section presents the empirical findings derived from the interviews and is structured according to the first two research questions of the study. The first part reports the results related to RQ1, which examines the challenges organizations face when replacing an on-premises ERP system with a cloud-based ERP. These findings are based primarily on the open-ended interview questions, allowing interviewees to describe challenges in their own words and highlight issues they considered most significant.

The second part presents the results related to RQ2, which focuses on the CSFs of ERP migration. Unlike the exploratory nature of the challenge-related questions, the CSF section is based mainly on the rating exercise included in the interviews. Interviewees evaluated the importance of previously identified success factors, enabling a structured comparison of their perceived relevance. Additional qualitative comments provided during the rating process were also incorporated to enrich the interpretation of the results.

5.2.1 ERP migration challenges

This chapter answers RQ1. The findings are based on interview participant experiences regarding the practical difficulties encountered during ERP mitigation and implementation projects. Answers received for questionnaire Q8 are presented in Table 9 below. The presented interview questions are edited for readability by removing filler words, correcting

grammatical issues, and standardizing tense or wording while preserving the original meaning.

Table 9 - Q8 answers on ERP implementation challenges that are difficult to manage or implement in practice

Q8 - Based on your experience, which of these factors are the most difficult to manage or implement in practice? Why?	
I1	<p>Change management can be extremely challenging. A key difficulty lies in gaining employee commitment and involvement in the change process. For example, there may be situations where an employee has only recently learned to use the existing system, after which a new implementation project is introduced and everything is changed again. In such cases, it can be very difficult to motivate employees to become enthusiastic about the new system.</p> <p>[...] Change management is also an area that is often overlooked, which can result in unnecessary customizations and insufficient process re-engineering. At times, stakeholders may avoid challenging requests because they want to maintain positive relationships, leading to situations where unrealistic or unsuitable requirements are not questioned.</p> <p>[...] Because implementation projects involve people, new systems and processes often create uncertainty and fear. Employees may also carry negative experiences from previous ERP implementations, as such projects do not always succeed and can leave organizations with unfavorable perceptions of system change initiatives.</p>
I2	<p>Top management support and cooperation among team members are the most difficult aspects to manage, as people are not always consistent or easy to coordinate. Furthermore, before the implementation becomes fully intensive, it is often difficult to predict what approaches will be effective and which challenges may emerge.</p>
I3	<p>Change management and end-user involvement [can be particularly challenging], as employees must participate in the project alongside their regular responsibilities, making it difficult to secure their time and attention. [...] Even when there appears to be SME buy-in, attitudes often shift after implementation. Prior to implementation, users may express enthusiasm for the new system and frustration with the existing one, stating that they 'can't wait for the new system' and no longer wish to use the current system. However, once the new system is introduced, users frequently begin to criticize it and perceive the previous system more favourably. [...] This is an issue I have encountered repeatedly: although there may appear to be buy-in initially, genuine commitment is not always present.</p>
I4	<p>Sufficient capability, resources, management support, and organizational readiness are critical for successful implementation. Company readiness can be particularly challenging, as it is often influenced by the reasons behind the change itself. Organizations that are open to change and actively seeking improvement are generally more receptive to implementation efforts, whereas companies that feel forced to adopt a new system often struggle to develop genuine buy-in. This lack of readiness can create significant obstacles for achieving broader project objectives, including training, identifying system fit, and establishing internal champions.</p> <p>[...] Resource and capability constraints among end users also present major challenges. Employees are typically expected to participate in testing, provide feedback, and support implementation activities alongside their regular responsibilities, while many organizations fail to allocate additional resources or reduce existing workloads. As a result, implementation tasks are often added to already stretched capacities, making progress difficult both for internal stakeholders and external implementation partners.</p> <p>[...] From both the business and implementation perspectives, insufficient internal resources can hinder decision-making, delay progress, and limit access to the information required for a successful outcome. Consequently, organizations often rely on post-cutover fixes, updates, and adjustments, reducing the likelihood of achieving an optimal implementation outcome.</p>

I5	<p>Requirements management is a major challenge in implementation projects. This is why establishing requirements at the beginning of the project is so important. Organizations typically define both 'must-have' and 'nice-to-have' requirements initially, but these often change substantially throughout the project and results in scope changes and increasing complexity.</p> <p>[...] End-user involvement and the presence of an internal champion are also critical but difficult to manage. Organizations often struggle to nominate suitable individuals for these roles, particularly in contexts of high staff turnover. In some cases, responsibility for testing falls to a single capable individual because other employees lack the necessary competence or system knowledge. This highlights the importance of having a dedicated internal representative. However, securing such commitment can be challenging, as many employees prefer to focus solely on their regular day-to-day responsibilities rather than take ownership of additional implementation-related tasks.</p>
I6	<p>Maintaining project timelines is consistently challenging, particularly because end users frequently request customizations and are not always satisfied with the proposed solution. Resistance to change also presents difficulties, especially when employees have used the same system for many years and are accustomed to established ways of working. As a result, gaining acceptance for the new system can be difficult despite the organization's intention to change.</p> <p>[...] Education and training can also be challenging when users are unwilling to learn or engage with the new system. However, users who are open to learning often become more receptive once they gain familiarity with the system and recognize that it improves or simplifies their previous ways of working.</p>

The interviews indicate that ERP migration challenges are mainly related to organizational, management, and human factors rather than technical issues alone. Participants consistently emphasized that although technical problems can often be solved through training, external support, or alternative approaches, organizational resistance and lack of engagement are significantly more difficult to overcome. Summary of the challenging CSFs to implement or manage is presented in Table 10.

Table 10 – Compiled Q8 answers

CSF	I1	I2	I3	I4	I5	I6
Organizational change management	X		X			
End user involvement	X		X			
Top management support		X		X		
Cooperation between team members		X				
Company readiness			X	X		
Sufficient capability and resources				X		
Clear goals and objectives					X	
Appointing an internal champion					X	
Keeping on time						X
Education and training						X

Organizational change management arose as a challenge frequently during discussions. Several participants identified resistance to change as a major obstacle during ERP migration projects. According to I1, getting employees involved in the new system can be difficult, and that change management is often overlooked during implementations. Similarly to this, I3 and I5 mentioned that employees often complain about existing systems before migration, but after implementation they often become resistant to the new system due to changes to previously familiar workflows. These suggest that ERP migration introduces organizational disruption which requires employees to adapt to new ways of working thus creating uncertainty and resistance.

Going little bit hand in hand with this, participants also identified securing top management support and organizational commitment as a major challenge. Participants emphasized that lack of management engagement can negatively affect decision making, prioritization, and employee participation. I2 described top management support as difficult to manage because organizational leadership is not always consistent or actively involved in the project. I4 further explained that management commitment can be particularly challenging because it is closely connected to the underlying business reasons for the migration itself. Without strong leadership support, participants noted that projects risk losing direction, momentum, and organizational alignment.

Resource allocation and capability management was also highlighted as a challenge. Participants explained that ERP implementation projects often require employees to participate in migration activities while simultaneously managing their normal daily responsibilities. According to I4, obtaining sufficient employee time and engagement for project tasks can be very difficult, especially from the perspective of external consultants who rely on client participation for successful implementation. Similarly, I5 noted that there may not always be enough competent personnel available on the client side to support activities such as testing, which may result in responsibilities accumulating on a small number of individuals.

Participants also identified requirements management and changing project scope as significant challenges during ERP migration. I5 explained that project requirements often change a lot during implementation, making it difficult to maintain stable deliverables and priorities. I3 similarly stated that projects rarely progress exactly as initially expected, while I4 noted that timelines and priorities frequently change once the organization becomes more

involved in the project. These findings suggest that ERP migration projects are highly dynamic and require continuous adjustment as organizations develop a better understanding of both the new system and their own business needs.

Another recurring challenge raised was maintaining project schedules and timelines. Although keeping on time was not considered one of the most critical success factors, participants still acknowledged that schedule management is difficult in practice. I1 explained that timelines mainly create structure for the project rather than directly determining success. However, several participants noted that changing requirements, resource limitations, and organizational changes often lead to delays. I6 specifically highlighted that changing requirements make maintaining schedules particularly difficult throughout implementation.

The interviews also revealed challenges related to end-user involvement and employee participation. While participants considered end-user engagement essential for project success, they also acknowledged practical difficulties in maintaining active participation during implementation. I3 explained that end-users are expected to contribute to the ERP project while continuing their regular operational duties, making it difficult to secure sufficient time for testing and other implementation activities. This creates a challenge for organizations attempting to balance operational continuity with project participation.

Another significant challenge identified by participants was education and training. Although training was considered important for overcoming technical competency gaps, participants explained that maintaining effective training throughout the project can be difficult. I6 noted that some employees may be unwilling to learn or adopt the new system which reduces the effectiveness of training. Similarly, participants suggested that users' technical competency itself is not necessarily a major risk because it can often be overcome through education and support. Instead, employee willingness to engage with the change process was perceived as more problematic.

Participants also discussed challenges related to business process re-engineering and system customization. According to I1, organizations often attempt to replicate old processes within the new ERP system instead of redesigning workflows to take advantage of modern ERP capabilities. This creates a risk that the new cloud ERP system becomes merely a copy of the old system thus reducing the overall benefits of migration. Excessive customization was similarly viewed as problematic because it increases complexity and may limit standardization advantages offered by cloud ERP solutions.

Data migration and data quality were also identified as important practical challenges. Participants explained that legacy systems often contain incomplete, inconsistent, or unnecessary data that complicates migration activities. I1 noted that clients frequently attempt to migrate excessive amounts of historical data, even when not all information is necessary for future operations. I4 emphasized that data issues can critically affect the success of the entire ERP system, describing data as something that can “make or break” the implementation during transition.

In addition, participants identified challenges associated with cost awareness and project transparency, particularly in the context of cloud-based ERP migrations. Several interviewees noted that organizations are not always fully aware of the total costs associated with cloud ERP migration. While cloud systems are frequently perceived as cost-efficient due to reduced infrastructure and maintenance requirements, interviewees emphasized that this perception can be misleading if not examined in detail.

I2 highlighted that increasing subscription costs can become a significant challenge and may come as a surprise to organizations during implementation. Similarly, I5 emphasized the importance of understanding the complete cost structure of ERP systems early in the project lifecycle. Without this clarity, organizations may underestimate the financial implications of cloud adoption, leading to budget overruns or misaligned expectations between stakeholders. These insights suggest that cost-related challenges are not solely financial but also managerial, as they reflect gaps in planning, communication, and cross-departmental visibility.

In conclusion, these findings suggest that replacing an on-premises ERP system with a cloud-based ERP system involves a combination of organizational, management, and operational challenges. The most significant difficulties identified by participants were related to change management, securing top management support, resource allocation, changing requirements, end-user involvement, and process re-engineering.

5.2.2 Critical Success Factors for successful migration

This section answers Research Question RQ2 by analyzing the interview participants’ evaluations of CSFs in ERP implementation and migration projects. The findings are based on the prioritization results presented in Table 11 together with qualitative insights gathered during the interviews.

Table 11 - Compiled Q4 answers

Q4 - Based on your experience, how important are the following factors in influencing the success of an ERP implementation or migration project? Please rate each factor on a scale from 1 to 5 (1 = Not important, 3 = Neutral, 5 = Very important)

CSF	I1	I2	I3	I4	I5	I6	Mean
End-user involvement	5	5	5	5	5	5	5
Top management support	5	5	5	5	5	4	4.83
Testing and start-up system	5	5	5	4	5	5	4.83
Team composition	5	5	5	5	4	5	4.83
Cooperation between team members	5	5	5	5	4	5	4.83
Data analysis and conversion	4	5	5	5	5	5	4.83
Organizational change management	5	4	5	5	4	5	4.67
Clear goals and objectives	5	5	4	4	5	5	4.67
Project team competence	5	5	5	4	4	5	4.67
Sufficient capability and resources	5	4	5	4	4	5	4.5
Effective project management	4	5	5	3	5	5	4.5
Information quality	4	4	5	4	5	5	4.5
Business process re-engineering	5	4	4	4	4	5	4.33
Vendor and consultant quality	4	4	5	4	4	5	4.33
Education and training	4	3	5	4	5	5	4.33
ERP fit	4	4	5	4	4	5	4.33
Use of consultants	3	3	5	5	5	4	4.17
Vendor support	4	4	4	4	4	5	4.17
Architecture choices available	4	4	5	4	4	4	4.17
Choice of ERP modules and packages	4	4	5	4	4	4	4.17
Company readiness	4	4	4	4	3	5	4
Innovative culture in company	3	3	5	4	4	5	4
User's attitude and willingness to change	3	4	5	4	4	4	4
Hardware and software selection	4	4	4	4	4	4	4
Extent of customization	3	5	4	3	5	4	4
Appointing an internal champion	3	4	3	4	5	4	3.83
Keeping on time	3	4	3	3	4	5	3.67
Quality of current system	3	3	2	4	4	5	3.5
Users' tech competency	2	2	4	3	4	4	3.17

The results show that successful ERP migration is influenced primarily by organizational and human-related factors rather than technical considerations alone. Among all identified CSFs, end-user involvement received the highest possible mean score (5.0), which indicates

unanimous agreement among participants regarding its importance. Participants emphasized that ERP migration projects require close cooperation between the implementation partner and the client organization.

Interviewee I1 stated described end-user involvement as “non-negotiable” since end-users possess the best understanding of operational processes and are therefore most capable of testing whether the system supports business requirements correctly. Participants also noted that insufficient user participation significantly increases the risk of project failure.

The findings further suggest that successful end-user involvement depends heavily on top management support, which was among the highest rated CSFs with a mean score 4.83. Multiple participants described management commitment as essential for project success. According to I1, top management support “makes everything much easier,” while I6 stated that without it, projects may “die, go sideways, or not reach the goal.” Participants highlighted that senior management plays an important role in enabling organizational commitment, allocating resources, and ensuring employee engagement throughout the project. I4 further explained that unlike many technical challenges, lack of business commitment is difficult to compensate for during implementation.

Another highly rated factor was testing and start-up system, which also received a mean score of 4.83. Participants viewed testing activities as essential for validating processes and identifying gaps before go-live. I1 noted that although test go-live may not be strictly necessary for successful deployment, it helps customers understand the practical state of the project and recognize areas requiring additional effort. The interviews suggest that testing activities also improve customer awareness and engagement by making the implementation process more concrete and visible.

Similarly, team composition and cooperation between team members were identified as highly important factors. Participants emphasized that ERP projects involve multiple stakeholders, responsibilities, and dependencies, which makes collaboration essential for effective execution. I2 specifically raised cooperation between team members as one of the most critical factors for success, while I1 emphasized that the project depends on people thus they have huge affect on the outcome. Other interviewees noted that ERP implementation requires continuous communication between consultants, management and end-users.

Another recurring theme was the importance of data analysis and conversion, which also ranked among the highest-rated CSFs with mean score of 4.83. Participants described data migration as a critical element that can significantly influence implementation outcomes. I4 noted that data can “make or break” the system during migration, while I1 explained that organizations often underestimate the complexity of transferring and cleaning legacy data. Participants recommended focusing primarily on transferring essential master data rather than attempting to migrate all historical information.

The findings also underline the importance of organizational change management, which received a high mean score of 4.67. Participants consistently described change management as one of the most difficult aspects of ERP migration to implement successfully. According to I1, involving employees in the transition process can be challenging and organizational change management is often overlooked. I3 explained that while employees may initially welcome a new system, resistance often emerges once new processes and working methods are introduced. These findings suggest that technical implementation alone is insufficient if employees are not prepared to adapt to organizational and procedural changes.

Participants further emphasized the significance of business process re-engineering during ERP migration. I1 stated that without process redesign, organizations risk recreating copy of the old system within the new ERP environment. Several interviewees argued that ERP migration should not aim to copy existing processes directly into the new system, particularly when the previous system is one of the reasons for initiating the migration project. Similar views were expressed regarding extent of customization, where participants generally preferred adopting standard ERP functionalities instead of excessive customization. According to the interviews, extensive customization increases complexity and may reduce the long-term benefits of migration.

The interviews also highlighted the importance of effective project management, clear goals and objectives, and sufficient capability and resources. According to participants, ERP projects require strong coordination because implementation involves multiple interconnected activities occurring simultaneously. I1 emphasized that project management includes expectation management and communication, noting that employees want to feel heard during the project. Clear goals and objectives were considered important for maintaining project direction and prioritization, although several interviewees acknowledged that project requirements often evolve during implementation. In addition, participants noted that

organizations frequently underestimate the internal resources required for ERP projects. I4 specifically highlighted that allocating employee time for project activities can be difficult because employees must often balance implementation tasks alongside their normal responsibilities.

Factors such as users' technical competency, innovative company culture, and quality of the current system were rated as less important compared to organizational and managerial factors. Participants generally viewed these issues as easier to overcome through training, communication, and support. For example, several interviewees noted that limited technical skills among users can be compensated for with effective education and training programs. Similarly, participants explained that the quality of the legacy system is often outside the project team's control and therefore less critical to implementation success itself.

The interviews also identified additional factors not originally included in the CSF list. Several participants highlighted the importance of cost transparency and requirement analysis during the early phases of ERP migration. Interviewees noted that organizations are often unaware of the full cost structure associated with cloud ERP systems, including increasing subscription expenses and additional implementation-related costs. Requirement and gap analysis were also considered important for defining realistic project scope and expectations before implementation begins.

In conclusion, the findings answering Research Question RQ2 indicate that successful ERP migration depends mainly on organizational alignment, top management commitment, collaboration, and employee engagement. While technical considerations remain important, participants consistently perceived human and management factors as more influential in determining project success. The results therefore suggest that cloud ERP migration should be approached not only as technical system replacement but also as a broader organizational transformation process.

6 Discussion: Comparison of Findings and Application to Case Systems

This chapter combines and builds upon the findings presented in previous chapters. Chapter 4 identified key challenges and critical success factors in ERP implementation based on existing literature, while Chapter 5 presented the empirical findings derived from interviews conducted for this study. The purpose of this chapter is to integrate these two perspectives in order to provide a comprehensive understanding of ERP migration in practise.

The first section compares the findings from the literature review with empirical interview results with a focus on the themes relevant to RQ1 and RQ2. This comparison highlights areas of convergence and divergence between theoretical knowledge and real-world experiences, and it helps to validate and contextualize the identified challenges and success factors.

The second section presents a brief overview of the two case systems involved in this study: the current on-premises ERP system Unibis and the target cloud-based system, Microsoft Dynamics 365 Business Central. This contextual background is necessary to understand the specific environment in which the migration takes place.

Finally, the findings from both the literature and interviews are synthesized and applied to the case context in order to address RQ3. This section translates the identified challenges and success factors into practical considerations and preparatory actions for the migration from Unibis to Microsoft Dynamics 365 Business Central. Through this approach, the chapter bridges the gap between theory and practice and forms the basis for the final conclusions of the study.

6.1 Comparison of Literature and Interview Findings

The purpose of this section is to compare findings identified in the literature review with the empirical findings obtained through interviews. The aim of this is to evaluate how well the theoretical challenges and critical success factors (CSFs) identified in prior research align with practical ERP migration experiences.

Overall, the interview findings showed considerable alignment with the literature. Several challenges and success factors emphasized in prior research were also strongly reflected in the experiences shared by interview participants, although differences did emerge in terms of emphasis and practical interpretation.

Organizational support, particularly top management support, was identified by literature as a key factor of ERP implementation success. This was strongly reflected in the interviews, and participants emphasized that insufficient management support can critically hinder project progress or even lead to project failure. Several interviewees coupled this challenge with poor change management and lack of company readiness, highlighting that the factors are interconnected.

The literature also highlighted underestimated timelines and budgets as major challenges affecting ERP implementation success. Similar concerns emerged from the interviews, where keeping on time was described as difficult due to changing requirements, customization requests, and organizational constraints. Insufficient capability and resources were also highlighted by interviewees as a cause for challenges on other areas such as securing continuous end-user involvement. Interviewees additionally emphasized that having top management support can mitigate this challenge since supporting top management is more likely to advocate for sufficient resources. Still more often than not, both interviews and literature showed that this is something that is easily overlooked.

Moving to end-user involvement, it emerged as one of the most important success factors in the interviews and received unanimous emphasis from all participants. While the literature also identified end-user involvement as relevant, it did not receive equally strong attention across the reviewed studies. Interview findings suggested that insufficient user participation may directly affect testing quality, system adoption, and overall implementation outcomes. It was also highlighted that the end-users are the ones who are going to be using the system regularly in their day-to-day work instead of the management, and thus having end-user input for the implementation project is crucial as they provide feedback on how the system matches real life situations.

Insufficient user education and training were identified in literature as one of the most significant challenges for ERP success as it did emerge across all studies reviewed. Although interviewees did not emphasize training to the same extent as a standalone challenge, they consistently recognized it as an important success factor that supports other implementation areas, such as organizational readiness, user adoption, and end-user involvement. It was seen more of a supporting factor as it can compensate to other areas such as user's low tech competency and unwillingness to change.

Data analysis and conversion were identified by interviewees as important considerations during migration projects. However, data quality itself was not consistently viewed as a primary challenge. Participants generally agreed that high-quality data simplifies implementation activities and reduces project effort, but it was not perceived as a dominant source of project difficulty. This is in line with literature findings as good data quality is essential for accurate reporting, decision-making, and system reliability, but many organizations do struggle with poor data quality, fragmented legacy systems, and inconsistent data structures. Based on literature, these complicate migration efforts and increase implementation costs.

A notable difference between the literature and interview findings concerned the relative importance of technical factors. Technical considerations such as ERP fit and selection of ERP modules appeared more prominently in literature than in the interviews, where organizational and people-related factors generally received stronger emphasis.

Another recurring theme in the interviews was the influence of users' attitudes and willingness to change. Multiple interviewees emphasized that resistance to change significantly affects how other CSFs can be managed and achieved. This observation aligns with the literature, which identified user resistance as a major contributor to ERP implementation difficulties and project failure. Interviewees did, however, emphasize that this challenge can be handled by having strong change management plan with focus on clear communication from top to bottom as well as having the support of top management.

Overall, the literature and interview findings demonstrated alignment. However, the interviews tended to focus more strongly on the underlying relationships between different success factors and challenges. For example, interviewees described how insufficient top management support may negatively influence user attitudes, organizational readiness, and stakeholder commitment across the project.

Some variation was observed both in the literature findings and in the interview responses regarding the relative importance of different CSFs. One possible explanation for these differences is the professional background and organizational role of the respondents. For example, project managers may place greater emphasis on stakeholder engagement, project governance, and organizational change management, whereas business analysts working closely with business users may prioritize end-user involvement, team cooperation, and clear objectives. Similarly, individuals with customer-side implementation experience may

perceive insufficient training, limited resources, and time constraints as particularly significant challenges. These differing perspectives contribute valuable insights into ERP implementation complexity but may also make direct validation of findings more challenging.

6.2 Case Systems

The purpose of this section is to present the two case systems that are Unibis and Microsoft Dynamics 365 Business Central. For context, these systems are two out of three main systems that Case Company handles and transfers new acquires into. More on the context can be read on section 2.1.

This section is divided into three parts. The first part presents Unibis system, the second presents Business Central, and the third one compares the systems to define differences. The comparison produces mitigation considerations that are then used in the following section to inspect the case specific migration project.

6.2.1 Unibis by Markinson

Unibis is Unix-based on-premises ERP system developed by Australian company Markinson [34]. It is primarily designed for small and medium-sized businesses. Within Case Company, Unibis has historically been used to support operational processes related to logistics, warehousing, inventory management, and financial tracking. The system has become deeply integrated into existing business processes and daily operations over time.

As a traditional on-premises ERP system, Unibis operates largely as a standalone environment maintained within the organization's own IT infrastructure. One of its primary strengths is its stability and relatively low day-to-day maintenance requirements. Because the system is not dependent on continuous internet connectivity, it has historically provided reliable operational support in isolated business environments.

However, several limitations associated with legacy on-premises systems have increased the need for migration. Interview participants highlighted that modern business requirements increasingly demand integration capabilities, accessibility, and flexibility that are difficult to achieve with Unibis. The system does not natively support cloud deployment, mobile access, or modern integration standards such as REST APIs, making interoperability with newer systems challenging.

In addition, Unibis relies heavily on organization-specific customizations developed over time. While these customizations support existing business processes, they also increase technical complexity and create challenges related to maintainability, upgrades, and future scalability. The interviews further indicated that the system's aging architecture, outdated user interface, and dependence on internal technical expertise have contributed to growing concerns regarding long-term usability and agility.

From a migration perspective, one of the major challenges associated with Unibis is the handling of historical data and embedded business processes. Legacy data structures often require normalization, cleansing, and conversion before migration into the new system environment. Furthermore, the organization's long familiarity with Unibis may increase resistance to change among users accustomed to existing workflows and system behaviour.

6.2.2 Microsoft Dynamics 365 Business Central

Microsoft Dynamics 365 Business Central is a cloud-based ERP system primarily targeted at small and medium-sized enterprises [35]. In contrast to the legacy on-premises architecture of Unibis, Business Central is typically delivered as a Software-as-a-Service (SaaS) solution hosted on Microsoft Azure. This reduces the need for internally maintained infrastructure and shifts responsibilities related to system hosting, updates, and maintenance to the service provider.

Business Central integrates multiple business functions into a unified platform, including financial management, supply chain operations, sales processes, and project management. As part of the broader Microsoft Dynamics 365 ecosystem, the system also supports integration with other Microsoft services such as Microsoft 365, Power BI, and the Power Platform. [35] Interview participants highlighted integration capabilities and connectivity with external systems as major advantages compared to older on-premises ERP systems.

One of the key strengths of Business Central is its scalability and flexibility. The subscription-based licensing model allows organizations to adjust the number of users according to operational needs, while the cloud architecture enables performance scaling as system usage increases [36]. The system also supports access from multiple devices, including desktop browsers, tablets, and smartphones, which improves accessibility for distributed and mobile work environments.

Compared to traditional legacy ERP systems, Business Central places greater emphasis on standardization, modularity, and configurable extensions rather than heavy modification of the core system. Additional functionality can be implemented through extensions and integrations without directly modifying the underlying application code, which helps maintain upgrade compatibility and reduces long-term technical debt. Furthermore, support for modern integration standards and REST APIs enables easier interoperability with third-party systems and services.

From a migration perspective, Business Central addresses many of the limitations associated with legacy on-premises systems, particularly in relation to scalability, accessibility, integration capability, and maintainability. However, the transition to a cloud-based ERP environment also introduces new organizational and operational challenges. Interview findings emphasized that successful adoption depends heavily on change management, user training, process standardization, and organizational readiness. Because the system evolves through continuous updates and ongoing development, organizations must also adapt to a more dynamic operational model than with traditional static on-premises systems.

Business Central additionally supports role-based access management and configurable user interfaces, allowing organizations to tailor system views and permissions according to employee responsibilities. This can improve usability and operational efficiency, although it also requires careful planning during implementation to ensure that system configurations align with organizational processes and user needs.

6.2.3 System comparison and migration considerations

In the context of this thesis, Unibis represents the departure point in a hypothetical ERP migration scenario whereas Microsoft Dynamics 365 Business Central represents the end point. Table 12 below compares these two systems and highlights migration considerations based on the comparison.

Table 12: System comparison

Area	Unibis	Business Central	Migration Considerations
System Type	Legacy Unix-based on premises ERP	Modern cloud-first ERP platform	Transition from legacy architecture to cloud-based operational model
Vendor	Markinson (Australia)	Microsoft	Vendor ecosystem, support model, and dependency structures will change
Deployment model	On-premises only	Cloud SaaS and on-premises hybrid support	Requires cloud adoption planning and governance policies
Infrastructure and maintenance	Managed internally within the organization's IT environment	Primarily managed by Microsoft in the cloud environment, while environment-level configurations remain internally managed	Redefinition of IT responsibilities and operational processes
Reporting and analytics	Relies on static reports, external tools, or custom-built solutions	Built-in analytics capabilities and integration with Power BI	Existing reports and analytics solutions may need to be rebuilt or redesigned
Licensing model	Perpetual licensing	Subscription-based licensing per user/month	Budgeting model shifts from capital expenditure to operational expenditure
Stability	Historically stable but aging and increasingly fragile	Modern cloud reliability with continuous improvements	Legacy process dependencies may create transitional operational risks
Scalability	Limited by local infrastructure and hardware capacity	Scalable according to business and user needs	Enables future growth but may require process standardization
Accessibility	Primarily office/local-network dependent	Accessible remotely through cloud and web access	Remote access policies and security governance must be established
Availability and recovery	Greater operational risk in case of local system failure	High availability and built-in recovery mechanisms, dependent on network connectivity	Requires reliable internet connectivity and contingency planning
User experience	Outdated, archaic, and less intuitive interface	Modern and user-friendly interface	Users may require extensive training
Data Structure	Complex, tightly coupled legacy data model	Structured and standardized relational data model	Significant data normalization, cleansing, and

			mapping activities required
API and Connectivity	No native REST API support	REST APIs and standardized integration methods	Middleware and transformation layers may be required during migration
Customization Model	Heavy organization-specific customizations accumulated over time	Structured extensibility and modular customization framework	Legacy customizations require assessment, simplification, or redevelopment
Technical Expertise Dependency	High dependency on internal legacy expertise and siloed knowledge	Large ecosystem with broad external expertise availability	Knowledge transfer and reduction of key-person dependency become important
Update and Development Cycle	Limited ongoing development and modernization	Continuously updated and actively developed platform	Continuous change management and release management processes required

The comparison between Unibis and Business Central highlights that in addition to the technological translation, the migration also involves significant operational and organizational changes. While Business Central offers advantages related to scalability, integration, and cloud-based service management, the migration also introduces new requirements regarding governance, process standardization, and dependency on external service infrastructure.

These differences reinforce the importance of change management, organizational readiness, as well as clear definition of responsibilities. In addition, the transition from a locally managed system to a cloud-based ERP environment requires careful consideration of how existing processes, reporting structures, and operational responsibilities are adapted to the new system landscape.

6.3 Applying Findings to Case Systems

This section applies the findings from the literature review and interviews to the case migration from Unibis to Microsoft Dynamics 365 Business Central. The findings are used to identify practical preparation measures that may reduce implementation risks and improve organizational readiness before migration begins. By combining the identified ERP migration challenges, critical success factors, and system comparison results, the chapter demonstrates how the organization can proactively prepare for technical, organizational, and operational

changes associated with the migration. The section is divided based on categorization done in section 4.4.

6.3.1 Organization and strategy

The findings indicate that migration preparation must address not only technical implementation but also the organizational restructuring required when shifting from a locally maintained ERP environment to a cloud-based service model. This transition necessitates redefining internal IT responsibilities, governance practices, and operational ownership structures, as many tasks previously handled internally will shift toward vendor-managed cloud services. As a result, organizational strategy must clarify how decision-making, support processes, and system governance will function in the new environment.

Several interviewees emphasized that the company's long history with Unibis as well as the extensive customizations developed over time, creates both emotional and operational attachment to the legacy system. This makes top-management support and clear top-down communication particularly important. Employees may perceive the change as intimidating, especially because it will significantly alter daily routines. Communicating the purpose and benefits of the migration was identified as essential for improving user acceptance.

Organizational readiness and change management emerged as central themes in both interviews and literature. Securing visible top-management commitment is consistently identified as essential for successful ERP implementation [26]. Interviewee I4 stressed the importance of preparing employees early and communicating change initiatives from the top down to reinforce organizational commitment.

Literature supports this view, noting that communication is a major component of change management and that top-down communication can motivate employees to participate in the transition [15]. Management commitment also influences resource allocation and user participation. Both of these are areas which are repeatedly highlighted as crucial for implementation success [30]. As one interviewee summarized, lack of top-management support "can kill the project."

The migration should therefore be understood not only as a system replacement but also as part of a broader modernization strategy aimed at improving scalability, interoperability, and long-term operational sustainability.

6.3.2 Process and change

The migration represents a shift from heavily customized legacy practices toward standardized cloud-based ERP governance. Interviewee I5 noted that Unibis has been extensively customized, resulting in highly specialized knowledge that is siloed among a limited number of individuals. This dependency complicates migration planning and increases implementation risk.

Because Business Central is designed around standardized, upgrade-compatible configurations, directly replicating legacy customizations may undermine the scalability and maintainability benefits of cloud ERP adoption. The findings therefore suggest critically evaluating existing processes and avoiding unnecessary replication of legacy customizations.

Migration preparation should also include assessing process consistency across business units and locations. Business Central supports centralized and standardized operational models, which may require harmonizing locally adapted practices currently embedded in Unibis.

Several interviewees highlighted that many manual tasks in Unibis could be automated in Business Central. Identifying such workflows is essential for leveraging automation capabilities and reducing operational inefficiencies. Migration preparation should therefore include identification of manual workflows that can be redesigned or eliminated through automation capabilities of the target system.

Overall, the findings indicate that migration success depends less on reproducing existing workflows and more on the organization's willingness to redesign processes around standardized and scalable ERP practices.

6.3.3 Project management

Several interviewees emphasized the importance of clearly defining and prioritizing critical requirements at the beginning of the project. Interviewee I4 further stated that it is important for all stakeholders to share the same vision and align expectations from the start of the implementation process.

The findings suggest that insufficient alignment between stakeholder expectations and implementation realities may increase project complexity and contribute to dissatisfaction during later project phases. Prior research similarly identifies difficulties in meeting management expectations as one of the factors hindering SMEs from adopting new systems

[37]. The success of the implementation can also be assumed to depend on how receptive the organizational culture is to process change and standardization [15].

Interviewee I2 recommended utilizing small and targeted pilot projects to test implementation scenarios and gain a better understanding of system structures, integrations, and operational requirements before large-scale deployment activities. This recommendation appears particularly relevant in the context of the Unibis migration, given the system's complex legacy architecture and non-standardized data structures. Pilot projects may help reduce uncertainty related to integrations, data conversion, customization requirements, and operational process compatibility before broader deployment activities begin.

Given the complexity associated with legacy integrations and historical business processes, phased implementation approaches may provide opportunities to reduce operational risk and improve organizational learning throughout the migration process.

6.3.4 People and team

Several interviewees highlighted that operational knowledge related to Unibis is concentrated among a limited number of individuals. The findings therefore suggest that migration preparation should include structured knowledge transfer activities in order to reduce dependency on siloed expertise before key legacy knowledge becomes inaccessible during later migration phases.

Several interviewees highlighted that the transition from a legacy system to a modern cloud-based ERP system represents a major organizational change and that extensive training is required to support adaptation to the new system environment. Training requirements may extend beyond technical system usage because the migration also introduces new operational models, automated workflows, and standardized business processes. Employees may therefore need support in adapting not only to a new interface, but also to revised organizational responsibilities and ways of working.

Both the interview findings and the literature suggested that training requirements are often underestimated during budgeting, as organizations may assume that employees already possess sufficient technical competence. However, insufficient training may limit employees' ability to effectively utilize the new system and adapt to revised operational processes [30]. Literature further identifies inadequate organizational preparation as a common implementation regret [30], [37].

Training should therefore not be treated solely as technical instruction, but also as a mechanism for supporting organizational adaptation and reducing resistance to change. Change management practices may therefore play an important role in improving user engagement and encouraging long-term system adoption. In addition, team leaders and key users may support employees in developing routines and habits around the effective use of the new system [19].

The transition from a locally managed legacy environment toward cloud-based ERP operations may additionally require new competencies among both users and internal IT personnel related to cloud governance, security practices, and integrated digital workflows.

6.3.5 Technology

Interviewees described Unibis as technologically outdated, difficult to integrate, heavily customized, and increasingly dependent on organization-specific expertise. Its Unix-based architecture and accumulated modifications have created technical complexity that limits flexibility, interoperability, and maintainability.

In contrast, Business Central offers a modern architecture with improved infrastructure, data modelling, and integration capabilities. Interviewees I4 and I5 emphasized that Business Central is significantly better connected to external systems and more compatible with modern data transfer methods. Integrations are easier to implement due to its modular ecosystem and native compatibility with Microsoft technologies.

The migration is therefore not simply a software replacement but a transition between fundamentally different architectural models. Business Central's standardized cloud-based services, APIs, and upgrade-compatible configurations introduce both opportunities and challenges. While the new architecture enables scalability, automation, and interoperability, it also requires redesigning integrations, workflows, and technical processes.

The extent of legacy customization emerged as a key concern. Replicating all historical customizations in Business Central could undermine the long-term benefits of cloud ERP adoption. The findings suggest prioritizing standardization and minimizing custom development to preserve maintainability and upgrade compatibility.

6.3.6 Data and information quality

Data migration was identified as one of the most technically demanding aspects of the project. Interviewees emphasized the need for early data governance activities, including ownership definition, master data validation, duplicate detection, and historical data retention planning.

Interviewee I4 described Unibis's data structure as "quite arcane," noting that it has evolved in a non-standardized manner and does not align well with Business Central's data model. Extracting and interpreting data is therefore difficult. Interviewee I5 similarly identified data extraction as a major challenge due to the legacy nature of the system.

Integrations were also highlighted as a significant challenge, particularly in understanding existing integrations and replicating them in the new environment. Because Unibis is not widely used, technical knowledge has become siloed which has increased dependency on a few individuals.

The findings suggest that migration planning should include early data analysis, mapping, and integration assessment to reduce risks associated with legacy dependencies. Identifying key personnel with system-specific knowledge is critical for successful data conversion and integration redesign. Given the presence of undocumented dependencies and organization-specific logic, a comprehensive integration inventory and dependency mapping should be conducted before implementation begins.

The complexity of historical data conversion and integration redesign may also require temporary coexistence strategies between legacy and new environments during transitional phases.

6.4 Suggested Preparation Actions

The findings across all analytical areas demonstrate that the migration from Unibis to Microsoft Dynamics 365 Business Central constitutes a multifaceted organizational transformation rather than a purely technical upgrade. Successful implementation depends on the organization's ability to balance standardization with operational needs, invest in training and change management, modernize technical structures, and address legacy dependencies through structured planning and knowledge transfer. Based on the empirical findings and literature, the following preparation actions are recommended.

1. Establish organizational change management and governance early

The findings indicate that migration preparation should begin with securing top management commitment, defining governance responsibilities, and creating a structured communication strategy. Because the migration affects both technology and organizational processes, early change management activities are necessary to improve user acceptance and reduce resistance associated with replacing the long-established Unibis system.

2. Evaluate and standardize existing business processes before migration

The findings suggest that existing Unibis customizations and locally adapted workflows should be critically evaluated prior to migration. Instead of replicating all legacy processes within Business Central, the organization should identify opportunities for process harmonization, standardization, and automation in order to support scalability and maintainability within the cloud ERP environment.

3. Prioritize knowledge transfer and end-user training

Because operational and technical knowledge related to Unibis is concentrated among a limited number of individuals, migration preparation should include structured documentation and knowledge transfer activities. In addition, comprehensive user training should be planned early to support adaptation to new workflows, cloud-based operations, and standardized ERP practices.

4. Conduct early data analysis and integration assessment

The findings highlight data conversion and integrations as major migration risks. Preparation activities should thus include early-stage data cleansing, mapping, ownership definition, and integration inventorying. Particular attention should be given to undocumented dependencies and legacy system structures that may complicate migration activities.

5. Utilize phased implementation and pilot projects to reduce risk

The findings suggest that phased implementation approaches and targeted pilot projects may help reduce uncertainty related to integrations, data migration, and process compatibility. Pilot environments can also support organizational learning and allow issues to be identified before broader deployment activities begin.

7 Conclusion

This thesis set out to examine ERP implementation challenges, success factors and how the gathered knowledge could be used to prepare for migration from Unibis to Microsoft Business Central. The findings demonstrate that ERP migration projects are not just technical endeavours. Instead, they represent complex organizational transformations that reshape processes, responsibilities, competencies, and governance structures. The empirical evidence from interviews, combined with insights from the literature, highlights that the success or failure of such initiatives is determined as much by organizational readiness and human factors as by technological aspects.

A central conclusion regarding RQ1 is that ERP migrations introduce significant organizational challenges. These include insufficient end-user involvement, limited top-management support, inadequate company readiness, and a lack of structured change-management practices. Each of these challenges has the potential to undermine implementation progress, reduce user acceptance, and increase resistance to change. These findings reinforce the view that technology alone does not determine success as organizational alignment and user engagement are equally critical.

At the same time, the study identifies several critical success factors regarding RQ2 that can significantly improve migration outcomes. These include active end-user involvement, strong and visible top-management support, well-structured testing and start-up environments, effective team composition, collaboration across project roles, and early attention to data analysis and conversion. These factors emphasize the importance of cross-functional cooperation, shared understanding, and iterative learning throughout the migration process.

Building on these insights, the thesis proposes five preparation actions tailored to the context of migrating from Unibis to Business Central as a result for RQ3. First, establishing organizational change management and governance early is essential for creating clarity, reducing uncertainty, and ensuring consistent communication. Second, evaluating and standardizing existing business processes before migration helps prevent the transfer of unnecessary legacy complexity into the new system. Third, prioritizing knowledge transfer and end-user training addresses the risks associated with siloed expertise and supports employees in adapting to new workflows and responsibilities. Fourth, conducting early data analysis and integration assessment mitigates technical risks related to data quality,

undocumented dependencies, and legacy integrations. Finally, utilizing phased implementation and pilot projects provides a controlled environment for testing assumptions, reducing uncertainty, and supporting organizational learning.

Taken together, these findings underscore that the Unibis–Business Central migration should be viewed not as a technical upgrade but as a comprehensive modernization initiative. It requires coordinated attention to organizational structures, business processes, technical architecture, and human capabilities. By approaching the migration holistically, the organization can increase the likelihood of achieving a successful transition and realizing the long-term benefits of a modern cloud-based ERP environment.

7.1 Research Limitations

While this study provides valuable insights into the organizational, technical, and process-related implications of migrating from Unibis to Microsoft Dynamics 365 Business Central, several limitations should be acknowledged. First, the Unibis system itself represents a legacy technology with limited publicly available documentation. This limited the extent to which external sources could be used to validate or complement interview findings. Much of the system-specific understanding therefore relied on internal expertise, which may not fully capture the system’s historical evolution or undocumented functionalities.

Second, the empirical data is based on a relatively small interview sample. Although the participants were selected for their relevance and experience, a broader sample group including additional end-users, IT personnel, and external consultants could have provided a more diverse set of perspectives and strengthened the generalizability of the findings.

Third, the literature on CSFs presents conceptual overlap and terminology can be inconsistent across studies. Different authors categorize and define CSFs in varying ways, which complicates direct comparison and synthesis. As a result, the CSFs identified in this thesis should be interpreted as thematic clusters rather than rigidly distinct categories.

Finally, the study reflects a specific organizational viewpoint shaped by the context, culture, and history of the company examined. Including perspectives from additional organizations undergoing similar migrations could have enriched the analysis and provided comparative insights into how different environments influence migration challenges and success factors.

7.2 Future Research

The findings of this thesis open several ideas for future research that could deepen understanding of ERP migration processes, particularly in small and medium-sized enterprises transitioning from legacy systems to cloud-based ones. Further research could examine knowledge-transfer practices in environments with deeply embedded legacy systems. Understanding how organizations capture undocumented system logic, mitigate knowledge loss, and transition expertise to new platforms would provide valuable guidance for similar migration projects.

Another area of interest is the long-term impact of process standardization on organizational culture and operational efficiency. As cloud-based ERP systems encourage harmonization and discourage customization, future studies could analyse how employees adapt to standardized workflows and how these changes affect productivity and decision-making.

Finally, comparative case studies across different industries or ERP platforms could provide broader insights into the factors that shape migration success. Such research would help determine which findings are context-specific and which represent generalizable patterns applicable to ERP migrations more broadly.

References

- [1] E. Coşkun, B. Gezici, M. Aydos, A. K. Tarhan, and V. Garousi, ‘ERP failure: A systematic mapping of the literature’, *Data & Knowledge Engineering*, vol. 142, p. 102090, Nov. 2022, doi: 10.1016/j.datak.2022.102090.
- [2] B. Johansson, F. Andersson, and M. Gustavsson, ‘Replacing on-premise ERP with cloud ERP solutions – Reasons and Drivers’, *Procedia Computer Science*, vol. 256, pp. 521–529, Jan. 2025, doi: 10.1016/j.procs.2025.02.148.
- [3] M. A. Abd Elmonem, E. S. Nasr, and M. H. Geith, ‘Benefits and challenges of cloud ERP systems – A systematic literature review’, *Future Computing and Informatics Journal*, vol. 1, no. 1, pp. 1–9, Dec. 2016, doi: 10.1016/j.fcij.2017.03.003.
- [4] H. Klaus, M. Rosemann, and G. G. Gable, ‘What is ERP?’, *Information Systems Frontiers*, vol. 2, no. 2, pp. 141–162, Aug. 2000, doi: 10.1023/A:1026543906354.
- [5] B. Johansson and P. Ruivo, ‘Exploring Factors for Adopting ERP as SaaS’, *Procedia Technology*, vol. 9, pp. 94–99, 2013, doi: 10.1016/j.protcy.2013.12.010.
- [6] S. Demi and M. Haddara, ‘Do Cloud ERP Systems Retire? An ERP Lifecycle Perspective’, *Procedia Computer Science*, vol. 138, pp. 587–594, Jan. 2018, doi: 10.1016/j.procs.2018.10.079.
- [7] T. H. Davenport, ‘Putting the Enterprise into the Enterprise System’.
- [8] M. Haddara and A. Elragal, ‘ERP Lifecycle: When to Retire Your ERP System?’, in *ENTERprise Information Systems*, M. M. Cruz-Cunha, J. Varajão, P. Powell, and R. Martinho, Eds, Berlin, Heidelberg: Springer, 2011, pp. 168–177. doi: 10.1007/978-3-642-24358-5_17.
- [9] J. M. Esteves and J. A. Pastor, ‘An ERP Life-cycle-based Research Agenda’, 1999.
- [10] V. Christiansen, M. Haddara, and M. Langseth, ‘Factors Affecting Cloud ERP Adoption Decisions in Organizations’, *Procedia Computer Science*, vol. 196, pp. 255–262, Jan. 2022, doi: 10.1016/j.procs.2021.12.012.
- [11] A. Bento, ‘HOW FAST ARE ENTERPRISE RESOURCE PLANNING (ERP) SYSTEMS MOVING TO THE CLOUD?’, *Journal of Information Technology Management.*, 2015.
- [12] B. Johansson and P. Ruivo, ‘Exploring Factors for Adopting ERP as SaaS’, *Procedia Technology*, vol. 9, pp. 94–99, Jan. 2013, doi: 10.1016/j.protcy.2013.12.010.
- [13] B. Johansson and M. Newman, ‘Competitive advantage in the ERP system’s value-chain and its influence on future development’. Accessed: Aug. 31, 2025. [Online].

Available:

https://www.researchgate.net/publication/220478922_Competitive_advantage_in_the_ERP_system's_value-chain_and_its_influence_on_future_development

- [14] J. May, G. Dhillon, and M. Caldeira, 'Defining value-based objectives for ERP systems planning', *Decision Support Systems*, vol. 55, no. 1, pp. 98–109, Apr. 2013, doi: 10.1016/j.dss.2012.12.036.
- [15] B. Johansson and M. Byström, 'The role of organizational culture in ERP implementation – The case of replacing an old ERP in a retail organization', *Procedia Computer Science*, vol. 239, pp. 1911–1918, Jan. 2024, doi: 10.1016/j.procs.2024.06.374.
- [16] M. Haddara, S. Gøthesen, and M. Langseth, 'Challenges of Cloud-ERP Adoptions in SMEs', *Procedia Computer Science*, vol. 196, pp. 973–981, Jan. 2022, doi: 10.1016/j.procs.2021.12.099.
- [17] V. Paulsson and B. Johansson, 'Cloud ERP systems architectural challenges on cloud adoption in large international organizations: A sociomaterial perspective', *Procedia Computer Science*, vol. 219, pp. 797–806, Jan. 2023, doi: 10.1016/j.procs.2023.01.353.
- [18] R. Kumar Pandey and P. Kumar, 'Challenges and opportunities of ERP implementation in Indian SMEs: A case study of Jharkhand', *Materials Today: Proceedings*, Mar. 2023, doi: 10.1016/j.matpr.2023.02.150.
- [19] G. B. Akrong, Y. Shao, and E. Owusu, 'Overcoming the Challenges of Enterprise Resource Planning (ERP)', *International Journal of Enterprise Information Systems*, vol. 18, no. 1, Jan. 2022, doi: 10.4018/IJEIS.306242.
- [20] O. Ntelamo, E. Chikohora, and J. Billawer, 'Assessing Enterprise Resource Planning Systems Implementation Challenges in Namibian Industries: A Survey', in *2021 3rd International Multidisciplinary Information Technology and Engineering Conference (IMITEC)*, Nov. 2021, pp. 1–8. doi: 10.1109/IMITEC52926.2021.9714705.
- [21] K. Moumane, N. C. Benabdellah, and I. Rafik, 'An empirical study of Moroccan industrial data: challenges and benefits of an ERP system', in *2023 7th IEEE Congress on Information Science and Technology (CiSt)*, Dec. 2023, pp. 566–574. doi: 10.1109/CiSt56084.2023.10409943.
- [22] S. Tongsuksai, S. Mathrani, and K. Weerasinghe, 'Critical success factors and challenges for cloud ERP system implementations in SMEs: A vendors' perspective',

- in *2021 IEEE Asia-Pacific Conference on Computer Science and Data Engineering (CSDE)*, Dec. 2021, pp. 1–6. doi: 10.1109/CSDE53843.2021.9718428.
- [23] S. Gupta, S. C. Misra, A. Singh, V. Kumar, and U. Kumar, ‘Identification of challenges and their ranking in the implementation of cloud ERP | International Journal of Quality & Reliability Management | Emerald Publishing’. Accessed: Aug. 03, 2025. [Online]. Available: <https://www.emerald.com/ijqrm/article/34/7/1056/142547/Identification-of-challenges-and-their-ranking-in>
- [24] N. M. Alsharari, M. Al-Shboul, and S. Alteneiji, ‘Implementation of cloud ERP in the SME: evidence from UAE’, *Journal of Small Business and Enterprise Development*, vol. 27, no. 2, pp. 299–327, Mar. 2020, doi: 10.1108/JSBED-01-2019-0007.
- [25] R. H. Kusumawardhana, Imairi Eitiveni, W. Yaziji, and Z. A. Adriani, ‘Identifying Critical Success Factors (CSF) in ERP Implementation Using AHP’., *Journal of Cases on Information Technology*, vol. 26, no. 1, Jan. 2024, doi: 10.4018/JCIT.337389.
- [26] Muradallah Idilbi and E. A. Abu-Shanab, ‘Critical Success Factors for ERP Implementation: Two directions Focusing on employee Perceptions in Qatar’, *International Journal of Technology and Human Interaction*, vol. 18, no. 1, Jan. 2022, doi: 10.4018/IJTHI.297613.
- [27] F. Sunmola and G. L. Lawrence, ‘Key Success Factors for Integration of Blockchain and ERP Systems: A Systematic Literature Review’, *Procedia Computer Science*, vol. 232, pp. 775–782, Jan. 2024, doi: 10.1016/j.procs.2024.01.077.
- [28] M. A. Juniawan, N. Ashari, R. T. Prastiti, S. Inayah, F. Gunawan, and P. H. Putra, ‘Exploring Critical Success Factors for Enterprise Resource Planning Implementation: A Telecommunication Company Viewpoint’, in *2022 1st International Conference on Information System & Information Technology (ICISIT)*, Jul. 2022, pp. 1–6. doi: 10.1109/ICISIT54091.2022.9873043.
- [29] S. Aini, M. Lubis, R. W. Witjaksono, and A. Hanifatul Azizah, ‘Analysis of Critical Success Factors on ERP Implementation in PT. Toyota Astra Motor Using Extended Information System Success Model’, in *2020 3rd International Conference on Mechanical, Electronics, Computer, and Industrial Technology (MECnIT)*, Jun. 2020, pp. 370–375. doi: 10.1109/MECnIT48290.2020.9166653.
- [30] H. Madathala, G. Yeturi, V. Mane, and P. D. Muneshwar, ‘Navigating SAP ERP Implementation: Identifying Success Drivers and Pitfalls’, in *2025 3rd International*

- Conference on Intelligent Data Communication Technologies and Internet of Things (IDCIoT)*, Feb. 2025, pp. 75–83. doi: 10.1109/IDCIOT64235.2025.10914890.
- [31] I. Dissanayake and S. Thelijjagoda, ‘Impact of Critical Success Factors in Oracle EBS Enterprise Resource Planning Post Go Live Implementation: A Case Study on SriLankan Airlines’, in *2022 International Conference on Computing, Communication and Power Technology (IC3P)*, Jan. 2022, pp. 268–272. doi: 10.1109/IC3P52835.2022.00064.
- [32] F. Mahmood, A. Z. Khan, S. A. Shah, and M. Adil, ‘Post ERP implementation issues and challenges: exploratory case studies in the context of Saudi Arabia’, *K*, vol. 53, no. 12, pp. 5749–5774, Dec. 2024, doi: 10.1108/K-06-2022-0914.
- [33] T. George, ‘Semi-Structured Interview | Definition, Guide & Examples’, Scribbr. Accessed: Mar. 19, 2026. [Online]. Available: <https://www.scribbr.com/methodology/semi-structured-interview/>
- [34] ‘Unibis | ERP Solutions for the Manufacturing & Logistics Industry’, Markinson. Accessed: Jun. 29, 2025. [Online]. Available: <https://www.markinson.com.au/unibis>
- [35] ‘Business Central | Microsoft Dynamics 365’. Accessed: Jun. 29, 2025. [Online]. Available: <https://www.microsoft.com/en-us/dynamics-365/products/business-central>
- [36] ‘Interview with ERP Consultant (I2)’, Mar. 24, 2026.
- [37] S. Tongsuksai, S. Mathrani, and K. Weerasinghe, ‘Critical success factors and challenges for cloud ERP system implementations in SMEs: A vendors’ perspective’, in *2021 IEEE Asia-Pacific Conference on Computer Science and Data Engineering (CSDE)*, Dec. 2021, pp. 1–6. doi: 10.1109/CSDE53843.2021.9718428.

Appendices

Attachement 1 - Questionnaire

Questionnaire

About the Study

This study explores migration from on-premises Enterprise Resource Planning (ERP) systems to cloud-based ERP solutions. The aim is to better understand both the challenges and the key factors that contribute to successful implementation, as well as how these insights can be applied in practice.

The study is guided by the following research questions:

RQ 1: What challenges are involved in replacing an on-premises ERP system with a cloud-based ERP system?

RQ 2: What are the factors of successful migration?

RQ 3: How can these findings be used to prepare migration from Unibis to Microsoft Dynamics 365 Business Central?

This questionnaire is designed to support a semi-structured interview. It provides a general framework for discussion while allowing flexibility to explore your experiences and insights in more depth. There are no right or wrong answers. Your professional perspective is highly valuable to this research.

Your responses will be treated with strict confidentiality. All data will be anonymized, and no individual or organization will be identifiable in the final report.

Consent

By participating in this study, you consent to the use of your responses for academic research purposes. Participation is voluntary, and you may choose to withdraw at any time.

If you have any questions or would like further information about the study, please feel free to contact the researcher.

Background	
Q1	Briefly describe your experience with ERP systems. (e.g., years of experience, roles, industries, types of systems)
Q2	What kind of ERP systems have you worked with: A. On-premises B. Cloud-based C. Both (If both, please specify the extent of your experience with each.)
Q3	Have you been involved in any ERP implementation projects? If so, in what capacity? (e.g., project manager, consultant, developer, end-user representative, etc.)

ERP implementation factors						
Q4	Based on your experience, how important are the following factors in influencing the success of an ERP implementation or migration project? Please rate each factor on a scale from 1 to 5: (1 = Not important, 3 = Neutral, 5 = Very important)					
		1	2	3	4	5
	Company readiness					
	Top management support					
	Innovative culture in company					
	Sufficient capability and resources					
	Organizational change management					
	Business process re-engineering					
	Effective project management					
	Keeping on time					
	Clear goals and objectives					
	Testing and start-up system					
	Use of consultants					
	Vendor and consultant quality					
	Vendor support					
	Project team competence					
	Team composition					
	Cooperation between team members					
	End-user involvement					
	User's attitude and willingness to change					
	Appointing an internal champion					
	Users' tech competency					
	Education and training					
	ERP fit					

	Quality of current system					
	Architecture choices available					
	Hardware and software selection					
	Choice of ERP modules and packages					
	Extent of customization					
	Data analysis and conversion					
	Information quality					
Q5	Which of the above factors do you consider the most critical? Why?					
Q6	Are there any factors you rated as less important? Please explain your reasoning.					
Q7	Are there any important factors missing from the list? If yes, please specify.					
Q8	Based on your experience, which of these factors are the most difficult to manage or implement in practice? Why?					

Migration from Unibis (on-premises ERP) to Microsoft Business Central (cloud-based ERP)?	
Q9	Based on your knowledge or experience, what key challenges do you foresee when migrating from Unibis to Microsoft Dynamics 365 Business Central
Q10	What preparation steps or preconditions would you recommend before starting such a migration project?
Q11	What advantages or opportunities do you see in moving from Unibis to Microsoft Dynamics 365 Business Central?
Q12	If you could give one key recommendation for ensuring a successful migration, what would it be?
Q13	How should the organization prioritize the critical success factors identified earlier when preparing for this specific migration?
Q14	Is there anything else you would like to add about ERP transitions, particularly between on-premises and cloud-based systems?