Lisbon School of Economics & Management
Universidade de Lisboa

MASTERS IN MANAGEMENT (MIM)

MASTERS FINAL WORK

PROJECT

CHALLENGES OF MANAGING A DATA-DRIVEN ORGANIZATION: EVIDENCE FROM SCHNEIDER ELECTRIC

CAROLINA CARVALHO DE ALBUQUERQUE

MARCH - 2026

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RESUMO

Este trabalho analisa os desafios que dificultam o desenvolvimento de uma cultura de gestão orientada por dados na equipa de Project Management Ibérica da Schneider Electric. Apesar da existência de ferramentas digitais e plataformas, a transição para uma organização orientada por dados (Data-Driven Organization-DDO) é influenciada sobretudo por fatores organizacionais e comportamentais, e não apenas por limitações tecnológicas.

Recorrendo a uma abordagem de investigação qualitativa baseada em entrevistas semiestruturadas, este estudo examina quatro dimensões centrais: (1) O Papel da Cultura Organizacional, (2) Gestão do Conhecimento em Organizações Orientadas por Dados, (3) Aceitação da Tecnologia e (4) Organizações Orientadas por Dados. A análise temática foi aplicada para identificar padrões-chave que afetam a qualidade dos dados, a usabilidade das plataformas e a perceção dos colaboradores.

Os resultados revelam que uma mentalidade orientada para a execução imediata, a pressão operacional, a dependência de conhecimento informal e a resistência associada à perceção de aumento da carga de trabalho condicionam o envolvimento com tecnologias orientadas por dados. Práticas inconsistentes de introdução e gestão de dados enfraquecem a confiança nos dados e afetam negativamente a utilidade percebida. O estudo conclui que o reforço de uma cultura data-driven exige alinhamento entre cultura organizacional, práticas estruturadas de gestão do conhecimento e melhoria da aceitação tecnológica. Ao integrar estas dimensões, esta investigação fornece orientações práticas para melhorar a fiabilidade dos dados e apoiar os esforços de transformação digital da Schneider Electric.

Palavras-chave: gestão orientada por dados, cultura organizacional, gestão do conhecimento, aceitação tecnológica, transformação digital, qualidade dos dados.

ABSTRACT

This work analyzes the challenges that hinder the development of a data-driven management culture within the Iberian Project Management team at Schneider Electric. Although digital tools and reporting platforms are available, the transition toward a Data-Driven Organization (DDO) is influenced by organizational and behavioral factors rather than technological limitations.

Using a qualitative research approach based on semi-structured interviews, this study examines four central dimensions: (1) The Role of Organizational Culture, (2) Knowledge Management in Data-Driven Organizations, (3) Technology Acceptance, and (4) Data-Driven Organizations. Thematic analysis was applied to identify key patterns affecting data quality, platform usability, and employee perception.

The findings reveal that an execution-first mindset, operational pressure, reliance on informal knowledge, and resistance driven by perceived workload decrease engagement with data-driven technologies. Inconsistent data practices weaken trust in platforms and negatively affect perceived usefulness. The study concludes that strengthening a data-driven culture requires alignment between organizational culture, structured knowledge management practices, and improved technology acceptance. By integrating these dimensions, this research provides practical guidance for improving data reliability and supporting Schneider Electric's digital transformation efforts.

KEYWORDS: data-driven management, organizational culture, knowledge management, technology acceptance, digital transformation, data quality.

GLOSSARY

MFW – Master's Final Work

CPP – Customer Project Process

DDOs – Data-Driven Organizations

KM – Knowledge Management

SDG – Sustainable Development Goal

TPB – Theory of Planned Behavior

UTAUT – the Unified Theory of Acceptance and Use of Technology

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1. INTRODUCTION

1.1. Work Contextualization

Businesses face numerous obstacles for staying competitive and increasing overall effectiveness, for this reason organizations are realizing the importance of focusing on how information is managed. Therefore, there has been an increase of data-driven management as a strategic asset, facilitating strategic decisions, and overall performance (Pantović et al., 2024; Zabala-Vargas et al., 2023). However, ensuring the use and the quality of data, can be challenging for businesses, since often face problems with data collection and inconsistencies (Fawzy et al., 2025). Such developments are particularly relevant in industrial and project-based contexts, where digital innovation and data utilization are key drivers of competitiveness, aligning with the principles of Sustainable Development Goal (SDG) 9, part of the United Nations 2030 Agenda, which focuses on building resilient infrastructure, promoting sustainable industrialization, and fostering innovation.

The adoption of a data-driven culture requires more than simply implementing technological tools, it also depends on a supportive organizational culture, effective knowledge management practices, and positive employee attitudes toward technology (Thanabalan et al., 2025). In project-based environments such as project management, rely heavily on accurate and timely data to control costs, prediction in the development of projects, the identification of critical factors, the detailed identification of risks, the optimization of planning, and the automation of tasks to ensure successful project delivery (Zabala-Vargas et al., 2023). Despite significant investments in digital platforms and information systems, many organizations still struggle to fully embed data-driven practices into their daily routines (Thanabalan et al., 2025).

This research project was developed within the context of work experience at Schneider Electric, integrated into the Iberian Project Management team. The experience provided direct exposure to project-based environments where data, digital platforms, and knowledge-sharing practices play a central role in a Data-Driven organization.

Schneider Electric is a global energy technology leader, with a portfolio of intelligent devices, software-defined architectures, AI-powered systems, digital services, and expert advisory. The company's technologies enable buildings, data centers,

factories, infrastructure, and grids to operate as open, interconnected ecosystems, enhancing performance, resilience, and sustainability. With 160,000 employees and one million partners in over 100 countries, Schneider Electric is consistently ranked among the world's most sustainable companies (Schneider Electric, 2025).

Within this context, this study addresses broader challenges related to data-driven management in project-based environments, which are directly connected to the United Nations Sustainable Development Goal (SDG) 9 Industry, Innovation and Infrastructure. By promoting effective use of data, digital platforms, and knowledge management practices, the research also contributes indirectly to SDG 13 Climate Action, as Schneider Electric's core business focuses on energy efficiency, electrification, and digital solutions that help customers reduce energy consumption, optimize resource use, and lower carbon emissions. Therefore, improving internal data-driven management practices enhances the company's operational efficiency, decision-making quality, and project performance, which in turn strengthens its ability to deliver sustainable solutions to clients, and sustainability-oriented outcomes.

1.2. Project Objectives

Despite the availability of data platforms and knowledge tools, organizations often face challenges related to inconsistent data usage, limited knowledge sharing, and resistance to digital systems. These challenges can reduce the reliability of project information and negatively affect financial decision-making (Fawzy et al., 2025; Pantović et al., 2024; Thanabalan et al., 2025; Zabala-Vargas et al., 2023). Such limitations hinder the full potential of data-driven project management as an enabler of innovation and efficient infrastructure management, which are central to SDG 9.

Within the Iberian Project Management team at Schneider Electric, although data platforms are available and widely used across the organization, their usability and engagement face challenges. This work aims to understand how organizational culture, knowledge management practices, and technology adoption influence the development of a data-driven project management culture and its impact on data quality. By addressing these factors, the study also explores how improved data practices may support more efficient and sustainability-oriented decision-making, contributing indirectly to SDG 13.

The main objective of this project is to analyze and identify the challenges that hinder the development of a data-driven management culture within the Iberian Project Management team at Schneider Electric, and to understand how these factors affect data quality, platform usability, and employee perception.

Therefore, this work aims to analyze the following questions:

1. How do organizational culture and knowledge management practices influence the adoption of data-driven management within project-based environments?
2. How well do employees accept data-driven technologies at Schneider Electric, and what challenges affect their use?
3. How can organizations strengthen a data-driven management culture to improve data reliability and the effective use of data-driven technologies?

1.3. Work Structure

This work is divided into six chapters. The first chapter introduces the theme to be addressed and presents the relevance of the study, as well as the objective associated with it and the respective research questions. The second chapter concerns the literature review, which focuses on (1) The Role of Organizational Culture, (2) Knowledge Management in Data-Driven Organizations, (3) Theoretical Foundations of Technology Acceptance, and (3) Data-Driven Organizations. Next, in the third chapter, the frame of reference that guided this project. The fourth chapter is dedicated to the methodology, in which the type of study, the sample, data collection and processing are mentioned. The analysis and discussion of the results is presented in the fifth chapter. Finally, the sixth chapter is closed with the conclusions and limitations of the study, followed by suggestions for future research.

2. LITERATURE REVIEW

2.1. The Role of Organizational Culture

Organizational culture constitutes a robust and extensively researched domain, with over 1,712,730 scholarly works indexed in Lens.org (2026), reflecting its strong theoretical and practical relevance across disciplines. Within this body of literature, Hofstede (1980) stands out as one of the pioneering scholars to empirically demonstrate how culture influences organizational practices, highlighting that managerial approaches cannot be separated from the cultural context in which they operate (as cited in Fernandes et al., 2023). This insight remains particularly relevant in the context of managing data-driven organizations, where decision-making increasingly relies on analytical reasoning rather than intuition or hierarchical authority.

Subsequent theoretical developments further refined the understanding of organizational culture at the organizational level. Schein (2007) conceptualizes culture as a pattern of shared basic assumptions learned over time, while Chiavenato (2009) defines it as a system of shared values, beliefs, and norms that guide managerial practices and organizational performance. Together, these perspectives emphasize that culture shapes how employees interpret information, respond to change, and engage with new managerial approaches, including data-driven management.

Recent literature highlights organizational culture as a critical enabler, but also a major challenge, in the adoption of data-driven practices. Studies show that cultural orientations toward learning, transparency, and experimentation significantly influence employees' openness to data use and analytics-based decision-making (Cherian et al., 2021; Fernandes et al., 2023; Ghafoori et al., 2024). Consequently, organizational culture is positioned as a central enabler not only of employee engagement but also of an organization's capacity to embed data-driven practices and sustain performance under conditions of change (Cherian et al., 2021; Fernandes et al., 2023; Ghafoori et al., 2024).

Culture within an organization can either facilitate or hold back changes, both values and beliefs, generally contained in the management philosophy, guide employees and influence their openness to new procedures like implementation of platforms for data-based decision making (Barbala et al., 2024; Szukits & Móricz, 2024). Therefore, it is necessary to succeed in implementing corporate culture, thus ensuring good acceptance

by employees (Ghafoori et al., 2024; Leso et al., 2023). Also, central of a data-driven company in literature can relied on how the organizational culture is approached and embedded within the organization (Ghafoori et al., 2024; Szukits & Móricz, 2024).

All areas of a company have their expectations aligned with their work methods and goals, whether directly related to the final product and services or not. Regardless, all are influenced by management practices, habits, and values embedded in the rules that define organizational norms, which ultimately affect employee performance (Cherian et al., 2021; Zhang et al., 2023). Organizational efficiency and its relationship with culture have been studied to demonstrate its role within the corporate structure. Thus, the way organizational culture is shaped impacts the efficiency levels of activities, as it determines the degree of importance assigned to tasks in each area (Barbala et al., 2024; Cherian et al., 2021).

In summary, culture not only affects individual attitudes toward data but also determines how data is shared, interpreted, and legitimized in decision-making processes. Research indicates that the successful implementation of data-driven management depends on embedding cultural values that support evidence-based reasoning and cross-functional collaboration (Ghafoori et al., 2024; Leso et al., 2023). As such, organizational culture emerges as a foundational challenge in managing data-driven organizations, as misalignment between cultural norms and data-driven objectives can significantly limit the value derived from data initiatives (Fischer et al., 2022).

2.2. Knowledge Management (KM) in Data-Driven Organizations

Knowledge management (KM) represents another highly robust research domain, with more than 3,671,636 scholarly works indexed in Lens.org (2026), and 233,702 studies specifically focused on business contexts. Within this extensive body of knowledge, early foundational contributions such as Nonaka and Takeuchi (1995), Davenport and Prusak (1998), and Alavi and Leidner (2001) helped shape the understanding of knowledge as a strategic organizational capability involving the creation, sharing, storage, and application of knowledge to support organizational performance and decision-making.

More recent studies emphasize that KM has become increasingly critical in data-driven organizations, where large volumes of data must be transformed into actionable knowledge (Durst et al., 2023; Idrees et al., 2023). Knowledge management is defined as

an organization's capacity to gather information from internal and external sources and convert it into strategies, insights, and improved practices (Idrees et al., 2023). However, this transformation process presents significant managerial challenges, particularly in project-based and digitally intensive environments.

One of the central challenges identified in the literature is that organizations often focus on managing information or documents rather than fostering genuine knowledge creation and sharing among employees (Idrees et al., 2023). KM systems may become repositories of data without supporting interpretation, learning, or contextualization, thereby limiting their contribution to data-driven decision-making (Durst et al., 2023; Qhal, 2025). This challenge is particularly evident in data-driven management contexts, where data alone does not generate value unless it is effectively integrated into organizational knowledge structures.

Internal knowledge development practices, such as collecting lessons learned and standardizing information related to activities within a company as projects, play a critical role in enabling continuous improvement in data-driven environments (Idrees et al., 2023; Inthavong et al., 2023). However, managing such processes requires alignment between KM practices, organizational culture, and managerial support. As knowledge is difficult to measure and codify, organizations must carefully manage human expertise, experience, and social interaction to avoid underutilizing internal knowledge resources (Durst et al., 2023; Idrees et al., 2023; Qhal, 2025).

Given the intangible nature of knowledge, organizations must adopt structured approaches to ensure the effective use of skills and experience embedded in their systems, processes, and workforce (Idrees et al., 2023; Inthavong et al., 2023). Often, solutions to challenges can be found internally by examining internal knowledge rather than seeking external solutions Knowledge management supports this process by helping organizations identify, select, and use critical information and knowledge that already exists (Idrees et al., 2023; Qhal, 2025).

However, for a successful integration of KM and data-driven project management, the company needs not only focus on a technological management, but employees (Durst et al., 2023; Qhal, 2025). Instead of managing relevant expertise, some businesses end up managing documents, this is a common mistake since many KM technologies are focused

technological tools for document organization rather than supporting creation, sharing the real knowledge (Idrees et al., 2023).

KM plays a central role in enabling data-driven practices within the field of project management (Idrees et al., 2023; Qhal, 2025). Cost, schedule, risk, quality, and performance are examples of data that is being generated throughout the project lifecycle (Banerjee et al., 2025; Idrees et al., 2023). When well-managed, this data can be transformed into valuable knowledge that supports project planning and control (Idrees et al., 2023). Therefore, it can be concluded that understanding the relationship between knowledge management, organizational culture, and data usage is essential for organizations that want to optimize the value of their project data (Durst et al., 2023; Qhal, 2025).

2.3. Theoretical Foundations of Technology Acceptance

Despite the significant investment from companies in digital platforms and data systems, organizations frequently face challenges related to the effective use of these technologies (Jalo & Pirkkalainen, 2024). The literature consistently shows that underutilization of organizational platforms is rarely caused by technical limitations alone, but rather by user behavior, organizational conditions, and leadership practices. Therefore, the topic of technology acceptance provides a structure theorical foundation to explain why employees choose to use or resist organizational platforms, even when such systems are strategically important for performance and competitiveness.

For over 40 years, multiple models and theories of technological acceptance have been developed to explain and predict user adoption and acceptance. Technology Acceptance Model (TAM) developed by Davis in 1989 is one of the most widely utilized models of acceptance and usage of innovative technologies, defining two main factors that are important determinants of users' acceptance: perceived usefulness and perceived ease of use (de Camargo Fiorini et al., 2018). More recent studies show that acceptance models remain highly relevant in explaining why employees underutilize organizational systems (Nnaji et al., 2023).

The fundamental of the TAM model is focused on how the employee perceives a specific platform, which will enhance their performance with higher adoption rate if it is better comprehended and the less effort is requires to use (Nnaji et al., 2023). Employees

are less likely to engage with platforms that are perceived as complex or badly integrated into daily routines, even when their potential benefits are recognized (Jalo & Pirkkalainen, 2024). Usability challenges are particularly evident when systems are not well integrated with existing tools or processes and when their use requires additional time or effort, mostly when exists a high workload and difficult demands. As a result, formal organizational platforms may be bypassed in favor of informal practices, reinforcing gaps between system availability and effective use, weakening the organization's ability to manage data consistently and systematically.

Beyond individual perceptions, technology use is also influenced by social and organizational dynamics. Employees often follow the practices and expectations of supervisors and colleagues, making more likely to use platforms when managers and colleagues actively use and support their use (Tamilmani et al., 2021). This view is reflected in the development of technology acceptance research, which moved beyond the original TAM to include social and organizational aspects, such as Planned Behavior (TPB) and the Unified Theory of Acceptance and Use of Technology (UTAUT). These models show that technology acceptance depends not only on effectiveness and ease of use, but also on social norms, available support, and organizational conditions (Nnaji et al., 2023).

Overall, from those points highlighted, technology acceptance in organizations can be complex and have a lot of effects, not only influenced by an individual or technical decision, but an organizational culture and process (Jääskä et al., 2025). By acknowledging the contributions of TAM, TPB, and UTAUT, the literature provides a solid theoretical basis to explain persistent challenges in the effective use of organizational platforms, particularly when adoption depends more on user perceptions, social influence, and organizational conditions rather than system availability alone (Tamilmani et al., 2021; Jalo & Pirkkalainen., 2024).

2.4. Data-Driven Organizations

The concept of data-driven organizations (DDOs) has gained prominence as companies pursue digital transformation to improve efficiency and decision-making (Adewusi et al., 2024; Barbala et al., 2024). While early research focused primarily on technological automation (Jurgen, 1983, as cited in Hupperz et al., 2021), contemporary studies

emphasize that becoming data-driven is an organization wide transformation rather than focusing purely on technical automation.

DDOs are defined as organizations that integrate data, analytics, and digital platforms to generate business insights and support evidence-based decision-making (Fischer et al., 2022; Morales-Arevalo & Rodríguez, 2025). However, the literature consistently highlights that the main challenges in achieving this transformation lie in aligning people, processes, and technology (Bayraktar et al., 2024; Fischer et al., 2022).

Nowadays, data-driven organizations (DDO) are defined as companies that incorporate platforms, data and analytics creating an outcome with business insights and opportunities (Fischer et al., 2022; Morales-Arevalo & Rodríguez, 2025). Leveraging the potential of data uncover future needs, secure compliance, standardize information, provide transparency within the company, all supporting better based decision making (Adewusi et al., 2024; Bayraktar et al., 2024; Fischer et al., 2022).

More than the concept that data creates value to the business, it's to provide competitive survival in a world increasingly defined by data. Implementing methods for analyzing data in smart way is a surviving matter for competition (Adewusi et al., 2024; Fischer et al., 2022).

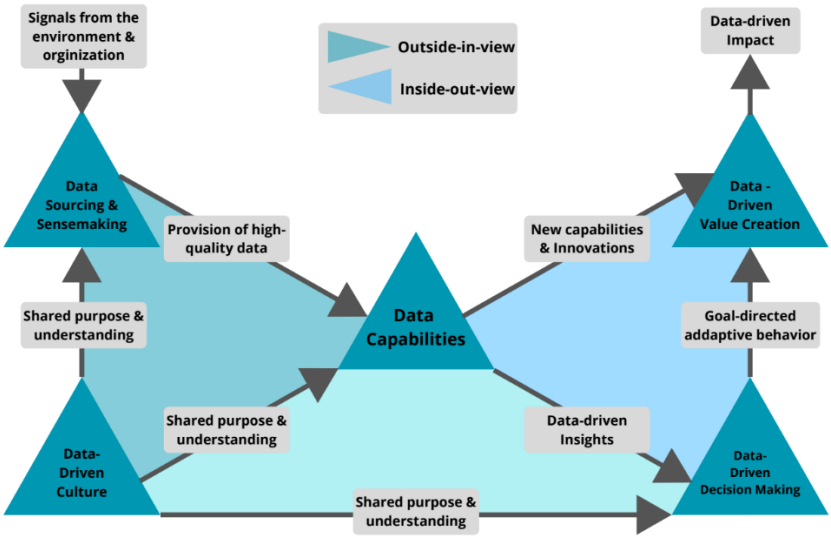

Figure 1 - Data-Driven Organization Dynamics
Source: own elaboration based on Fischer et al. (2022)

According to figure 1, based on Fischer et al., (2022), the framework shows that the "Data Capabilities" alone are insufficient to achieve data-driven outcomes. Organizations must develop cultural orientations that support data use and establish

knowledge management processes that enable interpretation and learning. Therefore, companies depend on a structure not only with technical skills, but a deep implementation of processes capable to promote change in the organizational behavior (Fischer et al., 2022; Idrees et al., 2023). Failure to integrate these dimensions often results in fragmented data initiatives and limited managerial impact (Adewusi et al., 2024; Bayraktar et al., 2024).

In this sense, the identification of the main challenges in the field of data analytics for organizational decision-making, highlights significant obstacles related to effective data management (Adewusi et al., 2024; Bayraktar et al., 2024). In summary, the literature identifies managing a data-driven organization as a complex challenge that extends beyond technological implementation. Organizational culture, knowledge management, and technology acceptance emerge as interdependent dimensions that jointly determine whether data-driven management can be effectively realized and sustained.

3. FRAME OF REFERENCE

Building on the literature review presented in chapter two, this chapter develops the analytical frame of reference that guides the empirical investigation. While the literature on data-driven organizations highlights the strategic value of data, analytics, and digital platforms, it also emphasizes that organizations frequently struggle to translate these capabilities into effective managerial practices (Cherian et al., 2021; Fernandes et al., 2023; Ghafoori et al., 2024). These challenges are not purely technical but are deeply embedded in organizational culture, knowledge management practices, and employee acceptance of digital systems (Barbala et al., 2024; Szukits & Móricz, 2024).

By applying this integrated frame of reference, the study aims to systematically analyze how managerial, cultural, and knowledge-related challenges affect the implementation of data-driven management practices at Schneider Electric. This approach ensures alignment between theory and empirical investigation as the analytical dimensions guide both the development of the interview guide (Appendix A) and the subsequent interpretation of findings. Rather than expanding beyond the literature, the empirical analysis is structured around these theoretically grounded dimensions, allowing emerging themes to be systematically interpreted within an established conceptual framework.

Each dimension presented in Table I reflects an essential element of a data-driven management and, at the same time, highlights the managerial challenges associated with its implementation. Together, these dimensions offer a comprehensive framework for understanding how organizational factors enable or constrain the development of a sustainable data-driven management culture.

Table I - Frame of References and Definition

Dimension	References	Description
The Role of Organizational Culture	Ghafoori et al. (2024) Szukits & Móricz. (2024) Leso et al. (2023)	Organizational culture is critical because shared values, leadership behaviors, and norms shape how employees perceive and use data in their daily work. Understanding this dimension helps explain whether the environment supports or constrains the development of a data-driven project management culture.
Knowledge Management in Data-Driven Organizations	Idrees et al. (2023) Durst et al. (2023) Qhal. (2025)	Knowledge management is essential to ensure that data and insights are effectively created, shared, and applied across project teams. Strong knowledge enables informed decision-making and reduces the risk of information silos that could hinder a data-driven approach.
Technology Acceptance	Nnaji et al. (2023) Jalo & Pirkkalainen. (2024) Tamilmani et al. (2021)	Technology acceptance was selected to assess how employees perceive and adopt digital platforms that support data-driven project management. Since advanced tools create little value if they are not fully utilized, this dimension helps identify factors influencing adoption and sustained use.
Data-Driven Organizations	Fischer et al. (2022) Idrees et al. (2023) Barbala et al. (2024)	The data-driven organization dimension captures the extent to which data is trusted, integrated into processes, and used to guide project decisions. Examining this area clarifies the organization's level of data maturity and its readiness to strengthen evidence-based management practices.

Source: own elaboration

Organizational culture literature emphasizes that shared values, leadership behaviors, and informal norms strongly shape how employees perceive, interpret, and use data in managerial decision-making (Ghafoori et al., 2024; Leso et al., 2023; Szukits & Móricz, 2024). In the context of digital transformation, culture determines whether data-based reasoning becomes embedded in everyday routines or remains a symbolic initiative. At a deeper level, cultural sub-dimensions such as learning orientation, accountability for data accuracy, openness to change, trust in data-driven reasoning, and leadership role modeling influence how analytical practices are legitimized within the organization (Leso et al., 2023; Szukits & Móricz, 2024). Learning orientation reflects the extent to which organizations encourage reflection and improvement based on evidence, while accountability reinforces responsibility for maintaining accurate and updated information. Trust in data-driven reasoning shapes whether employees rely on dashboards

or intuition, and openness to change determines the willingness to adapt established routines. Leadership commitment to evidence-based decision-making further reinforces these dynamics, as managers' consistent use of data signals its strategic importance (Ghafoori et al., 2024; Leso et al., 2023). Cultural misalignment may therefore limit the operational integration of data practices, even when technological infrastructures are in place.

Knowledge management research complements this perspective by focusing on the processes through which data is transformed into actionable organizational knowledge. Core KM sub-dimensions include knowledge creation, knowledge codification, knowledge sharing, knowledge reuse, and knowledge quality governance (Durst et al., 2023; Idrees et al., 2023). Knowledge creation refers to the generation of insights from project experiences and analytical outputs, while codification ensures that such insights are systematically documented and stored. Knowledge sharing, whether formal or informal, determines how information circulates across teams, and knowledge reuse enables past experiences to inform future decisions. In project-based contexts, particular challenges include excessive reliance on tacit knowledge, fragmented documentation, and limited cross-project learning (Idrees et al., 2023; Qhal, 2025). Moreover, data quality and consistency act as enabling conditions for effective knowledge management, as unreliable or outdated information weakens confidence in shared knowledge (Taleb et al., 2021). Without structured KM mechanisms, data remains underutilized and its contribution to organizational learning becomes constrained.

Technology acceptance literature provides further insight into why data-driven initiatives frequently underperform in practice, even when robust technological infrastructures are in place. Drawing on the UTAUT2, prior research identifies key sub-dimensions influencing adoption, including perceived usefulness, perceived ease of use (effort expectancy), social influence, facilitating conditions, perceived workload, and resistance to change (Jalo & Pirkkalainen, 2024; Nnaji et al., 2023; Tamilmani et al., 2021). Perceived usefulness refers to the extent to which users believe that a system enhances performance, while perceived ease of use captures the cognitive and operational effort associated with system interaction (Nnaji et al., 2023; Tamilmani et al., 2021). Social influence and facilitating conditions shape adoption by reinforcing normative expectations and providing structural support. Additionally, perceived workload reflects

users' evaluation of whether system use increases administrative burden, and resistance to change captures behavioral or attitudinal reluctance toward new digital practices (Jalo & Pirkkalainen, 2024). When effort is perceived to outweigh value, engagement may decline, leading to partial usage, avoidance, or reliance on alternative tools. These findings suggest that many data-driven challenges stem from managerial and behavioral dynamics rather than purely technical limitations (Jalo & Pirkkalainen, 2024; Nnaji et al., 2023).

Finally, the literature on data-driven organizations integrates cultural, knowledge, and technological perspectives by emphasizing that successful data-driven transformation depends on the alignment of people, processes, and technology (Barbala et al., 2024; Fischer et al., 2022; Idrees et al., 2023). Data-driven capabilities generate sustainable value only when supported by a culture that legitimizes analytical reasoning, knowledge management practices that convert data into shared insights, and high levels of user acceptance. Strategic alignment, data quality governance, and continuous learning mechanisms further reinforce the institutionalization of data-driven management (Barbala et al., 2024; Fischer et al., 2022). When misalignment occurs across these dimensions, organizations may experience fragmented implementation, where advanced analytics coexist with low engagement and limited strategic impact.

Taken together, these theoretical perspectives provide a coherent analytical foundation for examining the managerial conditions that enable or constrain the development of a data-driven management culture. By jointly considering organizational culture, knowledge management, and technology acceptance, this study establishes an integrated lens to analyze the dynamics shaping data use and decision-making within Schneider Electric.

3.1. Conceptual Framework of Challenges of Managing a DDO

Building on the literature review, this study adopts an integrated analytical framework to examine the challenges of managing a data-driven organization at Schneider Electric. As illustrated in Figure 2, the data-driven organization represents the broader organizational context within which data-driven management operates. Data-driven management is conceptualized as the managerial mechanism that enables the organization to translate

data capabilities into consistent and reliable data use across daily operations (Mikalef et al., 2020; Szukits & Móricz, 2024).

On one side, the framework is grounded in three key core theoretical dimensions, organizational culture, knowledge management, and technology acceptance. Organizational Culture and Knowledge Management are positioned as the core dimensions, as they shape values, behaviors, learning processes, and the interpretation of data in daily work (Ghafoori et al., 2024; Idrees et al., 2023; Durst et al., 2023). Technology Acceptance is treated as an enabling dimension that influences whether digital platforms are effectively used, while the Data-Driven Organization dimension captures the broader organizational outcome resulting from the interaction of these elements (Jalo & Pirkkalainen, 2024; Nnaji et al., 2023).

On the other side, the model highlights the main categories of challenges that emerged from the interview data and subsequent thematic analysis, namely pressure versus understanding, informal knowledge sharing, an execution-first mindset, resistance and misconceptions (particularly the perceived increase in workload), and data quality and reliability. Although these challenges are grounded in the empirical findings, they are interpreted and discussed considering the theoretical dimensions previously established. Their concrete manifestations within the Schneider Electric project context are examined in detail in the analysis chapter.

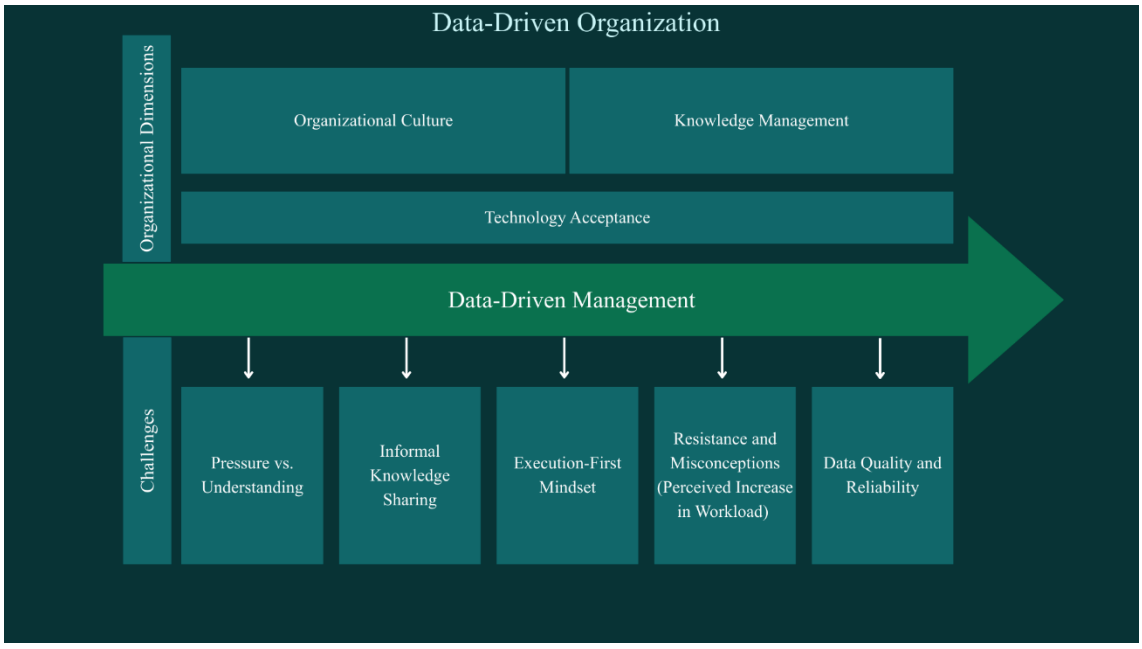

Figure 2 - Challenges of Managing a DDO.
Source: own elaboration.

4. METHODOLOGY

4.1. Research Approach

This study is grounded in an interpretivist research philosophy and follows an inductive research approach. According to Saunders et al. (2019), interpretivism assumes that reality is socially constructed and shaped by individuals' experiences and interpretations. In the context of this research, the development of a data-driven management culture is not limited to technological implementation, but also involves how employees understand, interpret, and apply data in their daily work routines.

From an ontological perspective, this study assumes that organizational culture, data quality, and platform usability are shaped by individual perceptions and social interactions. From an epistemological perspective, knowledge is generated through understanding these subjective experiences. This philosophical stance is appropriate because the research aims to explore how employees interpret data practices within the Iberian Project Management team at Schneider Electric, seeking to understand social processes within their real organizational context (Lavarda & Bellucci, 2022).

Consistent with this philosophical positioning, the study adopts an inductive research approach. As explained by Saunders et al. (2019), inductive reasoning begins with data collection and moves toward the development of broader explanations and insights, in this research no hypotheses were tested. Although the theoretical framework informed the structure of the interview questions, the analysis remained open to new patterns and themes emerging from participants' responses. This approach is suitable because the objective is exploratory, aiming to understand organizational challenges and generate context-specific insights rather than to test predefined theoretical propositions.

4.2. Research Design

This research adopts an exploratory qualitative single case study design, based on a mono-method qualitative strategy. According to Saunders et al. (2019), exploratory studies are particularly suitable when the objective is to gain deeper understanding of complex and context-dependent phenomena. In this case, the development of a data-driven culture involves organizational routines, employee perceptions, and behavioral dynamics, which require in-depth investigation.

The case study strategy enables detailed analysis within a real organizational setting. Lavarda and Bellucci (2022) argue that case studies are appropriate for examining internal processes, interactions, and contextual factors. Since a data-driven culture is embedded in daily practices and social dynamics, studying it within its natural organizational context is essential.

The study follows a cross-sectional time horizon, as data was collected during a specific period. This provides a snapshot of the current stage of the Iberian Project Management team at Schneider Electric.

Regarding methodological choice, the research adopts a mono-method qualitative approach. Qualitative methods are appropriate when the aim is to understand meanings, experiences, and interpretations rather than measure variables numerically (Saunders et al., 2019). The study focuses on cultural barriers, platform usability challenges, and knowledge management practices, which cannot be fully captured through quantitative instruments alone.

Data were primarily collected through semi-structured interviews, allowing flexibility to explore participants' perspectives in depth. In addition, internal documents and academic literature were reviewed to support the analysis and contextual understanding. The use of multiple sources contributes to the credibility and robustness of the findings (Lavarda & Bellucci, 2022).

4.3. Population, Sample and Data Collection Methods

In line with Saunders et al. (2019), the population refers to the group of individuals who are relevant to the research objectives. In this study, the population includes employees involved in project management activities at Schneider Electric, particularly those engaged in data-driven project management practices within the Iberian division. Since this research adopts a qualitative case study strategy, the focus is on a specific organizational unit rather than on a broad or industry-wide population.

A non-probabilistic purposive sampling technique was used. Participants were intentionally selected based on their direct involvement in project management processes and their experience with data usage in project-related decision making. Access to participants was facilitated through internal organizational contacts, which also reflects

elements of convenience sampling due to practical access conditions. The final sample consisted of project managers and team members working within the selected unit.

As this study relies on non-probabilistic sampling, the findings are not intended to be statistically generalizable but rather to provide in-depth understanding of the specific organizational context under analysis (Lavarda & Bellucci, 2022; Lim, 2024). The objective is analytical insight rather than statistical representation, which is consistent with qualitative research principles (Saunders et al., 2019).

Primary data were collected through semi-structured interviews. According to Saunders et al. (2019), semi-structured interviews are appropriate when the researcher seeks to explore participants' perceptions and experiences while maintaining some structure across interviews. This method allows flexibility and encourages participants to explain their views in detail (Lavarda & Bellucci, 2022).

The interviews were conducted over a defined period using an interview guide (Appendix A). Each interview followed a similar structure to ensure consistency, while still allowing space for participants to elaborate on relevant issues. Interviews were recorded with consent and later transcribed to ensure accuracy in the analysis process.

4.4. Interview Flow

In qualitative research, rigor is evaluated through trustworthiness. According to Lochmiller (2021), thematic analysis requires a clear and well-documented process. Credibility was strengthened through the use of multiple data sources and interviews that allowed participants to express their views freely.

The structure and flow of the interviews also contributed to the credibility of the study. The interviews followed a consistent structure aligned with the key dimensions of the research, including organizational culture, knowledge management, technology acceptance, and data-driven practices. Beginning with general questions and moving toward more specific topics helped create a comfortable environment and supported open and honest responses. This structured yet flexible approach enhanced the reliability of the data collection process (Saunders et al., 2019).

4.5. Data Analysis Techniques

The data were analyzed using thematic analysis. Lochmiller (2021) explains that thematic analysis identifies recurring patterns in qualitative data.

First, the interviews were transcribed and carefully read. Then, initial codes were created to identify important ideas. These codes were grouped into broader categories. Finally, main themes were developed to explain the challenges related to organizational culture, platform usability, data quality, and digital maturity. This method allows patterns to emerge while maintaining a strong connection to the real context of the organization.

4.6. Ethical Considerations

Ethical principles were respected throughout the research. Participation was voluntary and informed consent was obtained from all participants. Confidentiality and anonymity were guaranteed. No sensitive corporate information is disclosed. Data were stored securely and used only for academic purposes, following the guidelines of Saunders et al. (2019).

5. PROJECT FOR THE COMPANY

5.1. Company Description

Schneider Electric is a French multinational company founded in 1836. Originally established in the 19th century as a steel and armaments manufacturer, the company progressively transformed its business throughout the 20th century, shifting its focus toward electrical equipment, energy management, and industrial automation. This strategic evolution enabled Schneider Electric to expand globally and to position itself as a key player in power distribution, critical power, and industrial software solutions (Schneider Electric, 2025).

Today, Schneider Electric operates worldwide in the fields of energy management and industrial automation and is widely recognized for its strong commitment to sustainability, digital transformation, and innovation. The company aims to support organizations in achieving greater efficiency, resilience, and sustainability through smart, connected, and digital solutions (Schneider Electric, 2025).

The company operates under a matrix organizational structure that combines global business units with regional and local operations. This structure allows Schneider Electric to manage complex and large-scale projects across different geographical areas while ensuring alignment with its overall corporate strategy. Schneider Electric employs approximately 160,000 people and collaborates with a network of more than one million partners across over 100 countries (Schneider Electric, 2025).

The company's strategy is centered on the principles of "electrify, automate, and digitalize," with the objective of helping customers decarbonize their operations while improving efficiency and performance. In addition to its technological solutions, Schneider Electric provides energy and sustainability services, including energy efficiency programs, renewable energy procurement, and carbon and climate consulting for large enterprises and cities. As a result of these efforts, the company has set ambitious targets to help customers avoid or reduce significant amounts of CO_2 emissions and is consistently recognized among the world's most sustainable corporations which is strongly aligned with SDG 13 of climate action (Schneider Electric, 2025).

5.2. Project Scope and Objectives

The project developed during the work experience was designed to support project management practices within Schneider Electric. The scope of the project focused on analyzing how project-related data and knowledge are generated, managed, and reused across the team, with the objective of contributing to greater standardization, consistency, and efficiency in project execution. Also grounded in the theoretical framework presented in the literature review, which emphasizes the interconnection between knowledge management, organizational culture, data-driven culture, and technology acceptance.

Previous studies highlight that the increasing availability of data alone does not automatically lead to improvements into the organizational or project performance, but created when data is systematically transformed into knowledge and embedded in organizational routines, enhancing decision-making, performance monitoring, and continuous improvement within the project lifecycle (Durst et al., 2023; Idrees et al., 2023).

In this context, the volume and diversity of data generated throughout the project lifecycle creates challenges related to knowledge management, standardization, and effective information sharing. Without structured approaches to managing and reusing project knowledge, valuable insights risk remaining fragmented across teams, tools, and geographies. The business problem addressed by this project is therefore the need to strengthen knowledge management practices and improve the consistency and usability of project data to support efficient project execution and organizational learning.

By focusing on the use of data, digital tools, and knowledge management within project management, the project supports the company's objective of accelerating digital transformation across the entire project lifecycle. It also aligns with Schneider Electric's commitment to open, agile, and software-defined systems, as well as its emphasis on artificial intelligence and advanced analytics to improve decision-making, operational agility, and decarbonization efforts.

5.3. Data Analysis

The data processing took place after the data collection was complete and, due to the qualitative nature of the data, it was carried out using the MAXQDA software, which assists in the organization and systematization of data. After importing the transcripts of

the interviews, which were recorded, the data was analyzed with the resource of MAXQDA software, using a coding-categorizing technique. The technique involves ordering data into categories sorted by broader themes and then assigning codes to the categories. Therefore, 4 categories and 22 subcategories were identified, resulting in a total of 424 codes (appendix B). The results were interpreted considering the theoretical foundations presented in the literature review, allowing a deeper understanding of the challenges that hinder the development of a data-driven management culture within the Iberian Project Management team at Schneider Electric.

5.4. Sample Characterization

A total of five in-depth semi-structured interviews were conducted for this study. The sample comprised professionals directly involved in project management activities within the organization, selected due to their roles and proximity to data-driven project management processes.

Specifically, three interviews were conducted with Project Managers operating in the Iberian area, who are responsible for planning, monitoring, and executing projects and who regularly use data and digital platforms to support decision-making. In addition, one interview was conducted with a Finance Business Partner who interacts fully with the project management team through organizational platforms, providing financial oversight, performance analysis, and decision-support information for project-related activities. Finally, one interview was carried out with an Execution Team Leader Customer Projects & Services for the Iberian Peninsula, whose role involves coordinating project execution activities and ensuring alignment between operational teams, project objectives, and organizational performance requirements.

Table II – Sample Characterization

Category	Interviewee	Job Title	Duration (Minutes)
Core Users	A	Project Manager	54
	B		30
	C		45
Business Stakeholder	D	Finance Business Partner	24
Leadership Role	E	Execution Team Leader	46

Source: own elaboration

5.5. Empirical Findings by Dimension

Organizational Culture

Organizational culture emerged as one of the most influential dimensions affecting the development of a data-driven management culture. Although Schneider Electric formally promotes a strong data-oriented strategy, the interviews revealed a gap between strategic discourse and everyday practices.

Interviewees frequently referred to limited understanding of the purpose behind certain data practices, and continued reliance on intuition-based decision-making: *"People still rely a lot on experience and gut feeling instead of checking the dashboards first."* (Verbatim Project Manager). This quotation reflects a cultural pattern where experience-based judgment remains dominant over systematic data usage. While there is a general recognition of the importance of data, the transition toward consistent and structured data utilization appears uneven across the team.

Figure 3 presents the distribution of the most frequent subcodes within the main code Organizational Culture identified in MAXQDA. The figure illustrates that issues related to understanding data practices, informal knowledge reliance, and execution prioritization were among the most frequently mentioned topics, reinforcing the central role of cultural dynamics in shaping data-driven behavior.

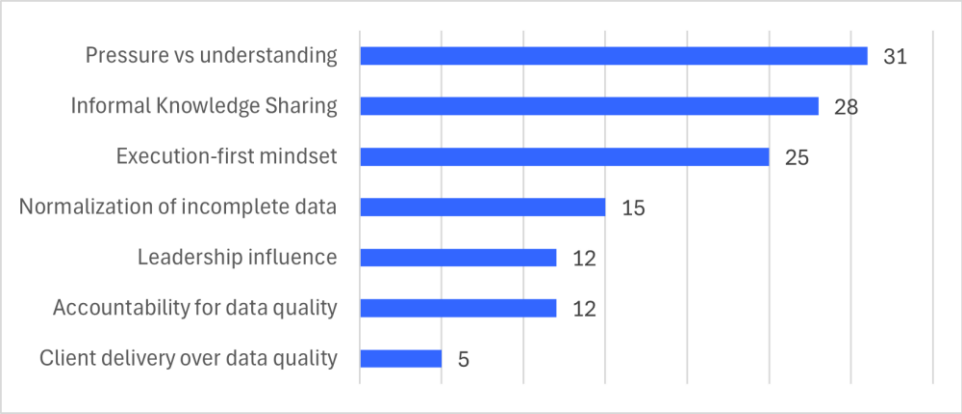

Figure 3 - Frequency of Themes Identified in the Organization Culture Code.
Source: own elaboration based on interview data (MAXQDA analysis).

Knowledge Management

Knowledge management challenges were strongly connected to how information is captured, structured, and reused within the team. Interviewees described situations where

knowledge remains fragmented, informally exchanged, or highly dependent on individual experience rather than embedded in standardized systems: *"We have tools, but people don't always know where to find the information or which version is the correct one."* (Verbatim Project Manager). This statement reveals a lack of clarity in information flows and version control, which directly affects data reliability and decision-making quality. Although digital tools are available, the absence of structured documentation practices limits effective knowledge reuse.

The analysis revealed that the most salient tensions were associated with knowledge codification and reuse, particularly reflected in the predominance of informal knowledge sharing over structured documentation practices.

Figure 4 presents the distribution of the most frequent subcodes within the main code Knowledge Management identified in MAXQDA. The results show that informal knowledge sharing and low reuse of documented knowledge were among the most recurrent topics, indicating limitations in formal knowledge systems and reduced engagement with structured repositories.

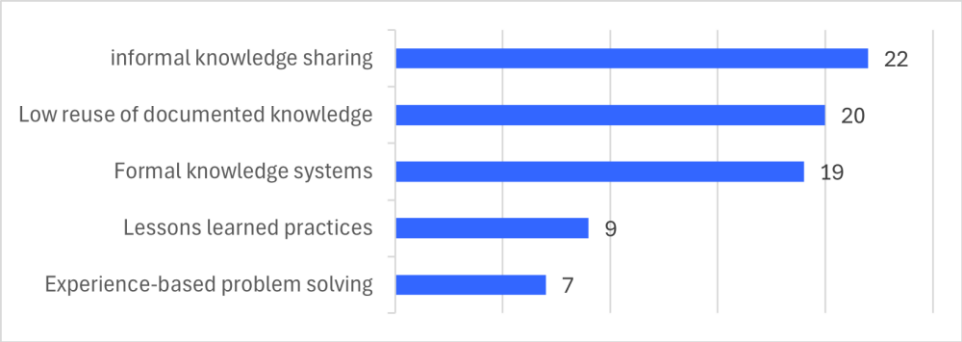

Figure 4 - Frequency of Themes Identified in the Knowledge Management Code.
Source: own elaboration based on interview data (MAXQDA analysis).

Technology Acceptance

Technology acceptance emerged as a relevant dimension, particularly regarding how employees evaluate the usability, usefulness, and reliability of digital platforms. Although Schneider Electric provides multiple tools to support project monitoring and reporting, engagement levels vary across the team. This variation appears to be closely linked to how users perceive system complexity, effort requirements, and data credibility.

As identified in the interviews, concerns regarding platform usability were explicitly mentioned. One project manager noted that: *"The platform is useful, but*

sometimes it is too complex and takes time to extract what we need." (Verbatim Project Manager). This statement reflects a tension between perceived usefulness and perceived ease of use, suggesting that even when employees acknowledge the value of the system, excessive complexity and time requirements may reduce consistent engagement.

Similarly, issues related to data reliability emerged in participants' accounts. As highlighted by another project manager: *"If the data is not reliable, people stop trusting the system and go back to Excel."* (Verbatim Project Manager). This observation illustrates how diminished trust in data quality directly undermines platform usage, leading employees to revert to alternative and more familiar tools.

Figure 5 presents the distribution of the most frequent subcodes within the main code Technology Acceptance identified in MAXQDA. The results show that perceived usefulness and increased workload were among the most recurrent topics, followed by platform overload, data duplication, and perceived ease of use. This distribution reinforces the importance of effort–value evaluations in influencing adoption behavior.

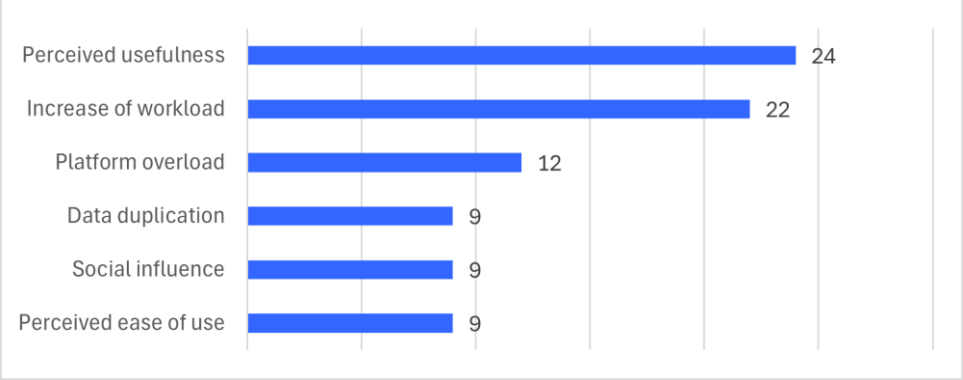

Figure 5 - Frequency of Themes Identified in the Technology Acceptance Code.
Source: own elaboration based on interview data (MAXQDA analysis).

Data-Driven Organizations

As previously discussed, being a DDO goes beyond having platforms or collecting large volumes of data. It requires consistent integration of analytics into managerial decision-making processes. Schneider Electric demonstrates strategic commitment to data-driven management, however, operational challenges remain evident: *"We collect a lot of data, but sometimes we don't really analyze it deeply to improve future projects."* (Verbatim Project Manager). This insight highlights a gap between data availability and data-driven action. While infrastructure and reporting systems are in place, deeper analytical reflection and systematic learning cycles are not always embedded in project routines.

The interviews indicate that perceptions of system complexity and increased administrative burden affect sustained platform engagement. These manifestations align with the theoretical understanding that adoption is shaped not only by technical functionality but also by users' evaluations of effort, value, and workflow integration. Resistance appears primarily in subtle forms, such as partial usage or fallback to alternative tools, illustrating how cognitive and behavioral factors influence digital adoption.

Although presented by dimension, the findings reveal significant interdependence across sub-dimensions. For example, deficiencies in knowledge quality governance affect trust in data-driven reasoning (organizational culture) and reduce perceived usefulness (technology acceptance). This overlap reinforces the integrative logic of the conceptual framework, where data-driven management depends on the alignment of cultural norms, structured knowledge processes, and positive user perceptions.

5.6. Challenges of managing a DDO

The interview analysis brought forward five recurring challenges that shape the current reality of managing data-driven initiatives within the Iberian Project Management team. These themes reflect common concerns and operational constraints expressed by participants.

Pressure vs. Understanding

A central theme identified was the tension between pressure to input data and lack of understanding regarding its purpose. Most of the interviewees expressed frustration about being required to fill in platforms without fully understanding how the data is used: *"We are pressured to input data, but often we do not receive feedback on the outcomes or consequences of the data we provide".* (Verbatim Project Manager)

This reflects what literature describes as a lack of analytical culture. According to Szukits and Móricz (2024), an analytical culture depends not only on data availability but also on employees' understanding of how data supports decision-making and overall, their roles. When data input is disconnected from visible outcomes, employees perceive it as an administrative burden rather than a strategic contribution, the absence of transparency undermines long-term cultural alignment.

This misalignment reduces intrinsic motivation and weakens engagement with data practices. Even when employees recognize the importance of accurate data, as highlighted: *"Data alone has no meaning unless it is accurate, coherent, and reliable".* (Verbatim Team Leader).

Informal Knowledge Sharing

Another central theme identified is the predominance of informal knowledge sharing practices, although structured platforms exist within the organization, employees often rely on informal conversations: *"People tend to prefer informal consultation with colleagues instead of searching for lessons learned in the platforms.".* (Verbatim Project Manager)

This finding aligns with research showing that organizational culture strongly influences digital transformation success. Even when digital tools are available, cultural habits may prevent their consistent use (Avença et al., 2024), the normalization of informal knowledge weakens institutional learning and reinforces dependency on individual experience, which limits scalability and data reuse.

Over time this challenge can create consequences, knowledge remains tacit and person-dependent, increasing vulnerability when employees change roles or leave the organization. Second, lessons learned are not systematically codified, which limits the scalability of best practices across projects. Third, data-driven decision-making becomes constrained because relevant insights are not embedded in accessible and structured data systems.

Execution-First Mindset

The analysis of the interviews revealed the presence of an execution-first mindset, characterized by the systematic prioritization of operational project delivery over documentation and structured data entry. Participants consistently described a work environment in which immediate client demands, and project execution tasks are perceived as more urgent and valuable than maintaining accurate and complete data in the system: *"Project execution comes first, and data is entered later."* (Verbatim Project Manager). This mindset creates a structural tension between short-term operational performance and long-term knowledge and data quality objectives.

Although data-driven management depends on systematic documentation and reliable data capture, employees associate performance evaluation more strongly with client delivery, invoicing, and problem resolution than with platform accuracy or knowledge registration: *"We are very focused on solving client problems, and data entry often comes second."* (Verbatim Project Manager).

Research on knowledge management in projects highlights that leadership and structured practices are essential to foster knowledge sharing (Avença et al., 2024; Idrees et al., 2023). In this case, documentation is seen as secondary, especially in smaller or low-financial projects, reinforcing inconsistency.

Resistance and Misconceptions (Perceived Increase in Workload)

Another relevant challenge identified in the interviews concerns resistance and misconceptions toward digital platforms, particularly linked to the perception that these tools increase workload, duplication of tasks, and usability concerns. Many participants associated digital platforms with increased effort: *"Platforms increase workload rather than reduce it."* (Verbatim Project Manager). This perception reveals not only usability concerns but also a deeper misunderstanding of the purpose and long-term value of structured data entry. Digital platforms are often interpreted as additional administrative requirements rather than as enablers of better planning, transparency, and decision-making.

This aligns with core constructions of UTAUT2, particularly perceived usefulness and effort expectancy. When users perceive technology as increasing workload or duplicating tasks, behavioral intention to use the system decreases. Although employees recognize the theoretical value of better data, the lack of immediate visible benefits weakens motivation for consistent adoption (Nnaji et al., 2023; Tamilmani et al., 2021).

Therefore, resistance and misconceptions toward digital platforms represent not merely a technical issue, but a behavioral and cognitive barrier. Without addressing how employees perceive the purpose, benefits, and integration of these tools into their workflows, efforts to strengthen a data-driven culture may remain limited (Ghafoori et al., 2024; Szukits & Móricz, 2024).

Data Quality and Reliability

Data quality emerged as both a cause and a consequence of low platform engagement. Interviewees highlighted that when information stored in the system is perceived as incomplete, outdated, or inconsistent, confidence in the platform decreases significantly: *"Some project managers do not update information correctly, so the data available there is not reliable."* (Verbatim Finance Stakeholder). This perception generates a self-reinforcing negative cycle, low data quality reduces trust in the system, reduced trust leads to lower usage, and lower usage further deteriorates data completeness and accuracy. Over time, this dynamic weakens the credibility of the platform as a reliable decision-support tool.

Literature emphasizes that data quality is a fundamental enabler of analytical decision-making (Szukits & Móricz, 2024). Without perceived reliability, organizations struggle to advance toward becoming truly DDOs (Bayraktar et al., 2024). When users doubt the accuracy or coherence of available data, they are less likely to integrate it into their decision-making processes (Mikalef et al., 2020).

This creates a negative cycle: low data quality reduces trust, which reduces usage, which further degrades quality. The literature emphasizes that data quality is a key enabler of analytical decision-making. Without perceived reliability, organizations struggle to become truly a DDO. The interviews also revealed tangible organizational consequences of poor data management: *"Information was not properly managed or communicated… this year we incurred unexpected costs of around EUR 60,000."* (Verbatim Finance Stakeholder). This example illustrates how insufficient documentation and weak knowledge management practices can translate into direct financial losses. Poor data quality, therefore, is not merely a technical issue but a risk factor with operational and economic implications.

Across all interviews on MAXQDA, the average code co-occurrence was 2.12, showing that themes often appeared together in the same interview segments. A clear link was found between "Data Availability Efficiency" and "Low Perceived Usefulness" (n=7), and between "Impact of Poor Data Quality" and "Low Perceived Usefulness" (n=9), as shown in Figure 6. This means that when participants talked about poor or incomplete data, they often also questioned the usefulness of the platform. In simple terms, when data is seen as unreliable, the system itself is seen as less useful. This

highlights that good data quality is essential to maintain trust and encourage consistent use of the platform.

Code System	Data availability efficiency (use)	Impact of poor data quality	Low perceived usefulness
Data availability efficiency (use)		3	7
Impact of poor data quality	3		9
Low perceived usefulness	7	9	

Figure 6 - Code Co-Occurrence Matrix.
Source: own elaboration based on interview data (MAXQDA analysis).

5.7. Discussion of Results

The discussion of results is structured around the three core theoretical dimensions of the analytical framework, organizational culture, knowledge management, and technology acceptance, and the themes that emerged within each of them. The findings demonstrate that the challenges identified are not isolated issues but interconnected manifestations of tensions within and across these dimensions.

Within the dimension of the role of organizational culture, the themes Pressure vs. Understanding, Execution-First Mindset, and Informal Knowledge Sharing reflect limitations in learning orientation, accountability for data accuracy, and trust in data-driven reasoning. Although Schneider Electric promotes a formal data-oriented strategy, the persistence of execution-focused priorities and limited sense-making around data practices suggests that cultural alignment remains incomplete. This finding supports the literature arguing that digital transformation requires not only structural tools but also deeper shifts in collective norms and leadership reinforcement (Ghafoori et al., 2024; Szukits & Móricz, 2024).

Within the dimension of Knowledge Management in Data-Driven Organizations, the themes Informal Knowledge Sharing and Data Quality and Reliability reveal weaknesses in knowledge codification, reuse, and quality governance. The predominance of tacit exchanges and concerns regarding incomplete or inconsistent data demonstrate that structured knowledge processes are not fully embedded. These findings align with prior research indicating that without systematic documentation and validation mechanisms, data cannot be effectively transformed into organizational learning (Idrees et al., 2023; Durst et al., 2023).

Under the dimension of Technology Acceptance, the theme Resistance and Misconceptions (Perceived Increase of Workload) reflects tensions related to perceived

usefulness, effort expectancy, and resistance to change. The results indicate that resistance does not appear as overt rejection but as subtle disengagement, such as fallback to alternative tools. This confirms existing research suggesting that behavioral and perceptual evaluations significantly shape sustained adoption of digital systems (Nnaji et al., 2023; Jalo & Pirkkalainen, 2024). The interviews suggest that when digital platforms are perceived as increasing administrative burden or duplicating tasks, sustained usage declines. Resistance does not emerge as explicit rejection, but as partial adoption, selective compliance, or parallel informal practices, highlighting how cognitive and behavioral evaluations shape digital adoption.

The literature on data-driven organizations emphasizes that transforming from "knowing" to being truly data-driven requires not only technological capability, but also analytical culture and organizational alignment (Fischer et al., 2022). Similarly, fostering an analytical decision-making culture depends on top management support and perceived data quality (Szukits & Móricz, 2024).

Importantly, the findings demonstrate cross-dimensional interactions. For example, issues related to data quality simultaneously affect knowledge governance, cultural trust in data-driven reasoning, and perceived usefulness of digital platforms. This interaction reinforces the integrative perspective of the conceptual framework and confirms that sustainable data-driven management depends on the alignment of cultural norms, structured knowledge processes, and positive user perceptions (Fischer et al., 2022; Barbala et al., 2024).

5.8. Recommendations for the Company

The MAXQDA analysis revealed that the most significant challenges affecting the development of a data-driven management culture within the Iberian Project Management team are the themes of Pressure vs. Understanding; Informal Knowledge; Execution-First Mindset; and Data Quality and Reliability. Those reinforce one another, creating a cycle in which limited transparency, weak accountability, usability concerns, and inconsistent documentation collectively undermine data reliability and platform engagement. Therefore, the recommendations presented below are designed not to address each challenge separately, but to intervene structurally in the underlying dynamics that connect them.

The first recommendation concerns increasing transparency regarding the use of project data. Interviewees expressed frustration about being required to input data without understanding who uses it and how it influences broader organizational processes. This lack of clarity directly contributed to the perception of data entry as an obligation rather than a strategic contribution, reinforcing the "Pressure vs. Understanding" dynamic identified in the findings. Research shows that top management support and clear communication about data usage are critical drivers of analytical culture and data-driven decision-making (Mikalef et al., 2020; Szukits & Móricz, 2024). To address this, Schneider Electric should strengthen communication around data flows and decision-making processes. Project Managers should clearly understand which stakeholders rely on the data they provide, how it impacts forecasting, budgeting, financial consolidation, and risk monitoring, and why accuracy is critical. This may involve periodic communication sessions, explanatory dashboards that trace data usage across departments, and visible examples of how project data influences outcomes. By making the purpose of data explicit, the organization can shift from pressure-driven to purpose-driven engagement, thereby increasing intrinsic motivation and cultural alignment with data-driven practices (Leso et al., 2023).

The second recommendation focuses on reducing redundancies in data entry. A recurrent issue raised during interviews was the perception that digital platforms increase workload, particularly when similar information must be entered in multiple systems. This finding is directly linked to the themes of Perceived Increase in Workload and Execution-First Mindset and directly linked to perceived effort and workload concerns, which are central constructs in technology acceptance research (Leso et al., 2023; Tamilmani et al., 2021). In the short term, Schneider Electric should conduct a structured review to identify duplicated data fields and define a single authoritative location for each type of information. Clarifying where data should be entered and eliminating unnecessary repetition would immediately reduce perceived effort. In the medium to long term, the organization should prioritize system integration or automation of data synchronization across platforms, as alignment between analytics and business operations is crucial for analytics maturity (Menukhin et al., 2023). By reducing redundancy and simplifying workflows, the company will not only improve usability and technology acceptance but also decrease resistance behaviors that currently weaken platform engagement.

The third recommendation directly addresses the theme of Data Quality and Reliability, which emerged as both a cause and consequence of low platform engagement. Inconsistent updates and unclear accountability reduce trust in the system, reinforcing a negative cycle of declining usage and deteriorating quality. as alignment between analytics and business operations is crucial for analytics maturity (Szukits & Móricz, 2024) and that structured quality management mechanisms are essential in complex data environments (Taleb et al., 2021). To break the cycle, Schneider Electric should establish clear data ownership within each project, formally defining responsibility for accuracy and completeness. The introduction of KPIs related to data accuracy and completeness would strengthen governance and introduce measurable accountability standards. Furthermore, periodic data audits across all projects would reinforce the message that all data matters, not only strategically critical projects. As trust in data increases, employees are more likely to engage consistently with formal systems, reducing reliance on informal knowledge-sharing mechanisms and strengthening institutionalized practices (Avença et al., 2024).

The fourth recommendation concerns aligning performance evaluation criteria with data practices. The Execution-First Mindset identified in the findings reflects a structural imbalance in incentives, where operational delivery is implicitly prioritized over documentation quality. As long as performance assessments focus predominantly on financial results and client outcomes, data management practices will remain secondary. Organizational culture and leadership play a decisive role in shaping digital transformation and knowledge behaviors (Inthavong et al., 2023; Leso et al., 2023). Schneider Electric should therefore incorporate indicators related to documentation completeness, data reliability, and knowledge reuse into performance evaluation processes. By formally recognizing accurate and consistent data practices, management signals that execution and documentation are complementary dimensions of project excellence. This cultural alignment supports the institutionalization of knowledge-sharing behavior and reinforces long-term organizational learning (Idrees et al., 2023).

Table III - Recommendation for the Company

Recommendation number	Time Horizon	Recommendation	Action	Related Themes
1	**Short Term**	Increase transparency of data usage	Communicate clearly who uses project data and for what purpose; provide feedback examples showing how data influences forecasting, budgeting, and risk control.	Pressure vs. Understanding
2	**Short Term**	Reduce data entry redundancies	Identify duplicated data fields and define a single authoritative location for each type of information to eliminate repetitive inputs.	Perceived Increase in Workload; Execution-First Mindset
	Long Term	Improve system integration	Integrate platforms or automate synchronization between systems to eliminate duplication and improve workflow efficiency.	Perceived Increase in Workload; Execution-First Mindset
3	**Short Term**	Establish clear data ownership and governance	Define responsible roles for data accuracy within each project; implement KPIs for data completeness and reliability.	Data Quality, Reliability, and Consistency
	Medium Term	Strengthen accountability through monitoring	Conduct periodic data audits across all projects (not only high-value ones) to reinforce consistency and create habit formation.	Data Quality, Reliability, and Consistency
4	**Medium Term**	Align performance evaluation with data practices	Incorporate documentation quality, data reliability, and knowledge reuse indicators into performance assessment criteria.	Execution-First Mindset; Cultural Misalignment and Informal Knowledge

Source: own elaboration.

Together, these recommendations aim to transform the current dynamics that hinder the development of a data-driven management culture. Increasing transparency enhances understanding and reduces compliance fatigue. Reducing redundancies improve usability and lowers resistance. Strengthening governance restores trust in data reliability. Aligning incentives reshape cultural priorities. By intervening at these structural and behavioral levels, Schneider Electric can improve data quality, enhance platform usability, and foster more positive employee perceptions toward digital systems, ultimately strengthening its capacity to operate as a mature data-driven organization (Menukhin et al., 2023; Mikalef et al., 2020).

6. CONCLUSIONS

6.1. Main Findings

This study aimed to analyze the challenges that hinder the development of a data-driven management culture within the Iberian Project Management team at Schneider Electric, and to understand how these barriers affect data quality, platform usability, and employee perception. The findings confirm that the main obstacles are not technological limitations, but rather organizational and behavioral dynamics related to four core dimensions of this research: organizational culture, knowledge management (KM), technology acceptance, and data-driven organization (DDO). These dimensions are strongly interconnected and jointly influence how data is perceived, used, and valued in project-based environments.

Considering the first question**:** *"How do organizational culture and knowledge management practices influence the adoption of data-driven management within project-based environments?"* the findings demonstrate that organizational culture is the primary structural driver shaping data behaviors. The execution-first mindset prioritizes client delivery and operational urgency over data completeness and consistency. This cultural orientation normalizes incomplete data entries and reduces accountability for data quality. As a consequence, platforms are perceived as unreliable, weakening analytical routines and limiting the transition toward a DDO.

At the same time, knowledge management practices remain fragmented and informal. Data is often stored but not systematically discussed, interpreted, or transformed into shared learning. Without structured reflection processes, such as data-based project reviews, information remains transactional rather than strategic. Prior research highlights that organizational culture significantly shapes innovation and performance outcomes (Zhang et al., 2023) and that analytical culture is a central enabler of data-driven decision-making (Szukits & Móricz, 2024). The results of this study align with these perspectives in project-based environments, culture and KM practices define whether data becomes a strategic resource or merely an administrative obligation. Therefore, the adoption of data-driven management is not only a technical transition but fundamentally a cultural and knowledge-oriented transformation.

As it comes to the second question: *"How well do employees accept data-driven technologies at Schneider Electric, and what challenges affect their use?"* the findings

indicate that employee acceptance of data-driven technologies is partial and context-dependent. While there is general acknowledgment of the importance of data within the organization, actual engagement with the platform is influenced by several operational and cultural challenges.

One central challenge is the tension between pressure and understanding. Employees operate under strong delivery pressure, which limits the time and attention dedicated to accurate data entry. This pressure reduces the perceived priority of data-related tasks, even when employees understand their importance.

Another relevant factor is the reliance on informal knowledge. In many situations, project management decisions are supported by experience, personal communication, and tacit knowledge rather than by structured data. This reduces the perceived necessity of consistently updating the system.

The dominant execution-first mindset further reinforces this dynamic. Since performance is often measured by delivery speed and client responsiveness, data quality practices are implicitly treated as secondary. This weakens the integration of the platform into daily routines.

Additionally, resistance and misconceptions, particularly the perception that the platform increases workload without delivering immediate benefits, negatively affect technology acceptance. Some employees associate detailed data entry with administrative burden rather than with strategic value.

Finally, data quality and reliability issues create a reinforcing cycle. When dashboards contain incomplete or inconsistent data, trust in the system decreases, which further reduces motivation to maintain high data standards. Overall, these challenges do not reflect rejection of digital technologies, but rather structural and cultural barriers that influence how employees perceive, prioritize, and engage with data-driven tools.

Considering the third question: *"How can organizations strengthen a data-driven management culture to improve data reliability and the effective use of data-driven technologies?"* the findings suggest that strengthening a data-driven management culture requires coordinated action across the four central dimensions of this study, organizational culture, KM, technology acceptance, and DDO structures. These elements do not operate independently, instead, they reinforce or weaken each other.

From an organizational culture perspective, it is essential to align incentives and performance metrics with data quality expectations (Leso et al., 2023; Szukits & Móricz, 2024). As long as speed of execution is prioritized over data accuracy, employees will continue to perceive data-related tasks as secondary (Leso et al., 2023). Cultural reinforcement must therefore clearly communicate that data reliability is part of professional responsibility and project excellence (Szukits & Móricz, 2024).

Regarding knowledge management, organizations need to move beyond storing data and start actively using it as a learning mechanism (Idrees et al., 2023). Integrating structured data discussions into project reviews and team routines can transform data from a reporting obligation into a shared resource for improvement (Avença et al., 2024). When data is collectively interpreted and connected to project outcomes, its perceived value increases (Inthavong et al., 2023).

In terms of technology acceptance, improving usability and clarifying the practical benefits of the platform are crucial (Tamilmani et al., 2021). Employees are more likely to engage with data-driven tools when they clearly understand how these tools support their daily tasks. Training and communication should therefore emphasize both operational benefits and strategic relevance (Tamilmani et al., 2021).

Ultimately, progressing toward a DDO requires visible leadership alignment and consistency between expectations and daily practices (Szukits & Móricz, 2024). DDO maturity is achieved when organizational culture supports data discipline, knowledge management practices promote learning from data, and employees perceive data-driven technologies as useful and relevant (Leso et al., 2023; Szukits & Móricz, 2024). Only through this integrated approach can data reliability improve and platform use become effective and sustainable.

6.2. Sustainability Implications of Data-Driven Organizations Practices

Beyond the internal organizational implications, the findings also relate to broader sustainability considerations. Strengthening a data-driven culture contributes directly to SDG 9 (Industry, Innovation and Infrastructure) by reinforcing digital transformation capabilities, improving technological integration, and fostering innovation-oriented project management practices.

In addition, the results are closely connected to SDG 13 (Climate Action). Schneider Electric positions itself as a global leader in energy management and sustainability, with a strong strategic focus on efficiency, decarbonization, and responsible resource use. In this context, improving internal data reliability, process transparency, and operational efficiency is not only an organizational objective but also aligned with the company's broader sustainability mission. More accurate and consistent data enables better monitoring of project performance, resource allocation, and environmental indicators. By strengthening internal efficiency and data discipline, the organization reinforces its capacity to support sustainability-driven initiatives and climate-related commitments. Therefore, advancing toward a Data-Driven Organization contributes indirectly but meaningfully to SDG 13, as it enhances the company's ability to manage and measure its environmental impact more effectively.

6.3. Academic Contributions

How data is managed in a company has become a critical factor in identifying its potential to improve performance through schedule adherence, budget adherence, quality of deliverables, resource utilization, and stakeholder satisfaction (Pantović et al., 2024). The literature increasingly recognizes the importance of data-driven practices in organizations (Barbala et al., 2024; Ghafoori et al., 2024; Hupperz et al., 2021).

This study contributes to the academic debate by integrating organizational culture, knowledge management practices, and technology acceptance into the analysis of a Data-Driven Organization (DDO). While much of the existing research focuses on strategic and technological dimensions, fewer studies explore the behavioral and cultural factors that influence how data is actually used in daily routines.

By examining these dimensions together within a project-based organizational context, this research addresses this gap and reinforces the idea that becoming data-driven is not only a technological transformation but also a cultural and organizational one. The study therefore advances the literature by offering a more holistic understanding of how internal dynamics shape data quality, platform usability, and employee engagement with digital systems.

6.4. Practical Implications

From a business perspective, organizations continue to invest significantly in digital platforms and information systems to support knowledge management and data quality (Adewusi et al., 2024; Mikalef et al., 2020; Szukits & Móricz, 2024). However, technological investment alone does not guarantee effective data-driven management.

This research provides clear and concrete implications for Schneider Electric's Iberian Project Management team and similar project-based organizations. First, it offers a structured diagnosis of the challenges affecting DDO development, clarifying how organizational culture, knowledge management, and technology acceptance interact to influence data quality and platform usability.

Second, the findings demonstrate that the main barriers to becoming data-driven are cultural and behavioral rather than technical. Therefore, improving systems alone will not solve the problem if data practices are not consistently embedded in project routines.

Finally, the study proposes an analytical framework that management can use to prioritize actions, guide leadership practices, and monitor cultural transformation. By identifying the root causes of inconsistent data practices and limited platform engagement, the research supports more focused, efficient, and sustainable improvement initiatives, contributing directly to the strengthening of a data-driven management culture.

In conclusion, the development of a data-driven management culture within the Iberian Project Management team depends on aligning organizational culture, knowledge management practices, technology acceptance, and DDO structures. Although the technological infrastructure is already in place, its strategic potential will only be fully realized through consistent cultural reinforcement, leadership alignment, and the normalization of high-quality data practices across project routines.

6.5. Study Limitations and Future Study Directions

This study presents limitations, first, the sample was non-probabilistic and based on convenience, being restricted to the Iberian Project Management team at Schneider Electric. This limits the generalization of the findings to other organizational contexts, departments, or companies.

Second, although the literature on organizational culture, knowledge management, and technology acceptance is well established, fewer studies have examined

the intersection of these dimensions within the specific context of data-driven management in project environments. Therefore, the integrative framework adopted in this study reflects an emerging area of research that would benefit from further empirical validation.

Third, the interview coding process in MAXQDA was conducted solely by the author. While established thematic analysis guidelines were followed, the absence of a second coder may reduce inter-coder reliability.

Finally, the specific organizational context and the sensitivity of certain topics may have affected the depth and openness of participants' responses. Some interviewees appeared cautious when discussing internal challenges and may have softened their answers due to concerns about exposing organizational problems. This potential self-censorship could have limited the full expression of critical perspectives.

Despite these limitations, the study contributes to the understanding of the challenges associated with developing a data-driven management culture in project-based environments. As this remains a contemporary and evolving topic, further research is encouraged to expand and strengthen the empirical evidence in this field.

Future studies could adopt a quantitative approach with a larger and more diverse sample of project management teams across different regions or business units of Schneider Electric. This would allow greater generalization of the results and statistical validation of the relationships identified between organizational culture, knowledge management practices, technology acceptance, and data quality.

Moreover, replicating this study in other organizational contexts such as different functional departments like finance, supply chain or in other multinational companies, that would enable comparative analysis of data maturity levels, platform usability, leadership influence, and employee perceptions. Such comparisons could help identify structural or sectoral differences in the development of data-driven cultures.

Future research could also explore other digital platforms or analytics tools used within organizations to better understand how system design, data governance mechanisms, and user experience influence data quality and technology adoption.

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During the preparation of this Master's Final Work, the author used ChatGPT (OpenAI, GPT-5 model) as an AI-assisted writing support tool. The tool was used for content assistance, specifically to:

1. Help structure sections and sub-sections of the thesis;
2. Support the refinement of arguments and improve logical flow;
3. Suggest alternative phrasings to enhance clarity and readability;
4. Assist in organizing literature review themes;
5. Support language editing (grammar, spelling, and coherence).

The author critically reviewed, revised, and validated all AI-generated suggestions. No AI-generated content was included without careful evaluation, modification, and integration by the author. All academic interpretations, data analysis, conclusions, and final written content remain the sole responsibility of the author.

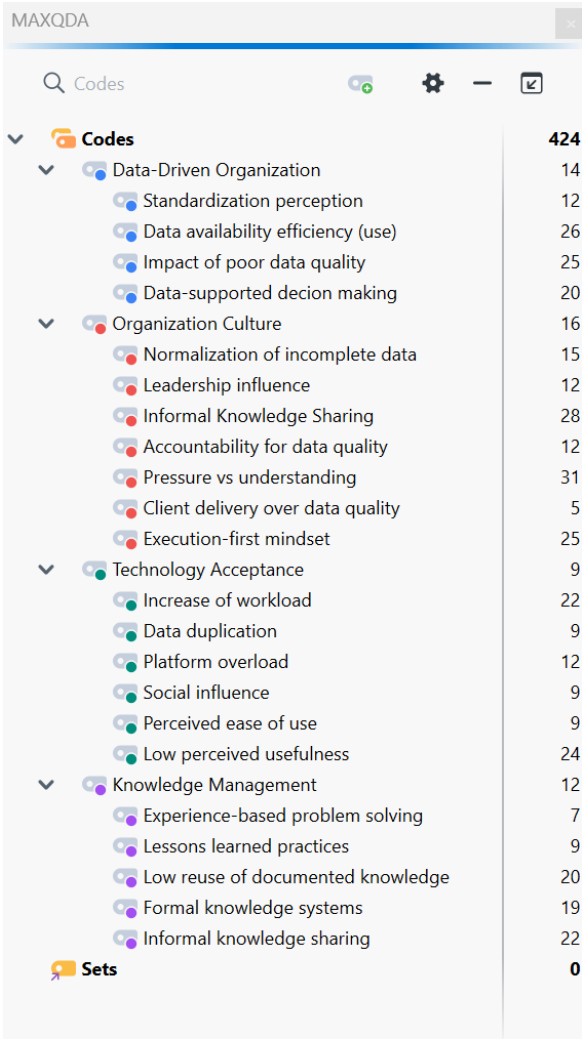
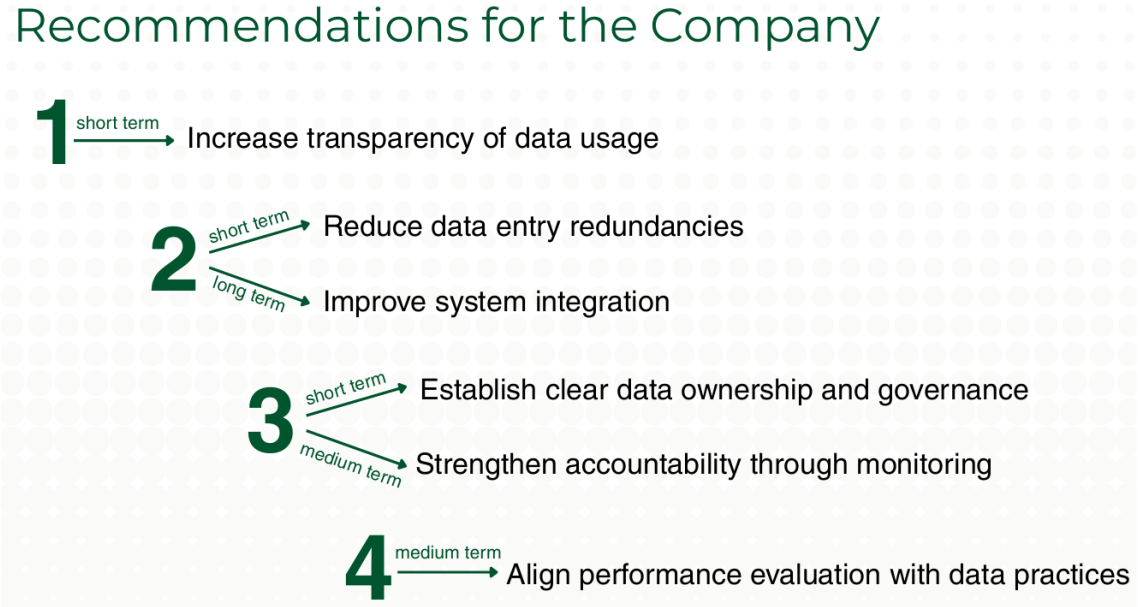
The author takes full responsibility for the integrity, accuracy, and originality of this work.

APPENDICES

Appendix A. Interview Structure

Dimension	Description	Papers/articles	Questions
The Role of Organizational Culture	Organizational culture is critical because shared values, leadership behaviors, and norms shape how employees perceive and use data in their daily work. Understanding this dimension helps explain whether the environment supports or constrains the development of a data-driven project management culture.	Ghafoori et al. (2024) Szukits & Móricz. (2024) Leso et al. (2023)	• How consistently do team members follow standardized processes? What influences this? • How do leaders communicate or reinforce the importance of using data? • How do people react to new digital initiatives or platforms? • Do managers or colleagues influence your use of the platform? • What factors make you or your colleagues hesitant to use the platform more often? • How do you typically respond when the platform changes or new features are introduced? • Have past negative experiences with digital tools influenced current attitudes? • How does the organizational culture influence the way people use or avoid the platform?
Knowledge Management in Data-Driven Organizations	Knowledge management is essential to ensure that data and insights are effectively created, shared, and applied across project teams. Strong knowledge enables informed decision-making and reduces the risk of information silos that could hinder a data-driven approach.	Idrees et al. (2023) Durst et al. (2023) Qhal. (2025)	• What types of knowledge (tacit vs. explicit) are most important for your tasks, and how are they usually shared? • Can you describe how information typically flows within the project team? • How is knowledge transferred when new members join the team? • What determines whether information gets documented in the platform versus remaining informal? • Have you ever experienced situations where important knowledge failed to reach the right people? • What training or support do you receive for using the platform or managing knowledge? • Does the platform support the knowledge flows needed for effective teamwork?
Technology Acceptance	Technology acceptance was selected to assess how employees perceive and adopt digital platforms that support data-driven project management. Since advanced tools create little value if they are not fully utilized, this dimension helps identify factors influencing adoption and sustained use.	Nnaji et al. (2023) Jalo & Pirkkalainen. (2024) Tamilmani et al. (2021)	• For which tasks do you rely most on the platform? Which tasks do you still perform outside the platform and why? • What aspects of the interface or workflow help you complete tasks efficiently? • What aspects hinder your work or cause frustration? • When technical issues arise, how quickly and effectively are they resolved? • How intuitive or easy to use do you find the platform for routine and complex tasks? • What resources help you overcome difficulties? • What changes would increase your willingness to use the platform more frequently? • Are there legacy or manual processes you still rely on? Why do they remain? • Does the platform ever feel like it adds to your workload instead of reducing it?
Data-driven Organizations	The data-driven organization dimension captures the extent to which data is trusted, integrated into processes, and used to guide project decisions. Examining this area clarifies the organization's level of data maturity and its readiness to strengthen evidence-based management practices.	Fischer et al. (2022) Idrees et al. (2023) Barbala et al. (2024)	• How would you describe the organization's attitude toward using data in decision-making? • Can you share an example where data significantly shaped a project decision or where it didn't? • What norms or expectations exist around data accuracy and documentation? • How would you assess the quality and reliability of the information stored on the platform? • To what extent does the platform improve your job performance or decision-making? • In your view, what are the most important improvements needed to enhance platform adoption and data-driven work?

Appendix B. MAXQDA Codes



Apendix C. Recommendations for the company