

Managerial Work in the Digital Age

A Case Study of How Middle Managers' Roles and Leadership Skills Evolve During Digital Transformation at Tork

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Digital transformation (DT) is reshaping managerial work. While prior research has emphasized the role of top management in DT, less attention has been paid to how middle managers' roles and leadership skills evolve in these changing contexts. At the same time, foundational frameworks such as Mintzberg's (1973) *Nature of Managerial Work* remain widely recognized to understand managerial work, yet rarely revisited in light of digital pressures. This study re-examines Mintzberg's framework through a qualitative single-case study of Tork, a global brand of Essity currently undergoing a large-scale DT initiative called DCX, to explore how middle managers' roles and leadership skills are evolving. Through semi-structured interviews and ethnographic observations, this study explores how digital leadership skills observed among DCX participants reshape Mintzberg's interpersonal, informational, and decisional roles. Findings show that as middle managers develop digital leadership skills such as adaptability, credibility, empathy, and digital literacy, it transforms the managerial work required to orchestrate DT. To capture this shift, the study introduces the conceptualization of Digital Managerial Roles, illustrating how Mintzberg's managerial work is reshaped in practice. While core elements of the original framework remain relevant, these roles evolve and give rise to three hybrid functions: the Change Agent, the Gatekeeper, and the Communicator. By revisiting and reconceptualizing Mintzberg's framework in light of empirical evidence, this study contributes to managerial literature in DT and offers practical implications for incumbent organizations seeking to leverage middle management as a key driver of DT.

Keywords: Digital Transformation, Digital Leadership, Middle Managers, Managerial Roles

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Definitions

<i>Term</i>	<i>Definition in this study</i>
Digital Transformation	This study adopts Nadkarni & Prügl's (2021, P. 236) definition, " <i>Organizational change triggered by digital technologies</i> ".
Digital Leadership	Doing the right things for the strategic success of digitalization for the enterprise and its business ecosystem (El Sawy et al., 2016, P. 142).
Middle Management	A position between the operating core and the apex of organizational hierarchies (Mintzberg, 1989, P.98)
Managerial Roles	Mintzberg (1973, P. 56) defines managerial roles into three groups - those that are concerned primarily with interpersonal relationships, those that deal primarily with the transfer of information, and those that essentially involve decision-making. It is for this reason that the ten roles are divided into three groups: three interpersonal roles, three informational roles, and four decisional roles.
Digital Maturity	The extent to which an organization has adapted its culture, workforce, and processes to digital technologies (Kane et al., 2017, P. 3).
Incumbent Organization	An organization already established in a particular industry with a demonstrated level of success in the market (Chen, 2024).

Abbreviations

<i>Abbreviations</i>	<i>Definitions</i>
DT	Digital Transformation
DL	Digital Leadership
DCX	Digital Customer Experience

1. Introduction

1.1 Background and Problem Formulation

Digital Transformation (DT) represents a paradigm shift (Nadkarni & Prügl, 2021; Hanelt et al., 2021). As a transformative force, it disrupts established business models and requires organizations to adapt quickly to remain competitive (Sebastian et al., 2017; Adner et al., 2019; Henderikx & Stoffers, 2023). The era of debating *whether* to embrace DT has passed. Instead, the focus has shifted to *how* organizations can effectively navigate DT and leverage it for competitive advantage (Hess et al., 2016). While digital technologies serve as crucial enablers (Vial, 2019), growing scholarly attention highlights the human dimensions of DT, including how people lead, adapt, and respond to ongoing change (Adner et al., 2019; Nadkarni & Prügl, 2021; Plekhanov et al., 2023). As such, DT is not only a technological concern but a deeply organizational and managerial one, where success depends on the ability to align people, processes, and strategy with the demands of an increasingly digital world (Warner & Wäger, 2019; Volberda et al., 2021).

Despite widespread recognition of DT, many incumbent organizations struggle to unlock its full potential (Firk et al., 2022), resulting in high failure rates (Correani et al., 2020; Oludapo et al., 2024). Common pitfalls include neglecting change management, legacy systems, and experiencing difficulties in navigating organizational boundaries (Yoo et al., 2010; Bharadwaj et al., 2013; Nambisan et al., 2017; Hanelt et al., 2021). In response, scholarly attention has increasingly focused on the role of leadership in DT (El Sawy et al., 2016; Kane et al., 2019; Cortellazzo et al., 2019; Klein, 2020; Gilli et al., 2024) and its organizational members (Hanelt et al., 2021; Nadkarni & Prügl, 2021; Firk et al., 2022; Elia et al., 2024).

Digital leadership (DL) involves leading the transformation and the resulting digital organization (Klein, 2020), requiring leadership qualities that positively influence the organizational members' attitudes and behaviors (Avolio et al., 2014; Kane et al., 2019; Gilli et al., 2024). This necessitates leaders who can build on traditional leadership skills while continuously adapting new DL skills (Kane et al., 2019). Nevertheless, DL itself remains underrepresented within organizational studies (Schwarzmüller et al., 2018; Cortellazzo et al.,

2019), leaving a gap in our understanding of the relationship between DL and the organizational ability to manage DT (Brunner et al., 2023). Further research is needed to integrate different perspectives on DL with management skills that facilitate DT (Margherita et al., 2024), particularly since organizational digital maturity often depends on the emergence of digital leaders who can advocate for new forms of management (Ostmeier & Strobel, 2022).

While much of the existing literature emphasizes top management's leadership skills and strategic role in DT (Hanelt et al., 2021; Firk et al., 2022), recent research highlights that DT is not solely a top-down initiative but increasingly becomes a distributed capability involving organizational members at all levels (Elia et al., 2024). However, the specific challenges and contributions of middle managers in DT have largely been overlooked (Nadkarni & Prügl, 2021). This top-down approach overlooks the fact that middle managers often are critical facilitators, driving transformation at the operational level, possessing in-depth organizational knowledge, and connecting different hierarchical levels (Wooldridge & Floyd, 1990; Nadkarni & Prügl, 2021; Tarakci et al., 2023).

Recent studies have begun to recognize the important role of middle managers in implementing digital strategy and ensuring operational alignment (Christodoulou et al., 2022; Henderikx & Stoffers, 2023). Still, a significant gap persists in understanding how their managerial roles and leadership skills evolve in practice, highlighting the need to explore the micro-level dynamics of DT (Nadkarni & Prügl, 2021; Henderikx & Stoffers, 2022, 2023; Christodoulou et al., 2022). This is particularly relevant to study given the blurring roles and boundaries of traditional middle management roles (Tarakci et al., 2023; Van Doorn et al., 2023), and their double relationality with numerous pressures from both superiors and subordinates (Gjerde & Alvesson, 2025).

To deepen the phenomenological understanding of DT, it is further critical to question whether established organizational theories can fully capture the complexities and boundary conditions of DT (Hanelt et al., 2021; Nadkarni & Prügl, 2021). Similarly, there is a growing need to adapt or extend existing organizational theories to incorporate DL characteristics (Klein, 2020). As such, a re-evaluation of the DT-DL relationship is motivated, given that existing theoretical frameworks may be insufficient to address the leadership challenges posed by DT (Cortellazzo et al., 2019).

1.2 Purpose

Leadership remains a central yet unevenly examined topic in DT research. While top management has received considerable attention, there is growing recognition that middle managers are critical in driving DT (Nadkarni & Prügl, 2021; Henderikx & Stoffers, 2023). Positioned between strategic vision and operational execution, middle managers are uniquely situated to connect organizational levels, manage ambiguity, and drive transformation on the ground (Wooldridge & Floyd, 1990; Tarakci et al., 2023). However, their evolving roles and leadership skills in DT remain under-theorized and empirically underexplored. This study aims to address these gaps by presenting answers to:

How do middle managers' roles and leadership skills evolve during a digital transformation initiative in an incumbent organization?

The investigation is twofold. First, it explores how middle managers' leadership skills evolve in response to the demands of a DT initiative at Tork, a leading global brand in professional hygiene of Essity. Particular attention is given to how middle managers have developed DL skills to lead the DT initiative effectively. Second, the study revisits Mintzberg's (1973) *Nature of Managerial Work* to evaluate its relevance and limitations in the digital era. By analyzing how DL skills interact with and reshape Mintzberg's interpersonal, informational, and decisional roles, the study aims to explore whether new forms of managerial work are evolving in the context of DT.

In answering this research call, the study aspires to make theoretical and practical contributions to the managerial literature on DT. From a theoretical perspective, by placing middle managers at the center of the analysis, an area that has previously been neglected (Nadkarni & Prügl, 2021), the study intends to develop a new conceptualization of managerial work in the digital age. This conceptualization aims to capture the evolving managerial roles and leadership skills required to navigate the demands of DT. From a practical perspective, the study aims to offer guidance on how organizations can structure and support managerial work during DT initiatives and clarify what is required of middle managers to lead and support such transformations.

1.3 Delimitation

To maintain focus and ensure feasibility, this study acknowledges a set of boundary conditions. First, it investigates one incumbent organization, using a single-case study approach. While this design enables deep contextual understanding, it may limit the generalizability of findings to other industries and organizational contexts. Second, focusing on one DT initiative rather than the organization's entire DT journey was necessary to address the research gap within a manageable timeframe. Studying organization-wide processes in a large global organization would have been excessively time-consuming. Third, the study adopts an organizational and managerial perspective, thereby excluding the technical aspects of DT. While technology is a crucial enabler of DT (Vial, 2019), this research focuses on the human dimensions of change. Fourth, the study is bounded by a specific timeframe, limiting its ability to capture longitudinal developments. As DT is a dynamic, ongoing, iterative process (Hanelt et al., 2021), this research offers a snapshot of one phase rather than a long-term analysis.

2. Theoretical Background

2.1 Literature Review

2.1.1 Actor-Driven Digital Transformation

Digital transformation (DT) has become a central theme in academic and practitioner discussions (Hanelt et al., 2021; Kane et al., 2019). Despite its prominence, DT remains conceptually ambiguous due to its multifaceted (Vial, 2019) and multidimensional nature (Hess et al., 2016), and the lack of a universally accepted definition (Hanelt et al., 2021). Scholars have sought to address this ambiguity by exploring DT varying dimensions and implications across fields such as information systems, organization theory, and innovation management (Appendix A). While acknowledging these diverse perspectives, this study adopts Nadkarni & Prügl's (2021) actor-centric view, focusing on the role of organizational members. Although DT is often described in stages – digitization, digitalization, and DT (Verhoef et al., 2021) – this study deliberately excludes a purely technology-driven view, concentrating instead on the human and organizational dimensions (Nadkarni & Prügl, 2021). Viewing DT as a phenomenon through a human lens emphasizes that DT represents a profound organizational shift, fundamentally changing how an organization operates, competes, and delivers value (Hanelt et al., 2021).

This actor-centric view becomes particularly relevant for incumbent organizations, where translating digital ambitions into meaningful outcomes remains a persistent challenge (Firk et al., 2022). Although DT has become a strategic imperative for navigating the evolving digital landscape (Chanias et al., 2019; Warner & Wäger, 2019; Volberda et al., 2021), incumbent organizations often struggle to change, facing high failure rates (Correani et al., 2020; Oludapo et al., 2024). These organizations often struggle with deeply embedded legacy competencies, established processes, and organizational cultures that once contributed to success but now generate inertia and path dependence (Vial, 2019; Hanelt et al., 2021). Managers may underestimate the urgency of change, resist experimentation, and favor established business models, reinforcing cognitive and behavioral rigidity (Fitzgerald et al., 2014; Volberda et al., 2021; Warner & Wäger, 2019).

Furthermore, failure often stems from neglecting change management (Correani et al., 2020) and difficulties in developing digital skills within existing organizational structures (Yoo et al., 2010), which requires establishing connections between existing organizational structures and newly created digital units (Bharadwaj et al., 2013; Nambisan et al., 2017). Navigating these organizational boundaries is challenging, as digital business models often differ fundamentally in governance structures, capabilities, collaboration approaches, and customer interactions (Wagner & Wärner, 2019; Vial et al., 2019; Correani et al., 2020). As a result, these embedded practices hinder organizational flexibility and responsiveness to digital disruption (Alstytne et al., 2016; Nadkarni & Prügl, 2021; Hanelt et al., 2021). To navigate these barriers, organizations must shift from hierarchical control to agile, decentralized models that empower employees to act autonomously and iteratively (Kane et al., 2019). This shift fosters distributed decision-making and is central to developing digital maturity, defined as an organization's ability to adapt its culture, workforce, and processes to digital technologies (Kane et al., 2017).

In response to these multilayered challenges, recent literature has increasingly emphasized the role of leadership and the contribution of organizational members in DT, which will be examined in greater depth in the following sections.

2.1.1.1 Digital Leadership

El Sawy et al. (2016, p. 142) define digital leadership (DL) as *“doing the right things for the strategic success of digitalization for the enterprise and its business ecosystem.”* Accordingly, DL entails leading the DT and the resulting digital organization (Klein, 2020), requiring leadership qualities that positively influence organizational members' attitudes and behaviors (Avolio et al., 2014; Kane et al., 2019; Gilli et al., 2024). Fisk (2002) was among the earliest to advocate for DL, arguing that digital represents a broader change in mindset aimed at creating business value through digitally driven approaches. He further emphasized that digital leaders must combine traditional leadership behaviors with a transformational perspective. Kane et al. (2019) support this view, arguing that leaders must build upon existing skills while simultaneously embracing change. This perspective suggests that DL is not a complete departure from traditional leadership but rather an adaptation and enhancement of existing skills to meet the demands of the digital age. However, due to terminological ambiguity, researchers diverge on which skills define DL, as illustrated in Table 1.

Table 1. Digital Leadership Skills

Authors	Objectives	Skills	Leaders Behaviours/Roles	Functions
Fisk (2002)	Guide organizations into a digital business world with new leadership approaches.	• Visionary • Engaging (coaching and supporting) • Fusing • Collaborative • Flexible • Techno-savvy • Open-minded • Constantly curious • Network-oriented	• Transformational leadership behavior: embrace change, bringing clarity amid complexity. • Coaching and supporting employees towards a strategic vision; giving purpose. Connect vision with the actions required to get there. • Fuse talents and opportunities to create value. Connect diverse ideas and initiatives to make things happen. • Actively seeking for self-transformation; lead by example. • Embracing failures as opportunities for learning and reinvention. • Seeks collaboration to make new possibilities.	• Driving organizational change by leading DT initiatives and programs • Orchestrating the redesign of organizational processes, internal and external collaboration structures, and the business model.
Schwarzmlüller et al. (2018)	Strategically prepare firms for DT by adjusting to changes in work design and leadership.	• Resilient • Learning-oriented • Result-oriented • Participative • Creative problem-solving	• Motivating and inspiring • Relationship-oriented leadership • Coaches and enablers • Inclusive style of leading.	• Developing talent • Embracing an agile culture • Satisfying employee flexibility requirements.
Kane et al. (2019)	Cope with challenges of DT such as increased pace of business, cultural shifts, distributed workplaces, higher productivity.	• Digital literacy • Forward-looking • Adaptability • Change-oriented • Open-minded • Strategic vision • Communicative • Creative	• Providing a transformative vision and purpose. • Enabling and empowering employees to think and act differently. • Collaborate across organizational boundaries • Leaders should provide perspective for problem-solving and allow the employee to solve problems independently, intervening only if required. • Leaders must take ownership of DT rather than delegating it to technology departments	• Driving organizational change • Developing talent • Embracing an agile culture • Orchestrating the redesign of organizational processes.
Cortellazzo et al. (2019)	Analyze studies on leadership and digitalization, identifying patterns across various social science disciplines.	• Digitally Communicative • High speed decision-making • Managing disruptive change • Managing connectivity • Technical competencies • Emotional intelligence	• Digital change agents and enablers.	• To lead in the era of DT requires individuals to be both people-oriented and technically minded, leveraging traditional leadership skills and new digital leadership skills.
Klein (2020)	Defining the main characteristics of leadership in the era of DT.	• Innovative visionary • Network intelligence • Digital intelligence • Motivational • Social intelligence • Ambidexterity • Diversity champion • Agile/adaptive • Learning by errors • Decisive courageous • Creative • Self-awareness • Knowledge-oriented	• Digital leadership skills are related to digital business, concerning social leadership attitude and a general mindset.	• Leading DT by managing disruptive changes and motivating employees.
Henderikx & Stoffers (2023)	Examine the leadership behaviours and skills of middle managers.	• Soft skills • Integrity • Trust • Humbleness • Digital intelligence	• Leaders need to shift from top-down leadership to people-oriented leadership approaches, integrating soft skills with digital intelligence.	• Support employees through digital change and to embody integrity and trust.
Tagscherer & Carbon (2023)	Research which leadership skills are required for successful DT regarding companies' internal and external dimensions.	• Visionary competencies: Anticipating markets and trends; scanning the internal and external environment • Soft Skills: Authenticity, empathy, humility, emotional intelligence, resilience.	• Leaders should be coaches and mentors, provide perspective for problem-solving and have the employee solve the problems autonomously and intervene if required. • Leaders must communicate a vision to achieve a shared and common vision between the leader and the employees. • Leaders need to provide the necessary abilities to execute strategies and tactics. • Leaders should be ethically responsible. • Promote teamwork and collaboration, including continuous awareness of diversity and cultural differences, which must be actively managed.	• Leaders must motivate and inspire their teams to follow the outlined objectives • Enable and promote creativity to create new business models based on digital technologies.
Brunner et al. (2023)	Examine DL-related capabilities.	• Adaptability • Digitally literacy • Strategic thinking • Agile • Motivating	• Transformational and situational leadership behaviours. • Coach, mentor and facilitator, sense-giver, and navigator.	• Enhancing organizational networking and self-organization • Driving agile working models as well as digital collaboration setups
Gilli et al. (2024)	The evolving role of leadership in the face of rapid digitalization.	• Being visionary • Digitally savvy • Highly collaborative • Adaptable • Motivating • Creative • Selfless • Soft skills • Open communication • Digital communication • Interpersonal skills	• Building strong relationships, including fostering trust, mutual respect, and open communication. • Effective communication is crucial for maintaining strong relationships, which implies leaders need to adopt digital communication tools. • Setting clear conditions for the employment relationship between leaders and team members • Leaders must focus on motivating and supporting, including providing feedback, coaching, and recognising efforts.	• Leaders should act as role models by fostering a supportive attitude toward change.

Despite this ambiguity, several core DL skills are widely acknowledged. A fundamental DL skill is the ability to articulate a clear vision and purpose for how DT can be leveraged to achieve organizational goals (Kane et al., 2019; Schwarzmüller et al., 2018; Tagscherer & Carbon, 2023; Brunner et al., 2023). It is agreed that a well-articulated vision provides direction and purpose, and it must be effectively communicated and translated into tangible and inspiring terms for the entire organization (Klein, 2020; Tagscherer & Carbon, 2023). Accordingly, DL requires strong communication skills (Kane et al., 2019; Klein, 2020; Henderikx & Stoffers, 2023; Gilli et al., 2024).

In addition, digital leaders must demonstrate strategic and tactical capabilities, including market anticipation, trend analysis, and aligning digital strategy with broader business objectives (Sebastian et al., 2017; Kane et al., 2019; Bawany, 2019; Gilli et al., 2024). Recognizing that change is constant, adaptability and agility are essential (Kane et al., 2019). This requires leaders to tolerate ambiguity, navigate complexity (Schwarzmüller et al., 2018; Gilli et al., 2024), and remain open-minded to new ideas (Kane et al., 2019). Digital leaders play a crucial role in removing obstacles to transformation (Cortellazzo et al., 2019; Gilli et al., 2024), fostering a culture of experimentation and innovation (Klein, 2020; Schwarzmüller et al., 2018; Gilli et al., 2024), and preparing employees to adapt to new situations (El Sawy et al., 2016). Critically, leaders must be motivational, encouraging employees to embrace the challenges of transformation and addressing their fears regarding changes in their tasks and roles (Bawany, 2019; Tagscherer & Carbon, 2023).

As DT centers around the use of digital technologies, digital awareness is emphasized. However, scholars differ on the required depth of technical expertise. Kane et al. (2019) and Gilli et al. (2024) argue that while deep technical skills are not essential, digital leaders must have a strong understanding of digital tools and their impact on business models and operations. From this perspective, what matters most is cultivating a digital mindset and holistic thinking, allowing leaders to recognize interdependencies and make informed strategic decisions. In contrast, Fisk (2002) suggests that digital leaders should possess a robust understanding of technology and its market implications. Cortellazzo et al. (2019) further stress the rising importance of digital intelligence, which is defined as the ability to analyze and leverage digital data in decision-making.

Finally, emotional and social intelligence are increasingly emphasized as essential to effective DL (Cortellazzo et al., 2019; Klein, 2020; Henderikx & Stoffers, 2023). Leaders must be able to understand and manage their own emotions while empathizing with and motivating others (Klus & Müller, 2021; Tagscherer & Carbon, 2023). Consequently, relationship-oriented leadership is gaining prominence, encompassing interpersonal skills such as active listening, empathy, and conflict resolution (Schwarz Müller et al., 2018; Henderikx & Stoffers, 2023; Gilli et al., 2024). This perspective aligns with adaptive leadership (Henderikx & Stoffers, 2022), situational leadership (Brunner et al., 2023), and coaching-oriented leadership behaviors (Schwarz Müller et al., 2018). Gilli et al. (2024) further argue that as technology continues to advance, the role of leadership is evolving. While some tasks may be automated or replaced by technology, the human element of DL becomes even more critical.

2.1.1.2 Organizational Members

DT is as much about its people as it is about technology (Hess et al., 2016; Kane et al., 2019; Warner & Wäger, 2019; Volberda et al., 2021). Therefore, understanding how organizational members drive and respond to DT is increasingly critical (Adner et al., 2019; Vial, 2019; Hanelt et al., 2021; Nadkarni & Prügl, 2021; Plekhanov et al., 2023). The critical role of the top management team (TMT) is frequently highlighted as central for shaping successful DT strategies, by identifying digital opportunities, aligning them with organizational goals, and mobilizing resources (Fitzgerald et al., 2014; Hanelt et al., 2021; Firk et al., 2022; Plekhanov et al., 2023). However, Elia et al. (2024) argue DT itself is not solely confined to individual TMT members. Rather, DT evolves into a distributed capability, incorporating the contributions of individuals at all levels throughout the organization, including peers, supervisors, the organizational environment, and culture. This distributed view highlights the multifaceted nature of DT, where roles, competencies, behaviors, and enablers collectively support DT and ensure alignment across strategic and operational levels.

In addition, a growing body of research highlights the critical, yet often neglected, role of middle management (Nadkarni & Prügl, 2021; Henderikx & Stoffers, 2022, 2023; Christodoulou et al., 2022; Van Doorn et al., 2023). This neglect stems partly from the traditional focus on TMT's strategic role in DT, underestimating middle managers' importance in execution and implementation. This top-down approach overlooks the fact that middle managers are often *where the action is*, possessing in-depth organizational knowledge and connecting different hierarchical levels (Nadkarni & Prügl, 2021).

Another reason for this neglect is the perception of middle managers as potential barriers to change. Since they are typically tasked with minimizing risks and ensuring compliance, they are often perceived as less likely to be entrepreneurial or support transformation efforts. This view tends to downplay middle managers' potential to drive change and overlooks the importance of understanding their perspectives, challenges, and motivations. Therefore, further research is needed to explore the roles and skills of middle managers in the context of DT (Nadkarni & Prügl, 2021).

Emerging research has begun to address this gap in understanding middle managers' critical role in DT. Henderikx & Stoffers (2022) explicitly call for more research on DT and leadership, noting the essential role of middle management in organizational change processes. Their follow-up study (2023) explores middle managers' leadership skills and behaviors in light of DT, emphasizing the importance of soft skills and people-oriented leadership. Christodoulou et al. (2022) further acknowledge the limited research on middle managers' roles in DT, noting that the only relevant paper on the subject was a case study of a Finnish public sector company by Paavola et al. (2017). Their work positions middle managers as strategic enablers, playing a central role in translating digital strategy into operational change and bridging hierarchical layers. Additionally, Van Doorn et al. (2023) explore the impact of digital automation on middle managers, revealing the complex interplay they must strike between efficiency gains and existing strategic responsibilities, which may involve balancing routine-based tasks with more forward-looking duties.

Collectively, these authors argue that the field of DT and middle management is still emerging and requires further investigation. In particular, there is a need to understand better how DT unfolds within incumbent organizations and how it reshapes the roles and skills of middle managers (Nadkarni & Prügl, 2021; Christodoulou et al., 2022; Van Doorn, 2023; Henderikx & Stoffers, 2023). Further research in this area is essential to equip middle managers with the necessary support to drive successful DT (Nadkarni & Prügl, 2021).

2.1.2 The Middle Management Perspective

Extensive research across industries underscores the important role of middle managers in strategy formulation (Wooldridge & Floyd, 1990; Huy, 2001; Tarakci et al., 2018), change management (Heyden et al., 2018), and the overall success of an organization (Floyd & Lane, 2000; Tarakci et al., 2023). Middle management is defined as “*a position between the operating core and the apex*” of organizational hierarchies (Mintzberg, 1989, p.98), consistent with Huy’s (2001) definition of “*any manager two levels below the CEO and one level above line managers*”, and Harding et al. (2014) characterization of middle managers as positioned “*below the top level strategic management and above first-level supervision.*”

This intermediary position brings both strategic value and inherent tension. On one hand, middle managers operate in contradictory positions within an organization’s hierarchy, acting as both controllers and the controlled (Harding et al., 2014). As a result, middle managers must manage relationships and communications in two directions, often experiencing conflicting demands from above and below (Gjerde & Alvesson, 2025). On the other hand, it also situates them at a unique intersection of operational detail and strategic overview (Mintzberg, 1989; Gjerde & Alvesson, 2020). Thus, middle managers play a crucial role in strategy, often being the first ones to recognize strategic problems and opportunities. Accordingly, their involvement is vital for bridging operations with the organization’s strategic objectives, leveraging internal strengths, and shaping new strategic directions (Wooldridge & Floyd, 1990; Tarakci et al., 2023). Beyond strategy, they act as key drivers of innovation, translating emerging ideas into execution. Empirical evidence by Heyden et al. (2018) confirms their role in fostering innovation across organizational levels, underscoring their significance in strategic renewal (Tarakci et al., 2023).

The contemporary business environment, marked by DT and evolving organizational structures, blurs traditional middle management roles. Their relational responsibilities have become more complex, requiring them to cultivate influence beyond formal authority. As a result, middle managers must act as “*connecting leaders*”, proactively engaging as both leaders and followers. This requires middle managers to rely not just on established procedures and rules, but also on personal values, emotions, and individual definitions of success (Taracki et al., 2023).

2.1.2.1 Mintzberg's Nature of Managerial Work

A recognized framework for understanding managerial work is Mintzberg's (1973) *Nature of Managerial Work*, which categorizes managerial roles into three categories (Table 2). Mintzberg (1973, p.58) defined Interpersonal Roles as tasks “*directly linked to the manager's status and authority, and each task essentially involves the development of interpersonal relationships*”, highlighting the manager's function in building relationships and representing the organization. Informational Roles, Mintzberg (1973, p.65) defined as tasks concerned with “*receiving and transmitting information*”, focusing on how managers collect, interpret, and disseminate information within and beyond the organization. Decisional Roles, Mintzberg (1973, p.77) defined as “*involve the making of significant decisions*”, that encompass tasks related to addressing challenges, allocating resources, initiating strategic changes, and negotiating.

Table 2. 10 Managerial Roles, Adapted from Mintzberg (1973).

Categories	Roles	Tasks
Interpersonal Roles	Figurehead	Performs ceremonial and symbolic duties as the formal head of the organization.
	Leader	Directs and motivates subordinates, manages performance, and oversees staffing and training.
	Liaison	Maintains a network of external contacts and internal connections to gather and exchange information.
Decisional Roles	Entrepreneur	Initiates and oversees new projects to improve organizational performance and respond to change.
	Disturbance Handler	Deals with unexpected events and operational crises, restoring stability and order.
	Resource Allocator	Distributes organizational resources, including time, funding, and personnel, based on priorities.
	Negotiator	Participates in and directs negotiations with stakeholders, unions, suppliers, and clients on behalf of the unit.
Informational Roles	Disseminator	Transmits important information internally to subordinates and other members of the organization.
	Monitor	Seeks and receives information about internal and external developments relevant to the organization.
	Spokesman	Advocating the organization's values, strategies, or achievements to the public or key audiences.

While Mintzberg originally focused on those people formally in charge of the organization, as the president, foreman, or department head (Mintzberg, 1973), his categorization of managerial roles remains highly relevant for analyzing the multifaceted nature of middle management (Korica et al., 2017; Lippert, 2024). The framework offers a structured approach to examining the daily realities of middle managers, particularly in how they balance strategic responsibilities with operational demands (Taracki et al., 2023).

That said, some scholars criticize Mintzberg for being too static and lacking contextual sensitivity (Ansoff, 1991; Tengblad, 2006; Korica et al., 2017). Tengblad (2006), for instance, challenges Mintzberg’s portrayal of managerial work as overly stable but also cautions against viewing it as constantly shifting. Instead, he positions managerial work as situated between stability and change, reflecting both persistent structures and evolving practices. Korica et al. (2017) further acknowledge Mintzberg’s ongoing relevance, but also argue that scholars must move beyond his categories to capture the complex, context-sensitive, and evolving nature of modern managerial work. Dandalt’s (2021) application of Mintzberg’s typology to school principals’ managerial roles, along with Beenen et al.’s (2021) argument that interpersonal skills are the most in-demand for organizational success and managerial effectiveness, reinforces the notion that while organizational contexts have evolved, the core functions of managerial work remain constant, underscoring the framework’s enduring stability and applicability (Korica et al., 2017). Thus, Mintzberg’s framework continues to serve as a valuable lens for analyzing middle managers’ roles in navigating strategic and operational complexities.

2.2 Synthesis & Research Gap

Based on the reviewed literature, DT is a relatively mature field. That is not to say it is saturated, since three research gaps have been identified, which this study aims to address. An overview of these identified gaps, along with the researchers who have noted their underexplored nature, is presented in Table 3.

Table 3. Research Gaps

Identified Research Gap	Among Others Highlighted by
Digital Leadership Skills	Avolio et al., 2014; Schwarzmüller et al., 2018; Cortellazzo et al., 2019; Klein, 2020; Ostmeier & Strobel, 2022; Brunner et al., 2023; Margherita et al., 2024.
The Middle Management Perspective	Nadkarni & Prügl, 2021; Christodoulou et al., 2022; Volberda et al., 2021; Henderikx & Stoffers, 2022, 2023; Taracki et al., 2023; Van Doorn et al., 2023; Gilli et al., 2024; Elia et al., 2024; Gjerde & Alvesson, 2025.
Digital Transformation Through Organizational Lens	Cortellazzo et al., 2019; Hanelt et al., 2021; Nadkarni & Prügl, 2021; Klein, 2020.

First, DL remains underrepresented within organizational studies (Schwarzmüller et al., 2018; Cortellazzo et al., 2019), particularly concerning the relationship between DL and the organizational ability to manage DT (Brunner et al., 2023). As Margherita et al. (2024) argue, a more integrated perspective on DL is needed, one that combines diverse viewpoints and clearly defines the managerial skills that support DT. Similarly, Ostmeier & Strobel (2022) highlight that digital maturity is strongly tied to the presence of digital leaders and the emergence of management that enables value creation in DT. From a practical standpoint, Klein (2020) advocates validating DL characteristics through empirical studies, while Avolio et al. (2014) emphasize the importance of examining the leadership dimension within organizations undergoing DT.

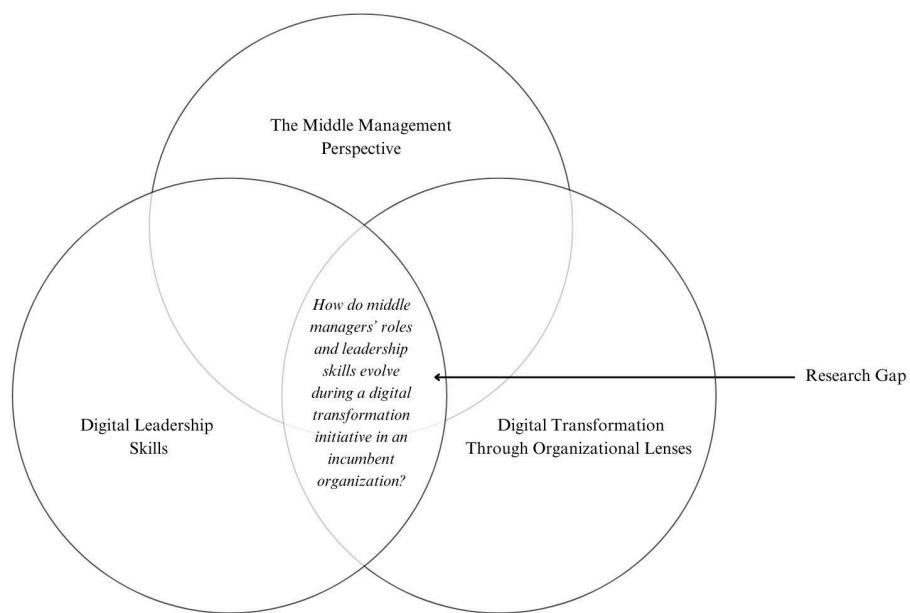
Second, while the human element of DT is becoming increasingly essential (Adner et al., 2019; Vial, 2019; Hanelt et al., 2021), there is a call for future studies of how DT impacts organizational members (Sebastian et al., 2017; Appio et al., 2021; Volberda et al., 2021; Firk et al., 2022). Interestingly, Nadkarni & Prüg (2021) point out that existing research on DT often neglects the middle management perspective, and therefore, call for more research to explore middle managers' critical role in driving DT. Adding to this, middle management necessitates attention due to blurred role boundaries (Tarakci et al., 2023; Van Doorn et al., 2023), and growing pressures from both superiors and subordinates (Gjerde & Alvesson, 2025). As the field of DT and middle management is still emerging, further investigation is required. In particular, there is a need to better understand how DT unfolds within incumbent organizations and how it reshapes the roles and skills of middle managers (Nadkarni & Prüg, 2021; Henderikx & Stoffers, 2022, 2023; Christodoulou et al., 2022; Tarakci et al., 2023). Further research in this area is essential to equip middle managers with the necessary support to drive DT (Nadkarni & Prüg, 2021).

Third, there is a significant question whether established organizational theories are adequate to fully explain the phenomenon of DT. The evolving empirical realities of DT may require a re-examination of these frameworks to determine their relevance and adaptability (Hanelt et al., 2021; Nadkarni & Prüg, 2021). It is unclear whether organizational theories are suitable to comprehend the multifaceted phenomenon of DT and its impact on leadership, necessitating re-evaluation of the DT-DL relationship (Cortellazzo et al., 2019). Moreover, it is not enough to simply point out the limitations of existing theories; there is a need to

actively adapt or expand them to incorporate DL characteristics, involving exploring how new leadership skills fit with established leadership frameworks (Klein, 2020).

Together, these gaps reveal the critical need to study how middle managers' roles and leadership skills evolve during DT in incumbent organizations. By addressing these gaps, this study aims to contribute to a more integrated understanding of the evolving nature of middle managers' managerial work in DT. Figure 1 visually illustrates the research gap.

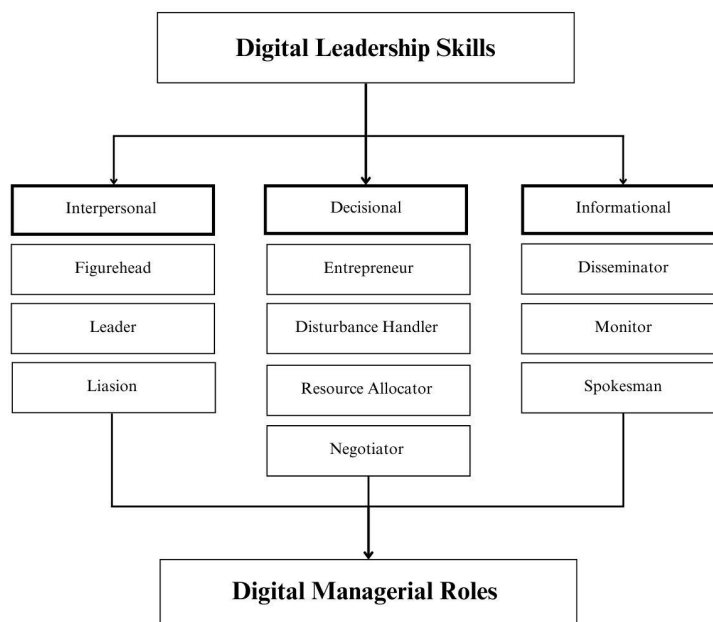
Figure 1. Research Gap



2.3 Initial Conceptual Framework

To fully grasp how middle managers' roles and leadership skills evolve during a DT initiative in an incumbent organization, an initial conceptual framework has been developed (Figure 2). The framework employs Mintzberg's *Nature of Managerial Work* (1973) as an established lens for analysing how DL skills reshape managerial work in DT. As Hanelt et al. (2021) suggest, leveraging established theoretical models is crucial for advancing our phenomenological understanding of the multifaceted nature of DT.

Figure 2. Initial Conceptual Framework



Following the framework, the study investigates the leadership skills middle managers need to have or develop to effectively lead DT initiatives, the so-called DL skills. These DL skills are then empirically linked to Mintzberg's ten managerial roles, providing insights into how DL reshapes managerial work. The framework further suggests that as DL reshapes managerial work, it evolves into *Digital Managerial Roles*. In essence, the framework proposes a transformation process: DL skills shape traditional roles, resulting in new, digitally-oriented roles.

3. Methodology

3.1 Philosophical Positioning

This study adopts a socially constructed ontological position. This perspective assumes that reality is socially constructed and subjective (Saunders et al., 2023), meaning that managerial roles and leadership skills are not fixed or objectively observable, but shaped through people's lived experiences. Accordingly, the philosophical assumption underpinning this study lies within an interpretivist paradigm, which views social reality as formed through actions, interactions, and meaning-making processes (Saunders et al., 2023). To understand how middle managers' roles and leadership skills evolve during DT, it is thus essential to listen to their reflections, stories, and interpretations.

3.2 Research Design

3.2.1 Qualitative Approach

Interpretivism's emphasis on meaning rather than frequency (Saunders et al., 2023) further supports the qualitative research approach (Collis & Hussey, 2021). A qualitative research approach enabled in-depth exploration of middle managers' lived realities, capturing their perceptions and experiences within their contextual setting (Yin, 2016; Collis & Hussey, 2021). It further allowed adjustments to research questions and design as the study progressed, enabling the study to adapt to emerging insights (Yin, 2018).

This flexibility was particularly well-suited to an abductive approach, which emphasizes iterative movement between empirical data and theory (Timmermans & Tavory, 2012). The research began with inductive observations at Tork but almost immediately engaged with relevant literature to better understand and interpret the emerging phenomenon (Collis & Hussey, 2021). This early and ongoing interplay between data and theory reflects the core abductive logic: moving back and forth between empirical insights and conceptual frameworks to iteratively refine both (Dubois & Gadde, 2002). Rather than setting a fixed scope at the outset, the research evolved as new insights surfaced through ethnographic observations and semi-structured interviews, allowing for continuous theoretical adaptation and richer case analysis.

The abductive reasoning also supports phenomenon-based theorizing (Fisher et al., 2021), where phenomena are “*regularities that are unexpected, that challenge existing knowledge (including the extant theory) and that are relevant to scientific discourse*” (Von Krogh et al., 2012, p. 278). This approach builds theoretical insights from emerging and undertheorized empirical patterns, ensures that theories remain relevant, practical, and capable of addressing contemporary challenges (Dubois & Gadde, 2002). This study uses empirical observation at Tork to explore whether Mintzberg’s (1973) *Nature of Managerial Work* remains applicable for the contemporary challenges and expectations of DT.

3.2.2 Single-Case

The single-case study design was employed for understanding the interplay between the phenomenon and its context (Yin, 2016; Collis & Hussey, 2021; Bell et al., 2022). This method was valuable as it allowed rich insights into the specific nuances of DT within organizational structures (Warner & Wäger, 2019; Appio et al., 2021). Given the aim to develop a rich contextualized understanding of middle managers’ roles and leadership skills, a comparative design would have limited the depth of insight achievable in each setting. Thus, the choice of the single-case study enabled a more in-depth exploration of lived experiences and organizational dynamics, aligned with the qualitative logic (Bell et al., 2022).

3.2.3 Case Selection

Tork was strategically selected based on relevance, timing, and access. On one hand, as Tork is amid its DT initiative, it provided the opportunity to directly observe how middle managers are involved in the DT initiative, and how their roles and leadership skills are evolving in response. On the other hand, it was chosen due to the accessibility facilitated by my employment. This aligns with an opportunistic case study strategy, where the researcher’s access to the particular organization facilitates the study of the phenomenon within its specific context (Collis & Hussey, 2021). These factors, combined with the relevance of the research topic, made this case a particularly suitable choice. Worth noting is that no compensation was offered, which Daft (1983) argues is important for novel insights uncoverage.

3.2.4 Ethnography

My employment provided the unique opportunity to integrate ethnographic elements. Ethnography is considered a qualitative research method by itself, yet often overlaps with case study methods (Bell et al., 2022), making it suitable for this study. It involves immersing oneself in a setting to understand its culture by identifying patterns through observation, listening, informal dialogue, detailed field notes, and reflection (Spradley, 1979; Bell et al., 2022). Organizational ethnography, in particular, emphasizes direct participation in daily activities to gain an insider's perspective (Bell et al., 2022). Drawing on Gold's (1958) classification of ethnographer roles, my position can be characterized as participant-as-observer. That is, I interacted with people and participated in the DT initiative, while participants were aware of the research purpose. This position prolonged access to people, meetings, and informal conversations, facilitating continuous observation beyond scheduled interviews. While this insider role offered a unique opportunity, it also presented the risk of bias and pre-existing organizational assumptions. To mitigate these challenges, Lincoln & Guba (1985) guidelines for trustworthiness were carefully followed, as detailed in Section 3.5.

The study employed a cross-sectional time horizon, meaning that data collection occurred at a single point in time rather than over a longitudinal period (Saunders et al., 2023). While a full-scale ethnography was not feasible within the study's timeframe, the time spent within the organization allowed for valuable insights into cultural norms and participant involvement in the DT initiative. This design aligns with rapid ethnography, as described by Galea et al. (2022), and offers a practical solution for conducting ethnographic research in time-constrained, project-based environments. This snapshot approach provided valuable insights into the phenomenon at a specific stage of the DT initiative.

As a final note, this research design is inspired by Mintzberg's (1973) own ethnographic fieldwork on managerial roles, where he closely observed five chief executives to theorize managerial work. Similarly, my observations at Tork explore how middle managers' roles and leadership skills evolve during a DT initiative, aiming to contextualize digital managerial roles.

3.3 Data Collection

In line with ethnographic principles, this study relied on multiple qualitative data sources, including semi-structured interviews, internal documents, and field notes based on observations and informal interactions (Watson, 2011), summarized in Table 4.

Table 4. Summary of Data Sources

Data Source	Example of Source Type	Numbers Processed
Research Interviews	19 interviews of approximately 45-60 minutes each, recorded and transcribed via MS Teams.	19 interviews, 376 A4 pages (Mars-April 2025).
Internal documents	Project presentations, reports, and internal project page.	12 A4 pages (June 2024-April 2025).
Researcher's personal notes and reflections	Notes written in Google Doc based on personal reflections, interactions and observations with the project members.	10 A4 pages (November 2024-April 2025).
Total		398 A4 pages

3.3.1 Researcher Role

Since June 2024, I have worked part-time at the organization. This insider perspective proved invaluable for the data collection, facilitating interview scheduling, providing organizational knowledge and access to internal documents, presentations, and informal communications, as well as fostering trust that encouraged candid responses (Collis & Hussey, 2021). Beginning in November 2024, followed by the six-month research period, I conducted ongoing ethnographic observations. These included note-taking during meetings such as team check-ins, project updates, and reflective journaling after interactions with team members. The resulting field notes captured organizational dynamics, leadership skills, and managerial practices. These observational insights were subsequently triangulated with interview transcripts and internal documents, strengthening the analysis's credibility, contextual depth, and originality.

3.3.2 Pre-study

The pre-study began with informal observations of team meetings and everyday interactions, along with analysis of internal documents, providing valuable context and insights into organizational culture and employee experiences. Additionally, four pilot interviews tested and refined the research focus and interview guide, ensuring alignment with emerging themes and nuances (Appendix B and C). This preliminary investigation provided valuable empirical insights, narrowing the research scope and confirming the importance of studying evolving managerial roles and leadership skills. This exploratory pre-study thus prepared the ground for subsequent research stages. As theoretical saturation was not the aim at this stage, four pilot interviews proved sufficient.

3.3.3 Main Study

3.3.3.1 Interview Sample

Participants were reached through my existing network and selected using a purposive sampling method, with inclusion criteria defined in advance to ensure relevance to the research question (Bell et al., 2022). Specifically, participants had to: (1) be full-time employees, (2) engage actively in or be directly affected by the DT initiative, and (3) be able to articulate their experiences and perspectives on the evolving managerial roles and leadership skills. This resulted in a final sample covering diverse hierarchical positions, spanning senior leadership, middle managers, and line managers across business functions as sales, marketing, digital, and IT. This targeted approach ensured the sample possessed the necessary knowledge and experience to address the research question, improving the quality and depth of the data obtained (Yin, 2016).

While inclusion criteria were predefined, the number of participants was not. Rather, data collection continued until theoretical saturation, meaning no more second-order themes emerged from the data (Bell et al., 2022). After 12 interviews, only one new theme emerged, and by the 13th, none were added. Nonetheless, two more interviews were conducted to ensure saturation and thematic depth (Crouch & McKenzie, 2006). This resulted in 15 interviews for the main study (Appendix D), comprising a final sample of 19 interviews.

3.3.3.2 Interview Design

All interviews were semi-structured and followed a thematic guide that focused on participants' involvement in the DT initiative, their evolving managerial roles, and the leadership skills they perceived as critical during the process (see Appendix E). Considering the interviewee's hierarchical roles, the content was partly tailored to capture individual reflections and interpretations (Bell et al., 2022). The interviews lasted between 45-60 minutes, allowing room for follow-up questions to unfold in each session.

Given the organization's global presence and the aim for a diverse interviewee sample, the interviews were conducted remotely by Microsoft Teams. While virtual interviews may limit the interpretation of non-verbal cues, research by Irani (2019) suggests that digital interview tools are nearly as effective as in-person interviews, thereby validating this method. To ensure ethical integrity, participant anonymity and the confidentiality of transcripts and recordings were strictly upheld in accordance with the ethical guidelines of Bell et al. (2022). Recognizing that meaning structures expressed by interviewees are central to this study, participants were given the option to conduct the interview in either English or Swedish. As a result, 11 interviews were conducted in English and the remaining 8 in Swedish. While this bilingual approach may introduce translation challenges, particularly in direct quotations, it was deemed necessary to minimize the risk of miscommunication, which could otherwise arise due to linguistic difficulties (Feldermann & Hiebl, 2020).

3.4 Data Analysis

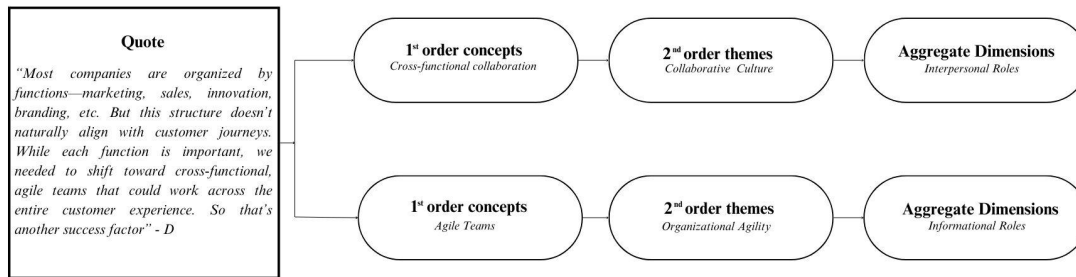
The data analysis was designed to capture the richness of individual experiences and the underlying patterns that reveal how managerial roles and leadership skills evolve during DT. During the pre-study phase, I conducted a thematic analysis to familiarize myself with the data and explore preliminary themes, a method well-suited for exploratory research (Saunders et al., 2023). I applied open coding to four pilot interviews and cross-referenced them with field notes and internal documents. This revealed patterns such as *role ambiguity*, *stakeholder complexity*, and *cross-functional tensions*, which helped refine the research question and the main interview guide.

For the main study, the Gioia method was deemed appropriate due to its structured yet emergent nature (Gioia et al., 2013). Although originally designed for inductive research, its iterative analysis makes it adaptable to abductive reasoning, especially when theory refinement is a core objective. This flexibility allowed the study to maintain empirical rigor while integrating theoretical insights to enhance explanatory depth (Bell et al., 2022).

The data analysis began with transcribing the interviews. Although MS Teams provided auto-generated transcripts, it was essential to manually review them to ensure an accurate understanding of participants' statements. I then used Atlas.ti for coding, starting with an in-depth review of the transcripts to identify first-order concepts, terms grounded in participants' language and observations. These initial codes were data-centric, ensuring minimal theoretical bias. As the analysis progressed, similarities and differences between first-order concepts were examined, allowing for the identification of second-order themes, more abstract categories that represent underlying patterns in the data. During this phase, theoretical considerations began to influence the interpretation of themes, as I examined how these emerging themes contributed to a broader understanding of managerial roles. Finally, these themes were abstracted into aggregated dimensions, with Mintzberg's (1973) managerial roles informing the interpretation.

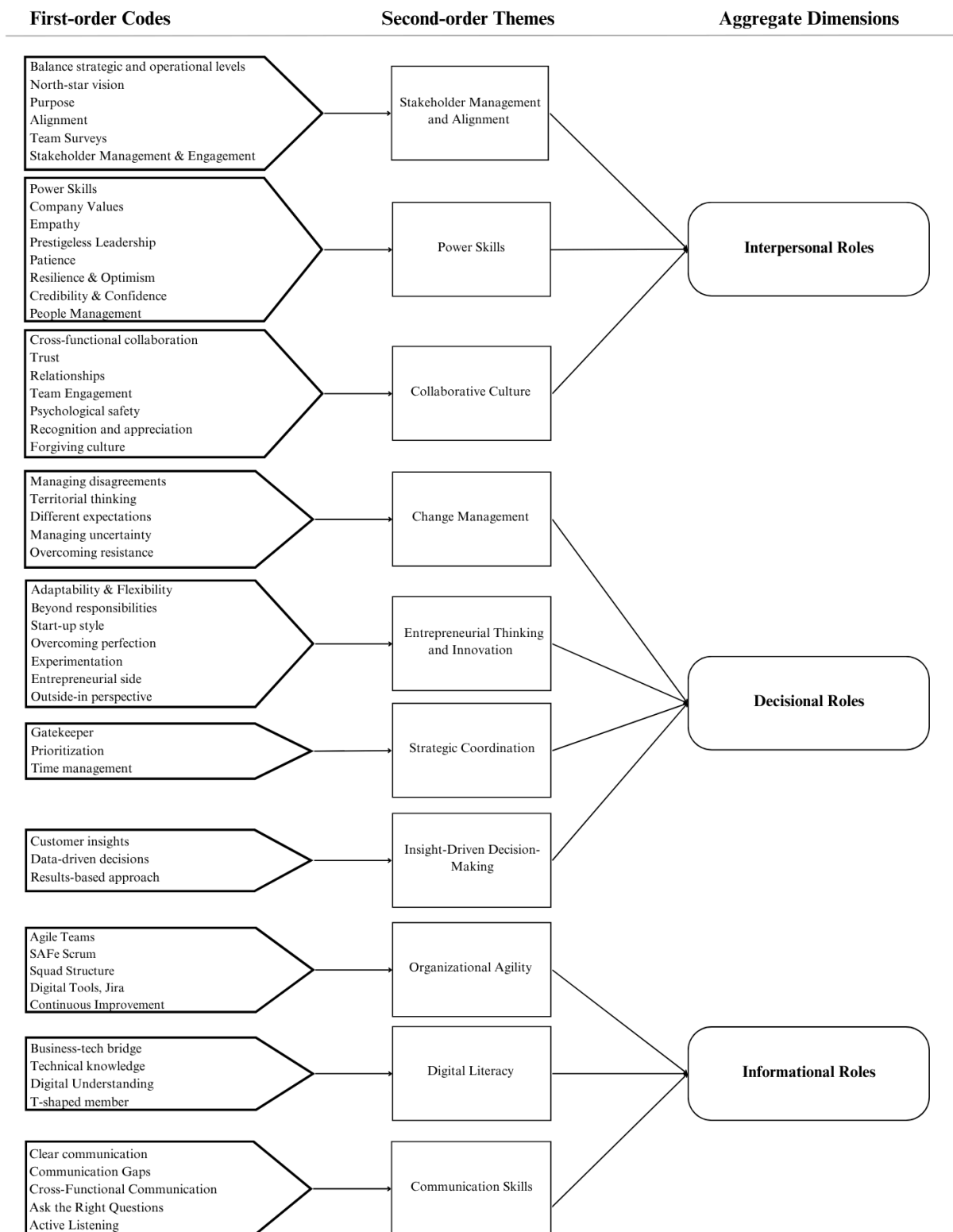
Figure 3 illustrates the coding process. From this quote, two first-order concepts were identified, each selected for relevance and potential to inform the research aim. This example demonstrates the iterative and interpretive nature of the analysis, moving from empirical detail to theoretical insight, and shows how the Gioia method enabled structured coding while allowing nuanced differentiation within a single quote. The data structure (Figure 4) illustrates the progression from raw data to higher-order themes, supporting analytical transparency and validation of findings (Gioia et al., 2013; Saunders et al., 2023). Appendix F provides an overview of the empirics.

Figure 3. Example of Data Processing



To complement the interviews and add contextual depth, ethnographic observations were analyzed thematically. I applied open coding, guided by principles from Lofland & Lofland (1995), cited in Bell et al. (2022). This involved asking analytical questions such as: *What does this observation represent? What topic is it an instance of? What question does it raise?* Through iterative review, I identified initial codes grounded in observed behaviors, interactions, and situational dynamics. These included, for example, how middle managers managed time pressure, prioritized tasks, or fostered a forgiving culture that embraced failure as part of a “*we test and we learn*” mindset. Such observations were clustered into broader second-order themes, in this case, Change Management and Collaborative Culture. This strengthened triangulation across data sources.

Figure 4. Data Structure



3.5 Quality of the Study

3.5.1 Trustworthiness

This study adheres to established qualitative research standards to ensure trustworthiness. To evaluate the quality and robustness of the research, the study applies the four key criteria for trustworthiness – credibility, transferability, dependability, and confirmability – as proposed by Lincoln & Guba (1985) and outlined in Bell et al. (2022).

Credibility is of greatest importance in this study. Since the phenomenon is being explored through the lens of human experiences, it is essential to ensure that my representations of reality accurately reflect participants' perspectives (Lincoln & Guba, 1985). While my dual role as researcher and employee offered valuable access, it also introduced the risk of bias, as pre-existing assumptions could influence data interpretation. To mitigate this and enhance credibility, several strategies were employed, drawing upon Lincoln & Guba (1985) recommendations. First, triangulation of data sources enabled cross-validation and reduced dependence on any single source. Second, purposive sampling ensured diversity across hierarchical levels and functional areas, strengthening credibility by capturing a broad range of experiences and mitigating the risk of a limited perspective. Third, the abductive approach facilitated iterative movement between theory and data, allowing continuous adaptation and refinement of research assumptions. This was supported by persistent observation, involving six months of engagement with the data, including repeated reviews of interview transcripts, internal documents, and field notes. This process deepened understanding of the phenomenon and reinforced the credibility of findings (Bell et al., 2022).

Transferability refers to the extent to which findings are transferable to other contexts beyond the examined setting (Lincoln & Guba, 1985). While single-case studies are often critiqued in this regard, this study's rich descriptions of the organization, its industry, the DT initiative, and the participants' profiles enable readers to make informed judgments about the applicability of the findings to other settings (Yin, 2018; Bell et al., 2022).

To ensure dependability, this study provides a transparent account of the research process, including the rationale behind methodological choices, description of the data collection methods, and the analysis techniques employed. A comprehensive audit trail was maintained throughout the study, documenting each stage from initial data collection to final interpretation. This record includes interview transcripts, meeting and observation notes, coding decisions, and analytical memos, ensuring a transparent and verifiable record of the research process. These records not only ensure transparency but also allow others to assess the logic and reliability of the findings (Bell et al., 2022).

Confirmability reflects the extent to which findings are rooted in the data rather than shaped by researcher bias (Lincoln & Guba, 1985). This was particularly important given my dual role. To mitigate potential bias, the analysis focused on how interviewees perceived and made sense of managerial roles and leadership skills, adhering to a grounded theory-inspired approach (Gioia et al., 2013). Interview findings were cross-checked against internal documents and meeting observations for triangulation (Lincoln & Guba, 1985). Additionally, findings were critically discussed with my supervisors at both Tork and the Stockholm School of Economics to reduce subjectivity and enhance objectivity. These discussions ensured findings were grounded in data rather than shaped by personal assumptions (Bell et al., 2022).

3.5.2 Ethical Considerations

Ethical considerations were central to the study (Saunders et al., 2023). Tork granted permission to be disclosed in the thesis, although to prioritize participant well-being, strict data confidentiality and anonymity measures were maintained to ensure that participants could express their opinions freely (Collis & Hussey, 2021). Before each interview, participants received comprehensive information about the study's purpose, objectives, and data usage, including their right to withdraw at any time. Informed consent was obtained both before and during the interviews (Collis & Hussey, 2021). All recordings were stored securely and deleted post-transcription, in line with GDPR and ethical guidelines (Collis & Hussey, 2021; Saunders et al., 2023).

4. Empirical Findings

4.1 Tork

Tork is a global brand owned by Essity and managed within its Professional Hygiene business unit. As a global leading professional hygiene brand, Tork offers sustainable hygiene solutions and digital services to commercial customers in over 110 countries. The brand generates +\$2.8 billion in annual sales and has approximately 7000 employees.

To serve its diverse customer base, Tork currently operates three distinct digital platforms: Tork Online (main website and product information), Tork Connect (distributor-sales team communication), and Easyorder (order placement and management). While these platforms have individually served their purpose, their coexistence creates inefficiencies and fragmented customer experiences. To address this, Tork launched the Digital Customer Experience (DCX) initiative in early 2024, with the vision of consolidating its digital infrastructure into Tork Global, a unified platform aimed at enhancing omnichannel experience, streamlining operations, and future-proofing the digital business model. Ultimately, make the business stronger, more competitive, and enable profitable growth.

“We want to make it easier for our customers. By merging the platforms into one, we remove friction and make the customer experience smoother. Previously, a distributor had to go to one platform to place an order, another to check their usage data, and a third for customer support. Now, everything will be in one place.”

- Interviewee C

Before DCX, Tork Online was managed by Global Units, while Tork Connect and EasyOrder were managed by Business Units, often operated in silos. DCX now brings these units together in cross-functional collaboration, involving 60-70 members from Marketing, Digital, Sales, and IT.

“This is not just about building a new website. It’s a full-scale transformation of how we serve our customers digitally. It affects every team, from IT and content to frontline sales.”

- Interviewee I

4.2 Pre-study Findings

The pre-study provided a contextual understanding of Tork's DCX initiative, revealing that the move towards a unified digital platform represents a fundamental change to the existing business processes and organizational structures.

Participants emphasized the scope and complexity of DCX, noting that it involved numerous cross-functional teams and managers working on parallel but interdependent assignments. A recurring theme was the need to align these diverse perspectives and priorities to ensure cohesion and success. As interviewee O explained:

“You have developers in one room, marketing in another, and sales in a third, each with their own priorities. Aligning them is not easy.”

This complexity underscored the difficulties of integrating digital skills into legacy structures. Pre-study findings suggested that entrenched routines, processes, and cultural norms had contributed to a degree of resistance to change, highlighting the organizational inertia that often accompanies transformation efforts.

Another key finding was the important role of middle managers in orchestrating DCX. They were identified as critical facilitators of change, responsible for interpreting strategic objectives, supporting teams through transitions, and building the capabilities needed for long-term success. As interviewee A explained:

“He has guided our teams through the changes brought about by DCX.”

Overall, the pre-study identified two main themes: the challenge of aligning efforts across stakeholders and the growing importance of middle managers in orchestrating DT. These findings informed the direction of the main study, shaping its focus on how middle managers navigate and respond to the demands of DT.

4.3 Main Findings

4.3.1 Interpersonal Roles

4.3.1.1 Stakeholder Management and Alignment

Middle managers were described as key translators of strategy into operational execution, responsible for coordinating stakeholder interests while fostering alignment. This was particularly important at DCX, where the scale and complexity required continuous effort to keep diverse stakeholders, such as product owners, marketers, developers, sales teams, and senior leadership, moving in the same direction.

One of the most emphasized mechanisms for alignment was a clearly articulated North Star vision, centered on building a unified digital platform to improve the customer experience. However, vision alone was not enough; clarity and ownership were considered equally critical. As interviewee I explained:

“You have to explain the why to leadership, the what to the team, and let them own the how.”

To monitor and reinforce alignment over time, team surveys were used to track engagement and adjust course when needed. While team surveys revealed strong alignment throughout DCX, some participants said alignment was not always seamless. Interviewee J described tensions emerging when strategic intentions were interpreted differently across stakeholders. For instance, while leadership emphasized long-term platform consistency, operational teams were often pulled toward short-term delivery pressures. In such cases, participants described middle managers had to mediate and realign expectations, using tools like OKRs (Objectives and Key Results) to create iterative goal-setting processes that enabled upward and downward alignment.

Ultimately, participants highlighted stakeholder management and engagement involved continuous interpretation, negotiation, and communication to ensure that strategic priorities were understood, shared, and implemented in ways that balanced both ambition and feasibility.

4.3.1.2 Power Skills

Participants consistently emphasized the importance of interpersonal skills, reframed internally as power skills. Rather than being treated as secondary, these skills were described as necessary for influencing peers, fostering collaboration, and sustaining team performance in a complex, fast-paced environment. As interviewee I expressed:

“We stop saying soft skills, instead, we call them power skills. People used to dismiss soft skills as secondary, but they are critical.”

These skills were closely tied to the company values and encompassed qualities like empathy, humility, and emotional regulation. Participants further described prestigeless leadership, where influence is built through trust and shared ownership rather than hierarchy, as essential at DCX. Interviewee F further described credibility built on confidence as the “*hard currency*” essential for navigating between stakeholders.

Several participants acknowledged that while pressure is inevitable, reacting impulsively can create misalignment and inefficiencies. Some participants stressed the importance of patience, others stressed resilience and optimism.

The human aspect of DT was frequently raised. Several participants underscored that successful DT depends as much on people management as on technical skills. With diverse and evolving team compositions, middle managers had to understand individuals, adapt their leadership styles, and create environments where others could thrive. As interviewee L exemplified:

“If I apply the same approach from a previous project to this one, it would not work. What always works is people management, understanding individuals, adapting styles, and recognizing strengths.”

Looking ahead, several participants argued that power skills would only increase in relevance as AI advances, underscoring the lasting importance of human-centered leadership.

4.3.1.3 Collaborative Culture

Participants described a shift from siloed departments to agile, cross-functional teams. This transition required not only new structures but a collaborative culture rooted in trust, mutual respect, and strong interpersonal relationships. As interviewee C reflected:

“Relationships are key. Without them, processes break down.”

Team engagement was seen as critical, described as a key enabler of collaboration and sustained performance. Participants emphasized that engaging team members is about creating an environment where individuals feel motivated, valued, and included in the decision-making process. As interviewee E illustrated:

“He spent most of his time engaging with people, making sure they felt valued and heard.”

To support team engagement, participants stressed the importance of empowerment. Interviewee K emphasized autonomy and self-organized teams ensure that team members are emotionally invested in the success of DCX, arguing their intrinsic motivation to perform at their best increases. In addition, recognition and appreciation were frequently mentioned to reinforce team engagement. Several participants reflected that when people felt appreciated, they were more likely to go the extra mile, not because of pressure, but because they felt motivated. As interviewee D put it:

“People wanted to do great work, not because they were being pushed, but because they felt motivated and appreciated.”

Beyond engagement, participants emphasized the importance of building psychological safety. DCX was seen as inherently uncertain, and middle managers needed to create spaces where teams felt secure enough to take risks, admit mistakes, and experiment. This shift towards a forgiving culture allowed learning to be prioritized over blame. As interviewee D explained:

“If something goes wrong, the response is never who to blame? But rather, how do we fix it?”

Participants described how normalizing failure enabled innovation to flourish. Interviewee C reflected that the ability to make mistakes without fear *“changed everything”* while interviewee O highlighted *“if you don’t make mistakes, it is actually a problem, because that means you are not taking risks.”* Essentially, middle managers were seen as enablers of collaboration by building trust, reinforcing engagement, and creating psychological safe environments.

4.3.2 Decisional Roles

4.3.2.1 Change Management

Participants described middle managers as central in driving change during DCX, tasked with both managing friction while enabling organizational adaptation. In the early stages of DCX, conflicts and disagreements were common. As interviewee A reflected, different teams initially held diverging understandings of the project scope, which created misalignment and confusion about shared goals. As interviewee D noted, these were *“classic change management issues.”*

Throughout DCX, disagreements were often attributed to conflicting priorities, resource constraints, and varying levels of comfort with ambiguity. Participants highlighted that managing these tensions required both diplomacy and decisiveness. Interviewee C explained:

“If we do not address disagreements, it escalates. My role is often to step in early, clarify misunderstandings, and ensure we move forward.”

Importantly, not all disagreements were viewed negatively. Several participants described disagreements as a source of innovation, where discussions were valuable for improved outcomes. As interviewee L emphasized:

“Conflicts are beneficial for digital transformation. When individuals debate solutions passionately, they contribute their best insights, experience, and knowledge, ultimately strengthening the program.”

Expectation management emerged as an equally critical dimension of change leadership. Middle managers were described as managing various expectations on how DCX should move forward: marketers focused on user experience, developers prioritized system architecture, and senior leadership focused on speed and delivery. These competing expectations required middle managers to mediate trade-offs and ensure progress without compromising strategic coherence. Interviewee E observed:

“His role is very political, making sure people feel heard, which is not the same as doing exactly what they want.”

Participants further discussed resistance to change as inevitable. Some teams welcomed ambiguity and change, while others remained anchored in existing structures and processes. This variability challenged middle managers to adapt their change strategies depending on team readiness and cultural dynamics. One approach described as effective was communicating transparency about uncertainty. Rather than presenting top-down certainty, middle managers actively communicated that not all answers were available upfront, a message that helped normalize ambiguity and reduce resistance.

4.3.2.2 Entrepreneurial Thinking and Innovation

DCX required middle managers to adopt an entrepreneurial mindset, characterized by adaptability, flexibility, and comfort with ambiguity. Rather than adhering to static roles or fixed processes, managers navigated fluid tasks and shifting priorities. Interviewee A reflected:

“You end up doing things you were not originally responsible for, but it is part of making the whole project work. You need to be adaptable with that.”

This entrepreneurial orientation was frequently compared to startup environments. Interviewee G noted:

“I have worked in startups before, and DCX feels very startup-like.”

Participants also described a shift from control-based planning toward iterative exploration. Rather than expecting full clarity and predictability at the outset, middle managers emphasized the need for flexibility in execution. This mindset allowed for responsiveness to emerging challenges and strategic recalibration throughout DCX. As interviewee C explained:

“You can not have fixed time, budget, and functionality all at once. You must be prepared to adjust at least one of these.”

Several participants mentioned this shift was embedded in the agile methodology underpinning DCX, where progress was measured not by perfect planning, but by the ability to test, learn, and adapt. In addition, participants described how teams were encouraged to move forward with “good enough” solutions, trusting that refinements could be made iteratively. One example illustrating this shift came from interviewee F, who described how conflicting views were resolved through experimentation:

“When two things conflict, it is not about one being right and the other wrong. It is about testing a direction, and if it does not work, we pivot.”

Finally, innovation was described not as a one-off outcome but as a sustained mindset. Participants stressed the need to stay externally focused, to maintain competitiveness. As interviewee J emphasized:

“We need to have an outside-in perspective to keep innovating, staying ahead, and adapting to change.”

4.3.2.3 Strategic Coordination

DCX was described as dynamic and, at times, demanding, requiring middle managers to take a central role in coordinating work, aligning priorities, and reducing noise. A recurring theme was the role of middle managers as gatekeepers, responsible for filtering large volumes of feedback, clarifying decision-making authority, and shielding teams from unnecessary complexity. This gatekeeping function was viewed as essential for preventing overload and enabling teams to direct their energy toward core priorities. Interviewee F explained:

“We receive a lot of feedback. It must be handled in a structured way. That is why we need a strong gatekeeper, someone who can filter and package the feedback while having the confidence to say, ‘No, we will handle this differently.’ It is about managing input to keep the team focused and aligned with priorities.”

Still, interviewee H noted that this was not always straightforward. In some cases, middle managers themselves were caught between top-down pressure and the need to shield their teams, revealing the tension of managing in both directions simultaneously.

Prioritization and time management emerged as equally critical. Participants emphasized the need to define clear focus areas, particularly under tight deadlines and shifting expectations. Rather than attempting to meet every request, several participants described learning to say no or postpone tasks that did not align with current goals. This pragmatic approach was seen as necessary to maintain quality and team motivation. Interviewee M emphasized:

“His role is all about prioritization, being very clear on what we need to work on because there is just a lot to tackle.”

Together, participants highlighted how strategic coordination in DT is about managing complexity, maintaining alignment, and balancing structure with adaptability.

4.3.2.4 Insight-Driven Decision-Making

Participants described a clear shift in decision-making logic during DCX. Rather than relying on gut feeling or internal assumptions, middle managers increasingly turned to customer insights or behavioral data to guide strategic direction, prioritize actions, and align stakeholders. For instance, customer insights were frequently cited as an effective way to reduce internal friction and accelerate alignment. Interviewee D shared:

“If someone had an opinion, we could point to customer insights and say, ‘This is what the customer wants.’ That ended most discussions quickly.”

In addition, several participants emphasized how data helped challenge assumptions and clarify user needs. At the same time, participants acknowledged that the shift to insight-led decision-making was still maturing. Despite greater access to analytics, several participants observed that the organization had not yet fully embraced data as a foundation for decision-making. As Interviewee F reflected:

“We have more data than ever, but it is surprising how rarely we base decisions fully on it. The challenge is to actually look at the data and have the courage to make decisions based on it.”

Nevertheless, there is a growing expectation for managers to act on insights. Interviewee J observed:

“Sometimes we hesitate to make the unpopular decision. But now with access to real-time customer data, we are expected to take responsibility, not wait for consensus.”

Participants marked a broader cultural move toward a results-based approach, where decisions needed to be supported by evidence rather than status, opinion, or consensus. Participants reflected a fundamental shift in managerial work, where the role of data grows, so too does the expectation that managers use it. Not just to measure performance, but to drive it.

4.3.3 Informational Roles

4.3.3.1 Organizational Agility

Participants described a structural shift in work structure during DCX, moving from siloed functional departments toward agile, cross-functional teams operating under the SAFe Scrum framework. This transformation introduced squads (small, autonomous units structured around customer journeys) designed to reduce handovers, embed key competencies, and increase team-level ownership. As interviewee C explained, each squad included roles such as product owner, scrum master, UX designer, business analyst, and an analytics expert, ensuring operational independence while maintaining strategic coherence.

Several participants emphasized that this agile structure enabled trust-based coordination. Instead of top-down oversight, teams were empowered to prioritize their own work and resolve blockers through structured ceremonies, such as daily standups. This shift reduced the need for constant managerial intervention while improving transparency and alignment. Digital tools like Jira supported this approach by allowing managers to monitor progress without micromanaging. As interviewee L noted: *“I can just see progress in real time.”*

Agility was described as a means of maintaining sustainable energy and engagement. Participants highlighted that sprints were deliberately not filled to capacity, leaving space for unexpected needs and individual recovery. As reflected by F:

“We do not completely fill the sprints, instead we leave room for flexibility and balance.”

Participants further highlighted that working with agile methodologies is about ongoing refinement, learning, and continuous improvement. Interviewee I emphasized this philosophy:

“Don’t wait for 100% perfection. We expect 70% and iterate. That is how we move forward.”

Interviewee J emphasized that navigating agile structures and championing continuous improvement had become essential leadership skills. As interviewee C further expressed: *“agility has become more than a methodology, it is almost like a religion”*, reflecting its central role in how middle managers orchestrate DCX.

4.3.3.2 Digital Literacy

Participants consistently described digital literacy as critical for middle managers during DCX. Rather than requiring technical mastery, digital literacy was framed as the ability to understand digital tools, workflows, and language well enough to make informed decisions. This view was echoed across participants and tied to the concept of the T-shaped members, combining deep expertise with broad cross-functional awareness. Interviewee D explained:

“We aim for a ‘T-shaped’ workforce, specialists in their areas but with enough knowledge to contribute across disciplines.”

Interviewee G provides an analogy to illustrate how digital understanding helped to assess feasibility and manage expectations:

“Imagine I’m your chef, and I tell you it will take me two weeks to make scrambled eggs. You immediately know that something is off, right? Having a bit of technical knowledge helps you make those adjustments.”

Additionally, several participants noted that digital understanding significantly enhanced credibility and effectiveness. Interviewee J reflected on the value of digital fluency among the middle managers:

“Both I and O have strong digital backgrounds. Even though they belong to different business units, they both have experience working with IT. This was incredibly valuable, as both were able to clearly explain the project status, challenges, and gaps to their respective bosses, and helped to support their teams more effectively.”

Overall, participants emphasized that digital literacy strengthens their ability to translate between teams, evaluate progress, and lead more confidently. As interviewee J expressed:

“This ability to bridge technical and business understanding was key to making the project work. It is crucial because, without this knowledge, you spend enormous effort just trying to bring stakeholders up to speed.”

4.3.3.3 Communication Skills

Communication was consistently described as a fundamental leadership skill during DCX. Participants emphasized the need to communicate clearly and concisely, particularly when addressing senior leadership and cross-functional teams. As interviewee I noted:

“How do I communicate what I want to tell them in 25 slides in one slide? Or better yet, in two minutes?”

In addition, a recurring theme was the challenge of bridging communication gaps between technical and business teams. Participants shared that DCX introduced new terminologies and frameworks that could easily lead to confusion, particularly in the early stages. As interviewee A shared:

“At first, you are not even sure if you speak the same language. But after a year and a half, you start to understand.”

Middle managers described their role as translators between these domains, ensuring mutual understanding across functions. Interviewee F cautioned against overusing jargon, explaining:

“It is easy to throw around technical terms that others do not understand, however, then you risk people talking past each other.”

To support the cross-functional communication, participants emphasized the importance of asking clarifying questions and listening skills. Interviewee E explained that middle managers must refine their questioning techniques to anticipate potential challenges, extract valuable insights, and ensure team alignment.

Together, participants highlighted communication skills as essential to drive DT initiatives successfully and create a cohesive working environment amidst organizational change. As interviewee N noted:

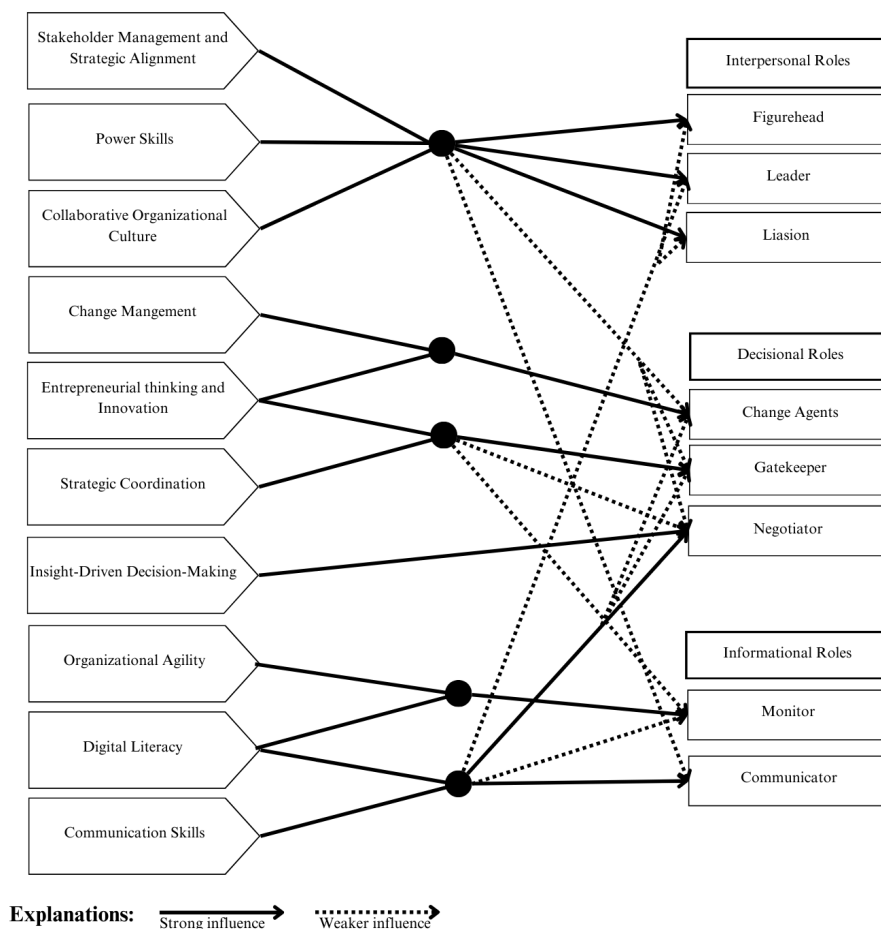
“Communication skills are central to everything we do.”

5. Analysis and Discussion

Building upon the initial conceptual framework introduced in Section 2.3, this chapter bridges empirical findings with theory through a refined data model (Figure 5). The model illustrates how DL themes simultaneously influence multiple managerial roles, signaling a shift away from role-specific skills toward holistic, integrated leadership practices. The arrows indicate strong empirical influence, while dotted arrows represent weaker but notable linkages, underscoring the dynamic, cross-cutting nature of DL skills.

The empirical realities observed at DCX make it clear that Mintzberg’s conceptualization requires re-examination and adaptation to meet the contemporary challenges of DT. While Mintzberg’s framework remains foundational, the lived experiences of middle managers at Tork demonstrate that these roles are actively reshaped by evolving DL skills. This evolution gives rise to what this thesis conceptualizes as *Digital Managerial Roles*.

Figure 5. Data Model



5.1 Digital Interpersonal Roles

This study advances to a more nuanced and contemporary understanding of interpersonal leadership, which positions human-centered skills as essential, extending Nadkarni & Prügl's (2021) actor-centric perspective. Table 5 presents the digital interpersonal roles. These evolved roles reflect how DL reshapes managerial work into a more relational, contextual, and emotionally intelligent practice, critical for navigating the complexity of DT.

Table 5. Digital Interpersonal Roles

Interpersonal Roles (Mintzberg, 1973).	Traditional Function	Evolved Role in DT	DL-Driven Evolution
Leader	Directs, motivates, and supervises team members.	Adaptive Leadership	Adapts leadership style to team compositions; leads through purpose, credibility, and emotional intelligence; fosters team autonomy, trust, and psychological safety; reinforces vision across levels.
Figurehead	Performs ceremonial and symbolic duties.	Cultural Role Models	Acts as a cultural role model who embodies company values, sets team tone, and fosters psychological safety in dynamic digital settings.
Liaison	Builds and maintains networks inside and outside the organization.	Ecosystem Connector	Actively aligns cross-functional teams; bridges business–tech divides; builds relational capital and cultivates trust across silos and functions.

5.1.1 Leader

Mintzberg's (1973) leader role positions the manager as a figure of authority who directs, motivates, and supervises. This foundational view proves insufficient to capture the complex, dynamic, and emotionally intensive work that middle managers now perform. At DCX, leadership extended far beyond task supervision or formal authority. What distinguished effective leadership was not only middle managers' ability to drive performance, but their capacity to build trust-based relationships, foster psychological safety, and guide teams through ambiguity, resistance, and change fatigue. This goes beyond Mintzberg's static depiction and aligns with recent scholars arguing that leadership in DT is increasingly relational, adaptive, and emotionally attuned (Schwarz Müller et al., 2018; Klein, 2020; Brunner et al., 2023; Gilli et al., 2024; Henderikx & Stoffers, 2023).

While middle managers were expected to quickly adopt digital tools and agile workflows, it was their ability to lead people effectively that proved most critical. More than mastering technical proficiency, they must be able to understand individuals, adapt their leadership style, and build trust-based relationships to drive transformation forward. This aligns with the notion of adaptive leadership (Henderikx & Stoffers, 2022) and situational leadership (Brunner et al., 2023), both of which prioritize emotional awareness, contextual responsiveness, and flexibility. This is particularly vital in incumbent firms dealing with legacy systems and cultural inertia (Hanelt et al., 2021), where adaptive leadership becomes essential for mobilizing people and incrementally shifting entrenched mindsets. In this light, adaptive, people-centered leadership is what future-proofs organizations in DT.

The findings further affirm the importance of strategic alignment and vision-setting as necessary DL skills (Kane et al., 2019; Schwarzmüller et al., 2018; Tagscherer & Carbon, 2023; Brunner et al., 2023). This was vividly expressed in quotes emphasizing the ‘North Star vision’, reinforcing that clear, consistent communication of strategic direction is key, particularly in large-scale, cross-departmental initiatives. Yet, the findings add nuances to the traditional top-down framing of alignment (Hanelt et al., 2021; Firk et al., 2022), by demonstrating that it is co-constructed and distributed. It supports the view that DT evolves into a distributed capability, involving contributions from all levels of the organization (Elia et al., 2024). Middle managers were shown to play a proactive role in shaping and sustaining alignment, where they tailored communication across organizational layers, explaining the *why* to leadership, the *what* to teams, and enabling teams to own the *how*. As such, the leader role has shifted from a command-and-control to one based on influence, facilitation, and empowerment. This adds nuances to their *sandwiched* position (Gjerde & Alvesson, 2020), redefining middle managers as bridges rather than bottlenecks, fostering autonomy rather than enforcing control.

The findings build on Henderikx & Stoffers (2023), who highlight the growing importance of soft skills. This study extends this notion by reframing soft skills, a term which can imply secondary importance, to power skills, reflecting a broader cultural shift in how interpersonal skills are valued. In DT, leadership is about possessing human-centred DL skills, not as supportive traits, but as strategic levers for influencing across hierarchies, fostering collaboration, and ultimately driving organizational success.

In addition, the study identifies three novel yet under-theorized DL skills emerging as essential to the leader role. First, patience as a practical form of emotional resilience, particularly valuable for managing delays, resistance, and organizational inertia. Second, prestigeless leadership, characterized by a rejection of ego in favor of shared outcomes and collective learning. Third, credibility earned through consistent, confident, and authentic behavior, rather than formal authority. These findings reinforce earlier arguments and contribute to a more human-centred and adaptive understanding of managerial work in DT.

As Kane et al. (2019) argue, DL requires combining traditional leadership skills with new, digitally focused ones. The findings show that middle managers must blend traditional leadership behaviors, such as providing direction and maintaining team cohesion, with adaptive, people-centered leadership. These human-centered DL skills redefine the leader role by positioning adaptive leadership as an integrative force central to navigating DT. It supports Nadkarni & Prügl's (2021) actor-centric perspective, highlighting the critical role of middle managers' interpersonal skills in shaping transformation from within.

5.1.2 Figurehead

Mintzberg (1973) described the figurehead role as primarily ceremonial, representing the organization in formal settings, signing documents, and fulfilling legal and symbolic duties. Yet, he also acknowledged its inspirational dimension, describing the figurehead as someone who helps employees feel connected to the organization. The findings extend this conception by demonstrating how inspiration in DT is not only symbolic but enacted through consistent, value-driven behavior. While middle managers continued to serve an intermediary role (Mintzberg, 1989; Wooldridge & Floyd, 1990; Harding et al., 2014), their work has evolved far beyond this bridging function. Building upon Tarakci et al. (2023), middle managers act as *"connecting leaders"*, not only representing strategic intent but embodying company values, modelling vulnerability, and shaping psychological safe environments, where team members feel empowered to contribute, take risks, and even fail.

In this way, the figurehead role evolves from symbolic presence to cultural role model: someone who actively shapes norms, reinforces purpose, and leads through example. This form of everyday, enacted inspiration was essential to sustaining engagement at DCX and highlights the cultural and emotional labor embedded in middle management today. This shift

builds upon Gilli et al. (2024), who argue that digital leaders should act as role models by fostering a supportive attitude toward change and cultivating a value-driven culture. It also expands on Schwarzmüller et al. (2018) claim that digital leaders must inspire intrinsic motivation rather than compliance. As such, the figurehead role in DT becomes a lived, relational practice, laying the cultural foundation upon which other interpersonal roles, such as the leader, are built.

5.1.3 Liaison

Mintzberg (1973) defined the Liaison role as the manager's responsibility to build and maintain connections both internally and externally. This role has not only expanded but has become fundamental for enabling collaboration in increasingly cross-functional and digitally enabled organizations. The findings support that, as digital initiatives grow in scale, complexity, and interdependence, the demand for seamless integration across departments, domains, and stakeholder groups intensifies (Kane et al., 2019; Bharadwaj et al., 2013; Oludapo et al., 2024). As a result, middle managers now act as ecosystem connectors, actively orchestrating alignment, trust, and shared understanding. This evolution is particularly critical in bridging the divide between existing business units and emerging digital functions (Bharadwaj et al., 2013; Nambisan et al., 2017), confirming that successful DT requires not only technical restructuring but also interpersonal facilitation across organizational silos (Kane et al., 2019; Gilli et al., 2024).

Participants consistently highlighted interpersonal adaptability, credibility, and empathy as key leadership skills to operate across organizational boundaries. These findings reflect Gilli et al. (2024) argument that digital leaders must build trust-based networks to promote shared purpose and cross-functional collaboration. This form of influence, built through authentic engagement, also mirrors the human-centered leadership discussed by Klein (2020) and Henderikx & Stoffers (2023). Notably, in this redefined role, the liaison is no longer just the one who connects people, but the one who enables collaboration by building the social glue required for DT to succeed. The middle manager, as liaison, ensures that DT is not only coordinated but connected, not only informed but aligned.

5.2 Digital Decisional Roles

As shown in Table 6, decisional roles are reshaped through DL skills, particularly in how middle managers balance innovation with stability, responsiveness with structure, and strategy with day-to-day delivery. This further validates recent calls (Nadkarni & Prügl, 2021; Christodoulou et al., 2022) to move beyond top management views of DT and recognize the strategic agency and operational complexity embedded in the middle.

Table 6. Digital Decisional Roles

Decisional Roles (Mintzberg, 1973).	Traditional Function	Evolved Role in DT	DL-Driven Evolution
Entrepreneur	Initiates change, identifies opportunities, and drives innovation.	Change Agent	Initiates change, identifies opportunities, and drives innovation, while resolving crises and addressing conflicts.
Disturbance Handler	Resolves crises and addresses conflicts.		
Resource Allocator	Allocates resources and balances competing demands.	Gatekeeper	A strategic filter, prioritizing tasks and shielding teams from external disruptions, using stakeholder alignment, clarity of priorities, and operational coordination.
Negotiator	Engages in negotiations and reaches agreements.	Strategic Facilitator & Trade-off mediator	Negotiates continuously across priorities, scope, time, and expectations; reframes trade-offs; leverages customer insights as negotiation levers; facilitates alignment between teams and leadership; balances ambiguity and competing demands through adaptability, emotional intelligence, and shared customer value focus.

5.2.1 Change Agent

As emphasized in the literature, DT is rarely linear – it is iterative, disruptive, and often contested (Vial, 2019; Hanelt et al., 2021). In such dynamic environments, middle managers must simultaneously initiate change and manage resistance. This dual responsibility reflects an integrated evolution of Mintzberg’s (1973) Entrepreneur and Disturbance Handler roles into what this study conceptualizes as the Change Agent.

At DCX, these functions were not distinct but fused into a single hybrid role. Middle managers simultaneously embraced uncertainty, facilitated experimentation, and described their work as working in a startup within traditional corporate structures. At the same time, they resolved disagreements, managed change fatigue, and sustained team resilience during ambiguity. This hybrid role further reflects insights from prior research. Cortellazzo et al. (2019) and Gilli et al. (2024) stress the need for leaders to make fast decisions in response to emerging trends while guiding their teams through ambiguity. Similarly, Tagscherer & Carbon (2023) highlight the need for leaders to motivate teams to embrace the change while addressing their fears. Brunner et al. (2023) explicitly position change agents as key actors in aligning employees with evolving organizational goals. These principles were evident at DCX, where middle managers fostered psychological safety, embraced imperfection, and sustained momentum through iterative progress.

This duality further reflects the shift from viewing middle managers as passive executors of TMT-driven strategy (Firk et al., 2022; Hanelt et al., 2021) to recognizing them as active shapers of DT (Christodoulou et al., 2022). As the findings illustrate, they balance visionary ambition with operational pragmatism, frequently navigating friction caused by legacy systems, resource constraints, and cultural inertia. In this light, the evolved Change Agent role exemplifies the distributed nature of DT (Elia et al., 2024), where transformation is not solely established from the top but co-created across organizational levels.

Finally, this role cannot be enacted through decision-making skills alone. Change leadership requires a holistic integration of DL skills. It requires interpersonal skills such as adaptability and resilience, echoing the findings of Schwarzmüller et al. (2018), Kane et al. (2019), Nadkarni & Prügl (2021). Equally, it demands informational skills to communicate clearly, translate complexity across stakeholders, and foster shared understanding, confirming Klein (2020), Hendriks & Stoffers (2023), and Gilli et al. (2024). In essence, as organizations confront accelerating complexity, ambiguity, and resistance, middle managers must both drive innovation while maintaining cohesion. Without this integrative role, DT risks remaining top-down and disconnected from the operational realities where change actually unfolds. Thus, the Change Agent is not simply an evolved managerial function, it is foundational for making DT possible.

5.2.2 Gatekeeper

A novel contribution from the findings is the Gatekeeper role as a critical DL function. This role represents a hybrid role of Mintzberg's (1973) Resource Allocator and Disturbance Handler. Traditionally, the Resource Allocator manages time, attention, and resources, while the Disturbance Handler deals with disruptions and conflicts. However, in DT initiatives, these two roles are no longer separate. Instead, they are fused in practice: middle managers are not merely administering resources or reacting to disruptions; they are actively filtering competing demands, shielding their teams from unnecessary distractions, and providing focus amid complexity. By absorbing complexity and synthesizing stakeholder input, they enabled teams to work undisturbed and maintain high productivity, even in cross-functional, high-stakes environments. It builds upon Van Doorn et al. (2023) argument that middle managers must balance competing pressures for efficiency and innovation. It also reflects the need for adaptive leadership (Henderikx & Stoffers, 2023), where leadership is not only about driving change but also about knowing when to shield, slow down, or disengage from competing pressures.

Effective gatekeeping requires managing expectations both upwards and downwards. As Harding et al. (2014) note, middle managers are “controlled” by upper-level goals yet also “controllers” of daily work. As illustrated by interviewee J, middle managers often interpreted strategic directives in ways that diverged from leadership's original intentions. These translation gaps do not indicate failure but reflect the adaptive work required in digital change, constantly adjusting plans so that short-term tasks still support long-term goals. Occasional misalignment is not a failure, but a necessary part of navigating DT. Successful gatekeepers did not attempt to address all demands simultaneously but strategically focused on what truly mattered. While prioritization is often an implicit expectation in DL literature (Hanelt et al., 2021), the findings at DCX make it explicit: prioritization is a DL skill, essential for preserving team energy and maintaining strategic coherence.

This role further builds upon Hanelt et al. (2021) and Kane et al. (2019), who emphasize the importance of embracing agility. The findings suggest that working in structured sprint cycles not only improved delivery but also created breathing room for teams, allowing members time to reflect, recharge, and maintain a sustainable pace. It helped preserve energy and reinforce long-term engagement, critical factors for navigating the demanding nature of DT.

At its core, the Gatekeeper role actively integrates resource allocation (what gets done, when, and by whom) and disturbance handling (managing overload, ambiguity, and emotional strain). At DCX, gatekeepers said no when needed, helped with prioritization, and clarified trade-offs, transforming what are often implicit tasks into deliberate, strategic DL skills.

5.2.3 Negotiator

Mintzberg's (1973) negotiator role is too narrow for the complexity of negotiation in DT. At DCX, middle managers were not confined to formal settings; they continuously negotiated priorities, time, resources, and stakeholder expectations. A key feature of the evolved role is the ability to frame and reframe trade-offs. As the participants noted, to have a successful DT initiative, you must be willing to compromise either time, budget, or functionality, and it is the middle manager's role to translate these trade-offs upwards to senior leadership and downward to operational teams. This supports Henderikx & Stoffers (2023) view of middle managers as critical mediators of stakeholder tensions, and affirms Klein's (2020) view that managing disagreement to reach consensus is a critical DL skill.

At DCX, effective negotiation depended on clear, adaptive, and empathetic communication. Middle managers built alignment not through authority, but by listening, framing trade-offs, and ensuring stakeholders felt heard. This reflects Klein's (2020) view that social intelligence is key to managing tensions, and supports Brunner et al. (2023), who see communication as foundational for reaching agreements. Importantly, negotiation further required embracing imperfection. Decisions were often made with incomplete information and prioritized "good enough" over perfection, which Kane et al. (2019) link to agile leadership.

A particularly novel finding is the use of customer insights as a negotiation tool. Rather than relying on gut feeling or internal assumptions, middle managers used customer data to shift discussions toward evidence-based decisions, pragmatically mediating competing interests and strengthening strategic focus. This supports Kane et al. (2019) argument that decision-making in digitally mature organizations must move from intuition toward evidence-based logic. It also expands Christodoulou et al. (2022) view of middle managers as key enablers of strategic alignment by showing how customer insights serve as a practical tool to mediate tensions between short-term operational needs and long-term goals.

While the prior studies acknowledge evidence-based decision-making, they do not explicitly address customer data as a negotiation lever. These findings demonstrate how a customer-centric approach empowers middle managers to align diverse interests, reduce internal friction, and drive strategic progress without relying solely on hierarchical authority. Essentially, the negotiator role in DT is redefined as a dynamic practice of balancing competing demands through adaptive communication, evidence-based reasoning, and stakeholder alignment, confirming its centrality to strategic progress in complex, fast-moving environments.

5.3 Digital Informational Roles

Table 7 outlines how informational roles evolve. These roles evolve as DL shifts the focus to agile sensemaking and continuous, multi-directional communication. While middle managers are not expected to be technical experts, having a foundational digital literacy is critical to translate and connect the dots across disciplines. The T-shaped member offers a promising way to conceptualize the “good enough” digital literacy; not mastering technology but understanding it well enough to lead confidently, collaborate effectively, and create coherence across DT initiatives.

Table 7. Digital Informational Roles

Informational Roles (Mintzberg, 1973).	Traditional Function	Evolved Role in DT	DL-Driven Evolution
Monitor	Gathers and analyzes information.	Agile Sensemaker	Continuously sense internal and external developments. Use real-time data and agile workflows (e.g., standups, Jira) to foster iteration, alignment, trust, and autonomy.
Disseminator	Share crucial information with stakeholders.	Communicator	Translates, adapts, and contextualizes information across audiences. Builds alignment through tailored, cross-functional communication; advocates vision and culture.
Spokesman	Advocating the organization's values, strategies, or achievements of the public or key audiences.		

5.3.1 Monitor

Traditionally, Mintzberg's (1973) Monitor role entailed gathering information, scanning the environment, and evaluating performance data to support managerial decision-making. While the findings confirm the continued relevance of tracking customer feedback, market changes, and technological developments, it further offers some contributions to how the Monitor role evolves in DT, emphasizing *how* managers monitor matters as much as *what* they monitor.

Aligned with the growing emphasis on agility in DT (Kane et al., 2019; Hanelt et al., 2021), monitoring at DCX shifted from tracking perfection towards progress, learning, and iteration. In fast-paced environments, where priorities and customer needs shift rapidly, waiting for perfection would paralyze action. Instead, teams were expected to deliver “good enough” solutions to maintain responsiveness to shifting demands. Participants also emphasized that static reports were no longer feasible, rather they orchestrated real-time information flows by having agile ceremonies, such as daily standups, sprint reviews, and structured feedback loops. These mechanisms became critical to monitor progress, detect issues early, and adapt work dynamically. Similarly, tools like team surveys and OKRs were reinforced to foster shared reflection, mutual accountability, and alignment across shifting priorities. This supports Gilli et al. (2024) argument that DL requires ongoing engagement and feedback loops, while also reinforcing the need for relational leadership in digital environments.

Digital literacy further emerged as a critical enabler of monitoring. Participants described it as having good enough digital understanding helped assess feasibility, anticipate delays, and manage expectations. This affirms Kane et al. (2019) and Gilli et al. (2024), who argue that digital leaders must grasp how technology impacts operations. That said, some participants emphasized the added value of a stronger digital background. For instance, interviewee J noted that prior digital experience among some middle managers helped accelerate stakeholder alignment, introducing nuance to the non-technical stance of Kane et al. (2019) and Gilli et al. (2024). This view aligns more closely with Fisk (2002) and Cortellazzo et al. (2019), who advocate for greater data fluency and technical competence. These views suggest that while deep expertise is not universally required, a higher level of digital familiarity can enhance credibility and speed in monitoring.

The evolving Monitor role illustrates how traditional management boundaries are blurring: monitoring is no longer purely informational but deeply interwoven with decision-making, cultural alignment, and adaptive leadership. Monitoring enables middle managers to sustain agility, foster continuous improvement, and maintain both strategic clarity and team resilience under conditions of constant change. In DT, monitoring progress, not perfection, is what drives sustainable success.

5.3.2 Communicator

In Mintzberg's (1973) framework, the Disseminator shared information with insiders, while the Spokesman shared information with outsiders. The empirical realities at DCX challenge this division. The findings show that communication in DT cannot be neatly separated into internal and external spheres. Middle managers now operate in agile, cross-functional, and digitally enabled structures that require continuous, multi-directional communication across teams, business units, and leadership levels. Thus, this study proposes merging these two roles into a single, more accurate role for DT: the Communicator.

As DT increasingly blurs the organizational boundaries (Hanelt et al., 2021; Volberda et al., 2021), especially between business and technology, middle managers must bridge these domains, facilitating mutual understanding and coordinated action. Digital literacy emerged as a crucial enabler of this bridging function. However, not in the form of deep technical expertise, rather, it is about possessing an understanding of digital systems and workflows sufficient to engage with technical teams, make informed decisions, and align digital efforts with business objectives. This aligns with Kane et al. (2019) and Gilli et al. (2024), who emphasize the importance of cultivating a digital mindset over mastering technical tools. The findings further nuance this view by empirically validating the concept of T-shaped members: middle managers combined deep expertise in their field with broad cross-functional understanding. This breadth enabled middle managers to translate between business and technical teams, a skill that was essential for contextualizing technical issues in ways that aligned with broader operational and strategic goals. This translation function strengthens the theoretical position of Klein (2020) and Cortellazzo et al. (2019), who highlight the growing importance of social intelligence and technical fluency in digital environments.

While communication is well-established in DL literature (Kane et al., 2019; Klein, 2020; Tagscherer & Carbon, 2023), this study advances the discussion by showing that communication skills are foundational to every aspect of leading and managing DT initiatives. It supports Beenen et al. (2021), who identify communication as one of the most in-demand skills for managerial success, highlighting that even companies like Google rank it above technical expertise. Tork affirms this. Without strong communication skills, no other leadership practices necessary for DT, such as driving strategic alignment, promoting innovation, or resolving disagreements, can succeed. The ability to communicate clearly, consistently, and across diverse stakeholder groups in complex, fast-moving digital environments becomes the mechanism through which shared understanding is built, and without it, DT cannot take hold.

6. Conclusion

6.1 Answering the Research Question

This study set out to answer:

How do middle managers' roles and leadership skills evolve during a digital transformation initiative in an incumbent organization?

Through a single-case study of Tork's DT initiative and applying Mintzberg's (1973) *Nature of Managerial Work* as a theoretical lens, this study presents answers to how middle managers' roles and leadership skills evolve during a DT initiative in an incumbent organization. The study conceptualizes the Digital Managerial Roles required to lead DT initiatives in an incumbent organization and outlines the leadership skills necessary to perform these roles.

Interpersonal roles evolve to reflect relational leadership built on trust, empathy, and cultural alignment. The Leader role integrates adaptive leadership, where middle managers lead by human-centered DL skills, such as emotional intelligence, credibility, and resilience, to inspire, align, and empower teams. The Figurehead role moves beyond symbolic position into cultural role models, where middle managers model organizational values and promote inclusive, psychologically safe environments that encourage change. The Liaison role expands as middle managers act as ecosystem connectors, actively orchestrating relationships across cross-functional teams to facilitate seamless collaboration and alignment.

Decisional roles evolve as middle managers balance strategic goals with operational complexity amid continuous change. Middle managers become Change Agents, actively driving transformation while managing resistance, bridging ambition with operational realities. The Gatekeeper role evolves as critical, as middle managers must strategically filter demands, shield teams from disruptions, and provide clarity amid complexity, thereby enhancing team focus and productivity. The Negotiator role expands to emphasize ongoing strategic alignment by continuously negotiating priorities, resources, and stakeholder expectations, often utilizing customer insights to mediate internal tensions and promote coherent strategic direction.

Informational roles evolve to align with agile working methodologies. The monitor role now incorporates agile sensemaking, enabling real-time responsiveness and iterative progress tracking. The Disseminator and Spokesman roles merge into a unified Communicator role, characterized by dynamic, multidirectional communication. Middle managers leverage foundational digital literacy to effectively translate between technical and business domains, facilitating clarity and coherence throughout the organization.

Crucially, these evolved roles do not operate independently. Rather, DL skills interact holistically across managerial activities, enabling middle managers to engage simultaneously in multiple roles. Power skills influence how a manager motivates a team, communicates progress, and allocates priorities. Digital literacy helps to interpret data, guide priorities, and align cross-functional teams. Communication emerges as the foundational DL skill underpinning all roles. Whether managing stakeholder tensions, facilitating agile ceremonies, or aligning cross-functional squads, communication is the connective tissue that activates DL in practice. This reflects the multidimensional nature of managerial work in DT, highlighting the necessity for middle managers to develop integrated DL rather than isolated skillsets.

In conclusion, this study demonstrates that DT is reshaping managerial work, moving from structured, hierarchical functions toward relational, adaptive, and integrative practices. Middle managers emerge not as passive executors of top-down directives, but as proactive enablers of change who bridge strategic vision with operational execution. Rather than replacing traditional managerial foundations, their roles evolve by integrating human-centred DL skills upon them. Ultimately, the success of DT initiatives in incumbent organizations depends not only on bold digital ambitions but on empowering middle managers to lead the structural and cultural change from within.

6.2 Developed Theoretical Framework

The developed theoretical framework presented in Table 8 integrates the study's empirical findings with Mintzberg's (1973) *Nature of Managerial Work*, redefining them as Digital Managerial Roles to reflect the realities of middle management in DT.

Table 8. Digital Managerial Roles

Categories	Roles	Tasks
Interpersonal Roles	Leader	Adapts leadership style to team compositions; leads through purpose, credibility, and emotional intelligence; fosters team autonomy, trust, and psychological safety; reinforces vision across levels.
	Figurehead	Acts as a cultural role model who embodies company values, sets team tone, and fosters psychological safety in dynamic digital settings.
	Liaison	Actively aligns cross-functional teams; bridges business-tech divides; builds relational capital and cultivates trust across silos and functions.
Decisional Roles	Change Agent	Initiates change, identifies opportunities, and drives innovation, while resolving crises and addressing conflicts.
	Gatekeeper	A strategic filter, prioritizing tasks and shielding teams from external disruptions, using stakeholder alignment, clarity of priorities, and operational coordination.
	Negotiator	Negotiates continuously across priorities, scope, time, and expectations; reframes trade-offs; leverages customer insights as negotiation levers; facilitates alignment between teams and leadership; balances ambiguity and competing demands through adaptability, emotional intelligence, and shared customer value focus.
Informational Roles	Monitor	Continuously sense internal and external developments. Use real-time data and agile workflows (e.g., standups, Jira) to foster iteration, alignment, trust, and autonomy.
	Communicator	Translates, adapts, and contextualizes information across audiences. Builds alignment through tailored, cross-functional communication; advocates vision and culture.

26.3 Theoretical Contributions

By exploring how middle managers' DL skills evolve during a DT initiative, this study addresses the underrepresentation of DL within organizational studies (Schwarzmueller et al., 2018; Cortellazzo et al., 2019; Brunner et al., 2023). It confirms well-established DL skills such as stakeholder alignment, emotional intelligence, digital literacy, and communication (Kane et al., 2019; Cortellazzo et al., 2019; Gilli et al., 2024), while further identifying three previously unexplored DL skills: (1) patience as a form of emotional resilience amid ongoing ambiguity and resistance, (2) prestigeless leadership where success depends on collaboration rather than competing for visibility, and (3) credibility grounded in confidence, consistency and cross-domain fluency. This contributes to a more integrated and empirically validated understanding of DL in DT (Avolio et al., 2014; Klein, 2020; Ostmeier & Stobel, 2022; Margherita et al., 2024). This study further builds upon Henderikx & Stoffers (2023) by reframing soft skills, a term often implying secondary importance, to power skills. This reflects a broader cultural and structural shift in recognizing interpersonal skills as strategically essential for middle managers orchestrating DT.

Importantly, this study explicitly addresses the underexplored role of middle managers within DT research (Nadkarni & Prügl, 2021; Christodoulou et al., 2022; Henderikx & Stoffers, 2022, 2023; Tarakci., 2023). The findings challenge traditional top-down assumptions prevalent in DT research (Firk et al., 2022; Hanelt et al., 2021) by positioning middle managers as critical in driving DT. The conceptualization of Digital Managerial Roles highlights how middle managers navigate blurred role boundaries (Tarakci et al., 2023; Van Doorn et al., 2023), balance tensions between superiors and subordinates (Gjerde & Alvesson, 2025), and how DT is distributed across organizational layers (Elia et al., 2024). This contribution directly responds to recent calls as it deepens our understanding of middle managers' evolving roles and leadership skills during DT initiatives within incumbent organizations (Nadkarni & Prügl, 2021; Christodoulou et al., 2022; Henderikx & Stoffers, 2022, 2023; Tarakci., 2023).

The study further contributes to the theoretical debate concerning the adequacy of established organizational theories in capturing the multifaceted realities of DT (Hanelt et al., 2021; Nadkarni & Prügl, 2021). Rather than discarding foundational theories, this study engages in phenomenon-based theorizing (Von Krogh et al., 2012), critically re-examining Mintzberg's (1973) managerial work in light of contemporary empirical realities. The study demonstrated how Mintzberg's managerial roles are not discarded but actively reshaped by DL skills. In doing so, it further addresses the call from Cortellazzo et al. (2019) and Klein (2020) by adapting existing theories by integrating DL skills. Thus, the conceptualization of Digital Managerial Roles provides an empirically grounded extension of Mintzberg's framework, better reflecting the managerial roles middle managers must obtain to orchestrate DT.

Together, this study contributes to the managerial literature on DT by placing middle managers at the center of analysis and developing a refined understanding of how their managerial roles and leadership skills evolve in response to digital change. Grounded in Mintzberg's (1973) *Nature of Managerial Work*, the study integrates contemporary insights from Tork to conceptualize the Digital Managerial Roles, an updated theoretical framework that reflects the realities of middle managers orchestrating DT initiatives in incumbent organizations.

6.4 Practical Implications

Drawing on the lived experiences of senior leadership, middle managers, and line managers involved in Tork's ongoing DT initiative, the study offers practical implications for how organizations can navigate DT initiatives, especially within incumbent structures. For senior leadership, the study provides new ideas for how to approach and support middle managers during DT initiatives. It illustrates that DT cannot be driven top-down alone, it requires empowered middle managers who are trusted to lead change, prioritize initiatives, and resolve tensions across functions. This means providing middle managers with clear mandates, time, resources, and support structures. It also calls for redefining success; recognizing not just output, but the relational and cultural contributions, such as building trust, fostering collaboration, and modelling values. The conceptualization of Digital Managerial Roles provides a practical framework for assessing how existing managerial structures align with the demands of DT. It offers guidance on how to structure managerial roles to better support DT initiatives. Rather than viewing leadership as a static skillset, the framework could be used to identify role gaps and development needs across interpersonal, decisional, and informational domains. For middle managers, the study provides clarity on what is required to drive a DT initiative successfully. The developed framework serves as a tool for self-reflection: *What roles am I currently obtaining? Where are my strengths? Where do I need support?* It clarifies the evolving expectations and concrete DL skills needed to lead change successfully from within. Essentially, this study provides a practical roadmap for how organizations can enable and sustain DT initiatives. At the same time, it equips middle managers with a clearer understanding of how their roles are evolving and which DL skills are essential to drive successful DT.

6.5 Limitations and Future Research

While this study offers meaningful insights into middle managers' roles and leadership skills, several limitations present opportunities for future research. First, the study employed a single-case design exploring one incumbent organization. While this allowed in-depth exploration, the findings may be context-specific and not fully generalizable. Thus, comparative studies across industries, national contexts, and organizational sizes could enhance our understanding of how different contexts shape managerial roles during DT. Second, the study captures a particular phase of an ongoing transformation. Since DT is iterative and dynamic, longitudinal studies could explore how these roles evolve over time and across transformation stages, providing a more comprehensive view of the DL-DT relationship. Third, while the study benefited from a multi-level perspective, drawing insights from senior leadership, middle managers, and line managers, it primarily focused on the middle management perspective. Future research could further examine cross-level dynamics and how managerial roles interact, conflict, or align across hierarchical boundaries. Fourth, although Mintzberg's (1973) *Nature of Managerial Work* remains robust, it may not capture the full complexity of contemporary leadership. Future research could enrich the analysis by incorporating complementary theories, such as sensemaking, dynamic capabilities, or institutional logics, to deepen understanding of how managers navigate DT.

Finally, this study approached DT from an organizational and managerial perspective, focusing on the human dimensions of change. Therefore, the study did not explicitly examine the technological features that underpin or shape these roles. To further develop the conceptualization of Digital Managerial Roles, future research should more directly explore how technological infrastructures, tools, and systems embed themselves into managerial work. Such research would deepen the theoretical conceptualization of the Digital Managerial Roles and offer a more comprehensive understanding of how leadership and technology co-evolve in DT initiatives.

7. References

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8. Appendices

8.1 Appendix A. Contextualizing Digital Transformation

Source	Field	Definition of DT	Key Aspects of DT
Yoo et al. (2010)	Information Systems	An ongoing process of using digital technologies in everyday organizational life.	A dynamic process with continuous strategic renewal in structure, processes, and routines.
Rogers (2016)	Strategic Management	Digital transformation is not about technology – it is about strategy and new ways of thinking.	Strategic mindset is more critical than IT infrastructure; transformation must be led by leadership to optimize business models and customer value.
Hess et al. (2016)	Information Systems	Changes that digital technologies can bring about in a company's business model, products, or organizational structures.	Technology drives change, but success requires rethinking value creation and how tech is embedded in strategy.
Warner & Wäger (2019)	Strategic Management	Strategic renewal that uses advances in digital technologies to enable major business improvements in business model, collaborative approaches, and culture.	DT involves the strategic renewal of an organization's business model, collaborative approach, and culture.
Vial (2019)	Strategic Information Systems	A process that aims to improve an entity by triggering significant changes to its properties through combinations of information, computing, communication, and connectivity technologies.	A process where digital technologies create disruptions that trigger strategic responses from organizations. Requires structural changes and overcoming barriers and often involves new leadership roles.
Adner et al. (2019)	Strategic Management	A shift from quantitative advancements in digital technology to qualitative changes in how businesses operate.	Digital strategy is no longer primarily about the increasing power of technology (e.g., Moore's Law) or the expanding reach of networks. Instead, it's about fundamental shifts in how businesses operate and create value through representation, connectivity and aggregation.
Nadkarni & Prügl (2021)	Management Research	Organizational change triggered by digital technologies.	Argue that two perspectives of digital transformation within organizations must be captured: a technology-centric and an actor-centric perspective. Requires changes at various levels including core business, resource exchange, process and structure reconfiguration, leadership adjustments and the implementation of a digital culture.
Hanelt et al. (2021)	Management Research	Organizational change triggered and shaped by the widespread diffusion of digital technologies.	DT is not just about technology adoption, but about fundamental shifts in how an organization operates, creates value, and interacts with its environment. It requires continuous adaptation, a malleable organizational design and a focus on digital business ecosystems.
Volberda et al. (2021)	Strategic Management	Company-wide change (either evolutionary or transformative) is required to create and appropriate new value in an existing or newly formed ecosystem.	DT is not limited to specific departments or functions but necessitates changes across the entire organization. This means that all levels of management and employees need to be involved, and that changes need to occur in the organization's structure, processes, and culture.
Verhoef et al. (2021)	Organizational Theory	A multidisciplinary process that implements change at multiple levels by leveraging digital technologies to innovate the existing business models or shape new ones.	DT is not confined to a single functional area, as IT, but requires the integration of various disciplines and perspectives. This means that strategic decisions about digital technologies must take into account their impact on different parts of the organization, such as marketing, operations, supply chains, and information systems. This interdisciplinary approach ensures that all aspects of a business are aligned and integrated in the digital transformation process.
Appio et al. (2021)	Innovation Management	Do not offer a single, concise definition, rather acknowledge <i>"providing a comprehensive definition of digital transformation is complex because it is a multifaceted and multidimensional phenomenon"</i> .	The study of DT involves diverse perspectives, concepts, and dynamics, contributing to a lack of a unified view. DT impacts various levels of an organization, suggesting that it is not just about technology implementation but also about broader organizational change.
Gong & Ribiere (2021)	Technology and Innovation Management	A fundamental change process, enabled by the innovative use of digital technologies accompanied by the strategic leverage of key resources and capabilities, aiming to radically improve an entity and redefine its value proposition for its stakeholders"	An entity could be: an organization, a business network, an industry, or society DT encompasses strategic renewal and transformation to recreate value at different levels in different entities. Resources and capabilities, as well as human and leadership aspects, are essential components.
Plekhanov et al. (2023)	Organizational Theory	When firms use digital technologies to create new or modify existing business models and processes or to support the transformation of organizational structures, resources, or relationships with internal and external actors.	DT involves internal and ecosystem-wide transformation for innovation and competitiveness.

8.2 Appendix B. Interview Subjects – Preparatory Work

<i>Subject</i>	<i>Responsibilities</i>	<i>Location</i>	<i>Format</i>	<i>Duration</i>	<i>Date</i>
O	Digital Team	Stockholm	Teams	30 minutes	2024-12-02
H	Content Management	Gothenburg	Teams	40 minutes	2024-12-05
A	UX/UI Design	Munich	Teams	60 minutes	2024-12-11
E	SEO	Munich	Teams	50 minutes	2024-12-11

8.3 Appendix C. Interview Guide – Preparatory Work

Formalities & Introduction

Thank you for taking the time for the interview.

Ethical Considerations - Information and questions for the interviewee

- Participation in this study is strictly voluntary, and the interview can be aborted at any moment without further explanation. You are anonymous in this study, and your data will neither be passed on nor saved.
- Do you have any questions for me before we begin?

DT at Tork:

- How do you define digital transformation?
- Could you explain more about Tork's current digital maturity level?

DCX

- Could you please explain DCX in your own words?
- What is your role in the DCX?
- How has DCX changed your way of working?
- What are the vision and goals for the DCX?

Barriers

- What are some challenges you see with achieving the DCX?
- Would you say the skills exist in the workforce today to achieve your goals in DCX?

Leaders and employees

- How would you describe the leadership during this period?
- How would you describe the team member's responses to DCX?

Finish

- Do you know of any specific individuals present during the DCX that would be valuable to the interview?
Different levels of seniority that I could get in touch with?
- Is there anything you would like to add before we finish?

8.4 Appendix D. Interview Subjects – Main Study

<i>Subject</i>	<i>Responsibilities</i>	<i>Seniority</i>	<i>Location</i>	<i>Format</i>	<i>Duration</i>	<i>Date</i>
A	UX/UI Design	Line	Munich	Teams	75 minutes	2025-02-28
B	Branding	Mid	Gothenburg	Teams	45 minutes	2025-03-05
C	Product Owner	Mid	Gothenburg	Teams	50 minutes	2025-03-11
D	Omnichannel Transformation	Mid	Philadelphia	Teams	45 minutes	2025-03-14
E	SEO	Line	Munich	Teams	50 minutes	2025-03-14
F	Business Analyst	Mid	Gothenburg	Teams	50 minutes	2025-03-14
G	Developer	Mid	Gothenburg	Teams	40 minutes	2025-03-17
H	Content Management	Line	Gothenburg	Teams	50 minutes	2025-03-18
I	Omnichannel Transformation	Senior	Philadelphia	Teams	45 minutes	2025-03-18
J	Developer	Mid	Munich	Teams	45 minutes	2025-03-19
K	Agile project manager	Mid	India	Teams	35 minutes	2025-03-21
L	Application Architecture	Mid	Munich	Teams	60 minutes	2025-03-28
M	Master Brand	Senior	Philadelphia	Teams	30 minutes	2025-04-01
N	Aware/Engage	Line	Gothenburg	Teams	45 minutes	2025-04-03
O	Digital Team	Mid	Stockholm	Teams	60 minutes	2025-04-03

8.5 Appendix E. Interview Guide – Main Study

Formalities & Introduction

Thank you for taking the time for the interview.

Ethical Considerations - Information and questions for the interviewee

- Participation in this study is strictly voluntary, and the interview can be aborted at any moment and without further explanation. You are anonymous in this study, and your personal data will be neither passed on nor saved.
- Do I have your permission to record and transcribe this interview?
- Do you have any questions for me before we begin?

About participant

- Could you please describe your current role within the organization? What are your primary responsibilities and day-to-day activities?
- How does your role interact with other departments or teams?
- What are the biggest challenges you face in your role currently?

About DCX

- How would you describe DCX?
- How are the DCX initiatives prioritized and implemented within the organization?
- How do you perceive the impact of DCX initiatives on your team specifically?

Role Evolution

- How has your role changed as a result of DCX? How has DCX influenced your day-to-day work and priorities?
- Could you provide specific examples of how your responsibilities have shifted or expanded due to DCX?
- How has DCX impacted your interactions with other departments or teams?
- Have you noticed any changes in the organizational culture related to DCX?
- Do you feel that the organization has adequately prepared you for the changes brought about by DCX?
- How do you see your role evolving in the future with continued advancements in DT?

Skills Development

- What new skills have you had to develop or acquire to effectively manage DCX?
- What existing skills have become more important or relevant in the context of DCX?
- How has the organization supported you in developing these new skills?
- What advice would you give to other middle managers who are navigating the changes brought about by DT initiatives?

Closing

- Thank you for your time and valuable insights.
- Is there anything else you would like to add or any other aspects of DCX and middle management that you think are important?
- Do you have any questions for me?

8.6 Appendix F: Overview of Empirics

Second-order theme: Stakeholder Management and Strategic Alignment

<i>First-order codes</i>	<i>Exemplary Quotes</i>
Balance strategic and operational levels	<i>“He has many hats. He has to balance between strategic and operational levels.” - N</i>
North-Star Vision	<i>“We had a North Star vision that we constantly reinforced, one that was based on actual customer insights. Maintaining consistent messaging was crucial. We made sure to repeat a set of key principles over and over, and eventually people aligned with the vision.” – D</i> <i>“The vision served as a North Star, though it was more aspirational than operational.” – J</i>
Purpose	<i>“Another key factor was ensuring that people felt a sense of purpose and autonomy.” – D</i> <i>“So it is kind of like this three-tiered thing, right? It is the “why” for the high level. And then it is the “what” that the team needs to understand from leadership. But then we want to give the autonomy and the ownership to them on the “how”.” – I</i>
Alignment	<i>“Keeping people aligned is essential.” – K</i> <i>“One of the first things we ask in our team surveys is, ‘Do you feel like you are part of the mission?’ and we consistently receive very high scores. So, there is definitely a strong sense of alignment, which is really rewarding to see.” - D</i> <i>“An aligned vision is really about clarity, and again, I think communicating about what is important, having very clear priorities. And in DCX, I think the business side has been very good at that, saying that for this quarter, this is what is important.” - F</i> <i>“The key is in maintaining alignment and ensuring that people stay committed to the vision.” - D</i>
Team Surveys	<i>“We also used team surveys and continuously acted on feedback to improve the way we worked. Instead of treating this as just another project, we saw it as building a long-term team culture, something more than just hitting milestones.” - D</i>
Goal Alignment	<i>“We have worked a lot with goal alignment, to ensure everyone works toward same goals” - C</i> <i>“We also just started working with OKRs.” - C</i> <i>“I wrote my goals, and then we aligned them upwards again. It has gone down the whole way and then pushed up again for approval.” - C</i> <i>“We are trying to stitch all this together. Another example is when we work with OKRs and how they play into the transformation process.” - D</i> <i>“Middle managers interpret strategy, but sometimes their translation does not fully align with what leadership originally envisioned.” - J</i> <i>“We had agreed on priorities, but midway, we shifted focus to campaign deadlines. It was not that we ignored the vision, but our short-term needs conflicted with long-term platform consistency.” - H</i>

Stakeholder Management & Engagement	<i>“You know these kinds of projects did attract a fair share of attention, which means there is a lot of enthusiasm, a lot of people, different stakeholders who want to come in, participate, share their experiences, share their interpretation of how they believe this program should move ahead. The challenge really is managing various stakeholders, all of whom have different expectations and perspectives on how the program should move forward” - J</i> <i>“It is very important with stakeholder management, and get everyone engaged” - O</i>
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Second-order theme: Power Skills

<i>First-order codes</i>	<i>Exemplary Quotes</i>
Power Skills	<i>“We are stopping saying soft skills, instead, we call them power skills. People used to dismiss soft skills as secondary, but they are critical, especially in influencing peers and leadership.” - I</i> <i>“With AI, power skills will become even more important.” - M</i>
Company Values	<i>“The company values. Everything Essity really holds dear, like care, commitment, collaboration, courage, all of those things, and we keep also trying to instill this culture in the team.” - I</i>
Empathy	<i>“Sometimes it is just about listening. People want to feel heard, not just managed.” - B</i> <i>“Having empathy with that.” - B</i> <i>“He always kept his emotions in check, which I think is really valuable.” - E</i> <i>“He is, you know, human. And he is a humble person. He praises me and says that the knowledge I have is valuable.” - H</i> <i>“You need to be able to read the room, understand how people are feeling and adjust your approach accordingly.” - K</i>
Prestigeless Leadership	<i>“I believe you need to adapt prestigeless leadership in a program like this. You are not here to show that you are the smartest person in the room. You are here to make sure the best ideas win.” - B</i>
Patience	<i>“For me personally, lots of patience has been the most important skill.” - A.</i> <i>“You can not expect everything to move as fast as you want. Sometimes, you just have to let things unfold at their own pace.” - O</i>
Resilience & Optimism	<i>“Personally, I think the most important qualities were: openness to change, resilience, and optimism, staying positive and motivated, even when things were unclear.” - D</i> <i>“Be resilient. Driving change often comes with pushback and misunderstanding, which can be frustrating. However, if you believe in your vision and know it benefits both the business and its customers, stay strong and committed to seeing it through.” - M</i>
Confidence & Credibility	<i>“One of the key things that I have learned over time is that I do not need to educate leadership or educate my peers on my subject matter expertise. I need to build the confidence and credibility that they believe that I know what I'm doing.” - I</i> <i>“If you have not established credibility, it becomes much harder to work with both IT and business. Credibility is truly the hard currency in these discussions.” - F</i>
People Management	<i>“People are a huge component of digital transformation. You can not talk about digital transformation without considering people.” - E</i> <i>“Even if you become more technical you still need to be good at working with people” - F</i>

	<i>"If I apply the same approach from a previous project to this one, it would not work. What always works is people management, understanding individuals, adapting styles, and recognizing strengths." - L</i>
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Second-order theme: Collaborative Culture

<i>First-order codes</i>	<i>Exemplary Quotes</i>
Cross-functional collaboration	<i>"We have moved toward cross-functional collaboration, meaning teams are structured differently rather than individual roles changing completely." - D</i> <i>"We had to bring cross-functional people into every squad so decisions could be made readily and improve customer experience." - I</i>
Trust	<i>"Building trust is crucial. When the team knows I'm doing my best, they trust me, and even if something goes wrong, they know it was not intentional." - D</i> <i>"We have a high level of trust and an open climate, which makes it more enjoyable for everyone to work." - F</i> <i>"Trust is key. Taking initiative is great but equally important is recognizing when to step back and respect others' expertise." - G</i>
Relationships	<i>"Relationships are super important. If I have good relationships, most things usually work out." - C</i> <i>"Relationships are key, without them, processes break down." - C</i>
Team Engagement	<i>"Our goal was to foster a strong team mentality, ensuring that collaboration was not just encouraged but felt natural". - D</i> <i>"He spent most of his time engaging with people, making sure they felt valued and heard." - E</i> <i>"As a manager, I always try to bring my team along with me to foster team engagement. Not in a way that is controlling. They should be self-organized and able to operate independently." - K</i>
Psychological safety	<i>"And another major lesson I learned is from leadership training I attended, they researched what makes high-performing teams. The number one factor? Psychological safety. People need to feel safe to take risks, safe to fail, and supported by their team. If they do not, performance and creativity suffer." - D</i> <i>"For me, creating psychological safety is one of the most important leadership responsibilities. If people feel safe and supported, they are far more engaged and productive. 'Let avoid blaming anyone, and focus on solving the issue. How can we move forward, and what should we do?'" - D</i>
Recognition and Appreciation	<i>"I guess I just try to make people feel seen and appreciated. That is something I really work on a lot" - C</i> <i>"People wanted to do great work, not because they were being pushed, but because they felt motivated and appreciated." - D</i>
Forgiving culture	<i>"We created an environment where mistakes were okay, and that changed everything." - C</i> <i>"If something goes wrong, the response is never 'who's to blame?', but rather 'how do we fix it?'" - D</i> <i>"You must have the courage to admit when you do not know something or when it is not your expertise." - F</i>

	<i>“You need to back your team, understand their challenges, and support them while fostering a culture of empowerment. When employees feel secure, they perform well. If they operate in fear they hesitate to share ideas, which stifles innovation.” - J</i> <i>“If you do not make mistakes, it is actually a problem, because that means you're not taking risks.” - O</i>
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Second-order theme: Change Management

<i>First-order codes</i>	<i>Exemplary Quotes</i>
Managing disagreements	<i>“At the very beginning, I felt like there were many disagreements inside, from different departments and teams. Everyone had their own ideas of what we were building, and then you put it together and realize, we are building different things. It took time before we realized that we were not even on the same page.” - A</i> <i>“Sometimes people have very different perspectives, and if we do not address it, it escalates. My role is often to step in early, clarify misunderstandings, and ensure we move forward together.” - C</i> <i>“Listen to others’ opinions, and then stand by whatever is best for the organization.” - K</i> <i>“Disagreements are beneficial for digital transformation. When individuals debate solutions passionately, they contribute their best insights, experience, and knowledge, ultimately strengthening the program.” - L</i>
Territorial thinking	<i>“Classic change management issues came up, like territorial thinking: teams wanting to protect their domains rather than collaboration.” - D</i>
Different expectations	<i>“The challenge really is managing various stakeholders, all of whom have different expectations and perspectives on how the program should move forward.” - J</i> <i>“Very political, making sure people feel heard, which is not the same as doing exactly what they want” - E</i> <i>“If we say yes to everything, we will never be able to do anything well. It is important to set limits, both for the team and for myself.” - C</i>
Managing uncertainty	<i>“Some people struggled with ambiguity – they wanted clear structures, but in digital transformation you do not always have that.” - D</i> <i>“Our approach was to continuously communicate that it was okay not to have all the answers yet. We were figuring things out together.” - D</i>
Overcoming resistance	<i>“At times, we faced significant challenges – some parts of the organization were more resistant than others.” - D</i> <i>“For an organization to be nimble and agile, everyone needs to buy into the vision, not just leadership. If only the leadership pushes for change while the foundation remains uncertain, the initiative will eventually collapse.” - J</i>

Second-order theme: Entrepreneurial Thinking and Innovation

<i>First-order codes</i>	<i>Exemplary Quotes</i>
Adaptability & Flexibility	<i>“What matters more is openness and adaptability rather than just theoretical knowledge.” - E</i> <i>“Embracing flexibility is important. Very few decisions are final; most can be adjusted if it turns out they are not working” - F</i> <i>“This principle enhances collaboration and also provides flexibility. For example, a developer does not need to be a UX designer, but they should understand the design process enough to contribute when needed. Similarly, a product owner might not be a designer, but they should be able to lead a design process when necessary.” - D</i>

Beyond responsibilities	<i>You end up doing things you were not originally responsible for, but it is part of making the whole project work. You need to be adaptable with that.” - A</i> <i>“I’m not sure if you have also had an interview with O about it, but it will be interesting to hear his perspective too, as he was involved in the process as well. He was also very hands-on, creating Jira tickets, and I think it is fascinating how his role of directing has evolved through this.”</i> <i>“Being comfortable with uncertainty and new ways of working” - D</i>
Start-up style roles	<i>“So that is a big change. Another major change is that I now manage more processes. I have worked in startups before, and the current DCX project feels very startup-like, though within a large company with substantial funding” - G</i> <i>“I have often found myself in startup-style roles where I need to figure out new projects and build things from scratch, which I love.” - D</i>
Overcoming perfection	<i>“Learning to accept ‘good enough’ and move forward without over analyzing is a valuable skill” - E</i> <i>“So we keep educating the organization: we do not expect perfection, we expect a 70% product, and continuous improvement will come” - I”</i>
Experimentation	<i>“We made it clear that while we had a strong vision, we would not have every detail planned out from the start. We needed the flexibility to make strategic decisions along the way.” - D</i> <i>“You can not have fixed time, budget, and functionality all at once. You must be prepared to adjust at least one of these.” - C</i> <i>“The idea is to create squads that are empowered to experiment, running quick, small-scale tests. If something does not work, they can discard it and move on.” - J</i> <i>“When two things are in conflict, it is not about one being right and the other wrong. It is about testing a direction, and if it does not work, we pivot.” F</i>
Entrepreneurial Side	<i>“So when the program started, it was more about the entrepreneurial side of things and getting ahead of the curve.” - I</i>
Outside-in perspective	<i>We need to have an outside-in perspective to keep innovating, staging ahead, and adapting to change.”</i> <i>“Even after DCX ends, you need to keep people aligned and prevent things from falling apart.” - D</i>

Second-order theme: Strategic Coordination

<i>First-order codes</i>	<i>Exemplary Quotes</i>
Gatekeeper	<i>“The biggest challenge has been gaining clarity on who actually has decision-making authority. We have many stakeholders, and sometimes it is unclear who owns the decisions. To address this, we introduced a structure where product owners act as gatekeepers. All communication and decisions must go through them.” - F</i> <i>“We receive a lot of feedback from various stakeholders. It must be handled in a structured way. That is why we need a strong gatekeeper, someone who can filter and package the feedback while having the confidence to say, ‘No, we will handle this differently.’ It’s about managing input to keep the team focused and aligned with priorities.” - F</i> <i>“Part of his role is to filter information so we are not overwhelmed. He shields us from unnecessary complexity and ensures we receive what is most relevant.”</i> <i>“My leader is tough but trusts me. She gives me the freedom to figure things out on my own while keeping me focused on key priorities. Upper management sometimes pressures us</i>

	with questions like ‘Why is this happening?’ or ‘What’s going on?’ But she is excellent at shielding me and the team and handling those tough questions herself.” - D “He tells me to focus on my tasks and not respond to emails about new tasks, yet he constantly sends questions and tasks himself. I once pointed out this contradiction, but I understand that he is also under intense pressure from stakeholders above him.” - H
Prioritization	“It is all about prioritization. When you have thousands of tasks, you can not do them all. You need to take it step by step, eat the cake piece by piece.” - A “I’m good at prioritizing and handling a lot at once. We focus on three priorities: 1, 2, and 3. Everything else is secondary. This approach helps everyone focus on what is most important, making the process more pragmatic and enabling greater innovation.” - D “His role is prioritization, being very clear on what we need to work on because there’s just a lot to tackle.” - M
Time Management	“I think what really helped me was blocking off time on my calendar for focused work. This is when you can actually get things done, without distractions. Otherwise, people will constantly call you, and there is no time to focus. So, time management you can call it.” - A “It is about tackling what truly matters before moving on to what can wait.” - C

Second-order theme: Insight-Driven Decision-making

First-order codes	Exemplary Quotes
Customer insights	“Many organizations talk about being customer-focused, but decision-making is often based on gut feeling rather than actual customer data.” - D “If someone had an opinion, we could point to customer insights and say, ‘This is what the customer wants.’ That ended most discussions quickly.” - D “Sometimes we hesitate to make the unpopular decision. But now with access to real-time customer data, we are expected to take responsibility, not wait for consensus.” - J
Data-driven decisions	“It is very important to have data when developing, so you understand what customers actually want, not just what you think they want.” - C “We have more data than ever, but it is surprising how rarely we base decisions fully on it. The challenge is to actually look at the data and have the courage to make decisions based on it.” - F “There has been this idea that anyone working in digital can just look at data, and that is good enough. But in reality, unless you have someone who truly specializes in analytics, someone whose ‘bread and butter’ is working with numbers, the insights will be limited.” - E
Results-based approach	“A more results-based approach, instead of “I think that.” - A

Second-order theme: Organizational Agility

First-order codes	Exemplary Quotes
Agile Teams	“Most companies are organized by functions—marketing, sales, innovation, branding, etc. But this structure doesn’t naturally align with customer journeys. While each function is important, we needed to shift toward cross-functional, agile teams that could work across the entire customer experience. So that’s another success factor” - D
SAFe / Scrum	“We have adopted Agile Scrum methodology, and we are currently using SAFe Scrum, a more refined version of Scrum. This allows us to work in time-boxed intervals, delivering products to our customers and stakeholders in structured phases. So basically, this Scrum framework provides predefined templates and structured ways of working. For example, we follow specific ceremonies, such as daily standups, quick 15-minute meetings. These

	<i>short meetings help keep things on track. We simply ask: What have you been working on? What are you planning to do? Are there any blockers? Each team member covers these three points, and we are done. This practice helps us stay aligned and efficient.” - K</i> <i>“When you work with Scrum, there is a very clear project methodology, or you could say, a methodology for driving that type of project, which automatically creates a very good structure.” - C</i> <i>“Before we worked on one application at the time and did not really talk to each other. Now, we are many scrum teams working together, aligned under one vision” - C</i> <i>“We have recently introduced a practice where we do not completely fill the sprints, but instead leave room for flexibility and balance.” - F</i> <i>“We have used examples like how Spotify and other big organizations work in this agile methodology, where it really drives autonomy and trust. The enemy of an agile way of working is a matrix organization, and as you know, our organization is very matrixed.” - I</i> <i>“Agility has become more than a methodology, it is almost like a religion” - C</i>
Squads Structure	<i>“We used to have two teams – Public Experience and Private Experience. Now, we have four squads aligned with the user journey: ‘Aware/Engage’, ‘Consideration/User’, ‘Purchase/Service’, and ‘Rollout.’” - A</i> <i>“Each squad has a product owner, a scrum master, a UX designer, a business analyst, and an analytics expert.”</i>
Continuous Improvement	<i>“One of the great things about this agile way of working is that we need to be able to change and adapt. Instead of aiming for a perfect 100%, it is about continuous improvement in the digital world. If we wait for 100% perfection, we will fall behind. So we keep educating the organization: we do not expect perfection, we expect a 70% product, and continuous improvement will come” - I</i> <i>“The ability to navigate agile structures, foster continuous improvement, and advocate for streamlined decision-making is now crucial for middle managers leading DT initiatives.” J</i>
Digital Tools, Jira	<i>“With Jira, we assign specific tasks for each three-week sprint. I do not need to check in with all 40 team members daily, I can just see progress in real-time. This eliminates micromanagement.” - L</i> <i>“Facilitation via digital tools for this kind of a collaboration” - L</i>

Second-order theme: Digital Literacy

<i>First-order codes</i>	<i>Exemplary Quotes</i>
Business-tech knowledge	<i>“I come from a communication background, not tech. But working on these projects over time has helped me understand what is complex and what is simple.” - C</i> <i>“If the business-side starts understanding the technology and the technology people start understanding the business equally on both sides, your project is already a success. That is what I would say. However, if this does not happen, you are a little slow, but you will achieve success. You have to just keep a positive mind.” - L</i> <i>“This ability to bridge technical and business understanding was key to making the project work. It is crucial because, without this knowledge, you spend enormous effort just trying to bring stakeholders up to speed.” - J</i> <i>“Having digitally competent managers makes this process much smoother” - J</i> <i>“Someone like O, does not necessarily need to learn to code, but it would help if he could acquire some technical skills. This way, he can engage in informed discussions with developers.” - G</i>
Technical Knowledge	<i>“Some technical knowledge can add value, but there are limits. No one can be an expert</i>

	<i>in every area.” - L</i>
Digital Understanding	<i>“Imagine I am your chef, and I tell you it will take me two weeks to make scrambled eggs. You would immediately know that something is off, right? You would either know I am lying or adjust your expectations accordingly. So, having a bit of technical knowledge helps you make those adjustments. It is about getting involved, but not to the point of micromanaging. Just enough to be informed.” - G</i> <i>“The success of this program was partly due to the fact that both O and I have strong digital backgrounds. Even though they belong to different business units, they both have experience working with IT and technical teams. This was incredibly valuable, as both were able to clearly explain the project status, challenges, and gaps to their respective bosses and helped to support their teams more effectively.” - J</i>
T-shaped member	<i>“There is a fundamental principle in agile methodologies, especially in the framework we follow, called T-shaped members. This means that while each person has their own specialization, they should also have a basic understanding of what the rest of the team does.” - I</i> <i>“We aim for a ‘T-shaped’ workforce – specialists in their areas but with enough knowledge to contribute across disciplines.” - D</i>

Second-order theme: Communication Skills

<i>First-order codes</i>	<i>Exemplary Quotes</i>
Clear Communication	<i>“How do I communicate what I want to tell them in 25 slides in one slide? Or better yet in two minutes?” - I</i> <i>“Communication skills are central to everything we do” - N</i>
Communication Gaps	<i>“At first, you are not even sure if you are speaking the same language. But after a year and a half, you start to understand.” - A</i> <i>“It is easy to throw around technical terms that others do not understand, however, then you risk people talking past each other.” - F</i>
Cross-functional communication	<i>“Yes, partly it is cross-functional communication. You really realize how important communication is – being able to communicate both upwards, downwards and in all directions. You can never communicate too much.” - F</i> <i>“Maintaining consistent messaging was crucial. We made sure to repeat a set of key principles over and over, and eventually, people aligned with the vision. Of course, in a large, complex project, there will always be different interpretations of what it entails, but overall, we have maintained strong cohesion.” - D</i> <i>“Our approach was to continuously communicate that it was okay not to have all the answers yet. We were figuring things out together, and it was a shared journey. Not only one in charge, we are here together.” - D</i> <i>“You have to explain what a phrase means. For one person, it means ‘tomorrow,’ for another, ‘next week.’” - A</i> <i>“You have to adapt your language to who you are speaking to, because everyone comes from different cultures. You can not have a standard presentation and always go with it, instead have it as a base and then adapt it to how you are speaking to.” - B</i>
Ask the Right Questions	<i>“Over time, you learn to ask questions more efficiently. You know what to look for.” - E</i> <i>“With so many specializations, you need to know how to communicate with different experts, speak their language, and ask the right questions to stay aligned.” - E</i>
Active Listening	<i>“It is very important to listen to different stakeholders, then ask clarifying questions to get everyone on board.”</i>

8.7 Appendix G: AI Disclosure

In line with the Stockholm School of Economics guidelines on the ethical and transparent use of AI tools in academic work, this section outlines how different AI tools have been used throughout the research and writing process of this thesis.

1. ChatGPT

ChatGPT has been used for proofreading purposes. As I am dyslexic, the tool has been useful for identifying and correcting spelling mistakes, improving grammar, and clarifying sentence structure. As such, its primary contribution was to improve academic clarity and expression. The main risk associated with using ChatGPT was the potential for inaccurate suggestions or unintended changes that could alter the intended meaning. To mitigate this risk, all suggestions were critically reviewed and verified by me. In addition, I instructed the tool to preserve my original intent and meaning, and to provide suggestions rather than make changes where uncertainty existed. An example of the prompt I have used:

“Act as a proof-editor for the following paragraph. Identify spelling mistakes, grammar, and clarify sentence structure, but do not alter the meaning, remove any content, or change terms. If you’re unsure about a change, leave a suggestion instead of rewriting it.”

Importantly, ChatGPT was not used to generate content, analyze, or develop arguments. All critical thinking, analysis, and final-decision making remained entirely my own.

Reference: OpenAI. (2025). *ChatGPT* (May 13, 4.0) [Large language model]. <https://chat.openai.com>

2. Google NotebookLM

Google NotebookLM has been used as a supportive tool during the literature review process. After reading abstracts to assess initial relevance, I used NotebookLM to generate summaries of selected academic papers. This helped create a high-level overview of different research areas and supported a more efficient prioritization of which papers to read in full. Its primary contribution was improving time efficiency and enabling broader exploration of relevant literature.

However, there are risks with using such tools. NotebookLM can produce overly narrow summaries or inaccurate interpretations of academic content, potentially leading to misunderstandings or missed nuances. To mitigate this risk, the tool was only used during the early exploration phase to get a general sense of new topics. All papers cited or used in the thesis were read in full and critically evaluated to ensure accuracy and depth of understanding.

Reference: Google NotebookLM (May 13, 2025). *Note Taking & Research Assistant powered by AI*. <https://notebooklm.google/>

3. Atlas.ti (AI-powered features)

Following my supervisor's recommendation, I used Atlas.ti to support the coding of interview transcripts. The coding process involved identifying and highlighting relevant text and assigning first-order codes in line with the Gioia method. The tool's AI-powered features, such as automatic code suggestions and pattern recognition, were occasionally used to inspire reflection and ensure no important themes were overlooked. Therefore, the main contribution was to improve the efficiency and structure of the initial coding process, especially as I was managing large volumes of qualitative data. However, a key risk associated with using AI-supported tools is the potential for over-reliance on automated suggestions, which could introduce bias or misrepresent participants' intended meanings. To mitigate this, all codes were reviewed and created manually by me. The AI-generated suggestions were treated as optional inputs. Additionally, all data were fully anonymized prior to import to protect participant confidentiality, and no personally identifiable information was stored or analyzed in the software.

Reference: ATLAS.ti (May 13, 2025). *AI data security and privacy*. ATLAS.ti. <https://atlasti.com/ai-data-security-and-privacy>