

## **ID Cover Page**

### **Summary of WP Student Team**

# **PRACTICAL EVIDENCE AND OPPORTUNITIES OF AMBIDEXTERITY IN CORPORATE STRATEGY – GENERATIVE ARTIFICIAL INTELLIGENCE AS A CATALYST FOR AMBIDEXTROUS STRATEGIES**

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**Work project carried out under the supervision of: Advisor: João Castro, Ph.D**

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**Abstract**

This study examines ambidexterity as a critical component of corporate strategy, analyzing how Amazon and Philips employed contrasting approaches to balance exploration and exploitation. Amazon's continuous innovation and internal resource synergies led to consistent growth, while Philips' radical transformation relied on divestments and acquisitions, with limited short-term returns. The study also explores Generative AI as an enabler of ambidexterity, enhancing resource allocation, organizational adaptability and strategic scope. Using the "Corporate Strategy Triangle," we create new perspectives on strategic ambidexterity. Therefore, our research offers actionable insights and highlights opportunities for further exploration of ambidextrous strategies and AI integration.

**Keywords:**

Strategic Ambidexterity; Organization; Performance; Transformation; Innovation; Exploit; Explore; Generative AI

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# 1 Introduction

## 1.1 Research Scope and Rationale

In an era defined by rapid technological advancements and constant market disruptions, organizations must navigate unprecedented strategic challenges to remain competitive. What works today may not work tomorrow, making strategic adaptiveness more important to sustainable success than ever. The concept of organizational ambidexterity – the ability to balance exploration (pursuing innovation and adaptability) with exploitation (optimizing and refining existing operations) – has emerged as a critical factor for sustainable success in management literature and practice. While ambidexterity provides a framework for navigating these challenges, it is often not viewed in the direct context of corporate strategy development and/or execution. Yet, there are inherent “conflicts” for scarce resources inherent to firms in pursuing their goals because of dual objectives. Mature businesses often focus on short-term financial performance, while the impact of innovation and new business models is often only visible in the long-term perspective. So how can ambidextrous strategies solve this conflict, and what does it mean for their performance?

Our research examines ambidexterity through three distinct lenses to provide a comprehensive understanding of its theoretical and practical dimensions. First, the case of Philips exemplifies the challenges of managing legacy businesses and seizing new opportunities in the context of a strategic transformation that embodies many ambidextrous characteristics. The second perspective focuses on Amazon, a company that has successfully employed structural and contextual ambidexterity to dominate multiple industries, from e-commerce to cloud computing. Finally, the transformative role of Generative Artificial Intelligence (Generative AI), assessing how this cutting-edge technology reshapes the dynamics of exploration and exploitation across industries. The relevance of strategic ambidexterity cannot be overstated as

the lifespan of companies is shrinking – S&P 500 companies' average tenure has fallen from 32 years in 1965 to just over 20 years in 2021, with a projection of 12 years by 2027. This trend highlights the need for organizations to adapt to rapid changes and disruptive innovations. Moreover, the increasing adoption of technologies such as Generative AI introduces new opportunities for achieving ambidexterity but also demands a rethink of traditional corporate strategy development in the dimension of resources, organization, and scope of business.

By integrating insights from two case studies and technological analysis, our research addresses an urgent need for further field research, aiming to create a holistic picture by combining theory, practical evidence and future development opportunities to create insights into actionable strategies.

## **1.2 Methodology**

Our study employs a mixed-methods approach (qualitative and quantitative) to examine ambidexterity through organizational and technological lenses.

The cases of Philips and Amazon are analyzed qualitatively regarding their ambidextrous character in strategy and execution, while the quantitative analysis focuses primarily on stock price performance (cumulative stock returns)<sup>1</sup>. This approach not only allows for flexible analysis of two different companies with different strategies but also provides opportunities to distinctly match strategical actions with prior findings in the literature. In a later stage, a high-level financial statements analysis with selected KPIs helps underscore the financial impacts of the chosen strategies (e.g., margins and others)<sup>2</sup>. To compare both companies in their overall performance, we opt to assess cumulative stock returns against selected competitors and indices, adopting Collins' (2001) approach. This allows us for an unbiased analysis, assuming

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<sup>1</sup> Cumulative stock returns were chosen to account for dividends paid by some companies.

<sup>2</sup> Financial data was acquired through annual reports and retrieved from Bloomberg.

that markets price securities almost optimally. In analyzing performance in this way, we can adopt both internal and external perspectives. The research on Generative AI takes practical examples and expert interviews into account to capture the rapid technological development, practical adoption, and impact. Our research is guided by the overarching research question of how organizations achieve, sustain, and perform by leveraging ambidexterity in the context of their respective strategies and how technological advancements such as Generative AI (may) influence this process (in the future). As the methodology – for the two cases analyzed – varies slightly by the nature of the company, a short overview of the methodology applied is provided in the respective parts.

### **1.3 Contribution**

This thesis aims to contribute to the field of innovation and organizational strategy/management by taking new perspectives on ambidexterity and combining practical evidence from the past with present technological change and resulting future opportunities. Our approach allows for a comprehensive understanding of ambidexterity derived from real-world examples. By examining Philips, we provide lessons on how companies in large conglomerates can manage the tension between legacy operations and innovation. The analysis of Amazon offers a blueprint for the opportunities of ambidexterity in the path of growth. The exploration of Generative AI adds a cutting-edge perspective, demonstrating how advanced technologies can serve as enablers of strategic ambidexterity, particularly in fast-moving industries, now and in the future. From a practical standpoint, our research takes practical evidence and creates initial thoughts on actionable strategies for leaders seeking to navigate the complexities of balancing exploration and exploitation in the context of corporate strategy development.<sup>3</sup> It furthermore contributes to the growing body of literature on ambidexterity by bridging the gap between

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<sup>3</sup> Therefore, we structure our findings along the “Corporate Strategy Triangle” framework, often used by scholars to characterize the complex organization into three categories of “Resources”, “Organization” and “Scope of Business”.

theory and practice, providing a multi-perspective view for understanding ambidexterity in the 21st century.

## **2 Literature Review**

### **2.1 Introduction to Ambidexterity in Organizations**

The concept of ambidexterity in organizational theory addresses the challenge of balancing two contrasting yet complementary strategies: exploration and exploitation (March 1991). The term “ambidexterity” in management literature was first established by Robert Duncan in 1976 (O’Reilly and Tushman 2013). In literature, exploitation is described as refining existing capabilities and structures to improve incrementally. It involves refining existing capabilities and efficiency and leveraging inherent knowledge to enhance short-term performance and operational stability. In contrast, exploration involves experimentation, search, and risk-taking, allowing firms to innovate, discover new opportunities, and adapt to changing markets (March 1991; O’Reilly and Tushman 2013; He and Wong 2004). An ambidextrous firm can exploit its existing business to stay competitive in the short term while also being able to take advantage of new opportunities and proactively react to disruptions (Soto-Acosta, Popa, and Martinez-Conesa 2018; Birkinshaw and Gupta 2013; March 1991). March’s (1991) foundational work on organizational learning emphasized a fundamental resource conflict within businesses, practically showing itself an everlasting tension between exploitative and explorative practices, proposing that organizations must find a balance to avoid the “success trap” of over-relying on exploitation or the “failure trap” of excessive exploration. March (1991) argues that extreme focus on exploration leads to excessive costs, while an excessive focus on exploitation increases short-term performance but impedes long-term performance. This view is supported by the findings of He and Wong (2004), stating that balancing both strategies benefits a firm’s performance, while an imbalance is detrimental, especially if one objective is pursued overly

aggressively. As markets become increasingly dynamic, balancing these competing demands becomes critical to an organization's adaptability and long-term survival (Raisch et al. 2009; Gibson and Birkinshaw 2004).

Literature indicates that pursuing both exploitation and exploration requires different corporate cultures, organizational structures, and methods to judge organizational success (O'Reilly and Tushman 2021). While they are not seen as mutually exclusive but rather complementary, materializing the benefits of an ambidextrous strategy is "a managerial balancing act" (O'Reilly and Tushman 2021; Marín-Idárraga, Hurtado González, and Cabello Medina 2022).

For exploitation, the structure emphasizes tight coordination and hierarchical control, focusing on optimizing existing products in established markets. Processes are standardized, aiming at efficiency and cost reduction through routine procedures and centralized decision-making. The culture associated with exploitation values stability, discipline, and risk avoidance, aligning closely with the current business strategy. Exploitation benefits from centralized decision-making and a high degree of formalization of rules and procedures (Jansen, Van Den Bosch, and Volberda 2006). In contrast, exploration requires flexible and decentralized structures, such as semi-autonomous units, to encourage creativity. Processes for exploration emphasize experimentation and rapid prototyping, with local units given autonomy to adapt quickly. It promotes risk-taking, autonomy, and openness, where failure is part of the learning process. Both approaches are supported by distinct but complementary structures, processes, and cultures. Achieving the optimal balance between exploitation and exploration depends on the organization's circumstances and operations. Birkinshaw and Gupta (2013) suggest that the trade-off can be seen as an efficiency frontier, as suggested by Porter (1985), where multiple positions between the two extremes may achieve optimal performance. In a rather competitive industry, firms are less likely to use valuable resources on pursuing explorative approaches with unlikely outcomes, as they rely on incremental and exploitative improvements to stay

competitive (Jansen, Van Den Bosch and Volberda 2006; N. Kim and Atuahene-Gima 2010). Jansen (2006) also shows that a centralized and formal organizational structure positively affects exploitative measures while hindering explorative approaches.

Regarding environmental dynamism, his results show that firms pursuing exploratory innovations tend to achieve better results. While Marín-Idárraga, Hurtado González, and Cabello Medina (2022) do not suggest that exploitation in general may benefit a firm in a strong competitive environment, it does suggest that exploration is less effective given its inherent uncertainty and risk. In addition, findings suggest that mechanistic structures help firms exploit, while environmental dynamism supports a more explorative approach (Soto-Acosta 2018; Jansen 2006). Furthermore, results propose that factors such as organizational slack may help a firm be ambidextrous. Lastly, findings suggest that organizations in Western countries achieve better results in pursuing exploration than firms in Asia, larger companies with more resources achieve better results in pursuing ambidexterity, and that firms in high-tech sectors also achieve better results in pursuing an ambidextrous strategy (Marín-Idárraga, Hurtado González, and Cabello Medina 2022)

While there is significant evidence that an ambidextrous approach benefits an organization, it is important to understand what prevents firms from successfully applying these concepts. One of the key drivers of failure for established businesses is that they miss out on catching the wave of disruptive innovation (Bower and Christensen 1995; O'Reilly and Tushman 2021). In trying to solve resource conflicts, a key challenge is political dynamics in firms, as some objectives are commonly valued strongly, or the given business unit has more political power inside the organization (Tushman and O'Reilly 1996).

A related issue is that firms often recognize change but fail to react because solutions are either not profitable enough or because of feared cannibalization effects (Bower and Christensen 1995; Scott et al. 2017). Firms need to maintain alignment between strategy, structure, and

culture for short-term success while also being prepared to expand into new ventures (Tushman and O'Reilly 1996, 24).

Other issues firms face trying to pursue ambidexterity are related to their size. Large organizations often experience greater inertia due to entrenched processes and structures that make it difficult to pivot toward new opportunities. While structural inertia describes resistance to change based on the organization's size complexity, organizational structure, and standard processes, cultural inertia consists of (informal) values and norms (Tushman and O'Reilly 1996). Gilbert (2004) shows when an organization perceives a threat, such as a disruptive innovation, its inertia often leads to a self-reinforcing response, reducing the capacity for an agile response (O'Reilly and Tushman 2021). Furthermore, small companies struggle to pursue ambidexterity. This is mainly due to financial constraints with no margin to fund (potentially) money-losing initiatives without risking bankruptcy (Marín-Idárraga, Hurtado González, and Cabello Medina 2022; Boronat-Navarro, Escribá-Esteve, and Navarro-Campos 2024; O'Reilly and Tushman 2013). In summary, there is consensus in the literature that organizations managing to achieve an optimal balance can often sustain a competitive advantage and findings on why companies regularly fail to achieve ambidexterity.

## **2.2 Types of Ambidexterity**

Organizational learning theory originally build the basis on which ambidexterity theorems were first developed. Introduced by Argyris and Schön (1978), it postulates the dual learning processes central to ambidexterity. March (1991) linked exploration to generative learning – focused on developing new knowledge and competencies – and exploitation to adaptive learning, emphasizing refinement of existing skills. Vera and Crossan (2004) argue that organizations that balance both learning types are better positioned for innovation and sustained performance. Researchers have subsequently identified various types of ambidexterity, each involving distinct organizational approaches for managing exploration and exploitation.

The most prominent types included within the ambidexterity theorem are structural, contextual, and sequential ambidexterity, with specific applications, advantages, and limitations. Structural ambidexterity involves creating separate organizational units dedicated to either exploration or exploitation. This segregation enables organizations to optimize each unit's focus, tailoring its resources and culture to maximize efficiency or foster innovation (O'Reilly and Tushman, 2004).

Structural ambidexterity is often observed in large organizations that can afford to maintain separate units for innovation and core operations (O'Reilly and Tushman, 2008). Studies have shown that structural ambidexterity supports large-scale transformations, especially in industries facing disruptive technological changes (Benner and Tushman, 2003). However, maintaining such a division can lead to fragmentation and coordination challenges, as different units may develop conflicting goals (Raisch et al. 2009). Structural ambidexterity therefore requires an integrative leadership approach to prevent silos and ensure that innovations can be effectively scaled within the organization (Smith and Tushman, 2005).

Gibson and Birkinshaw (2004) introduced contextual ambidexterity, which emphasizes creating an organizational environment that allows individuals to balance exploration and exploitation behaviors within their roles. Key components of contextual ambidexterity include a high level of trust, shared vision, and autonomy, which allow employees to exercise flexibility in their decision-making (Gibson and Birkinshaw 2004). It has shown to be effective in firms that require rapid adaptability without the resources for major structural change. It is also suited to industries where the pace of change demands flexible responses across all organizational levels (Simsek, 2009). Despite its benefits, contextual ambidexterity relies heavily on organizational culture, which can be challenging to cultivate in MNEs (Gibson and Birkinshaw 2004).

Sequential ambidexterity involves balancing exploration and exploitation over time, with organizations shifting their focus between the two as needed. This approach allows firms to alternate between periods of innovation and optimization, which can be particularly advantageous in industries with cyclical demand patterns or where technological advancements require periodic adjustments (Gupta, Smith, and Shalley, 2006). Siggelkow and Levinthal (2003) suggest that sequential ambidexterity benefits organizations operating in dynamic environments, where firms may need to prioritize one mode over the other at different times. Although sequential ambidexterity is less resource-intensive than structural ambidexterity, it requires effective management and flexibility to adjust the organization's focus (Lavie, Stettner, and Tushman, 2010).

Subsequent developments of these concepts led to the dynamic capabilities perspective, developed by Teece, Pisano, and Shuen (1997). It aligns closely with ambidexterity, requiring continuous recalibration between exploration and exploitation. Firms with robust dynamic capabilities can pivot strategies as markets shift, enhancing their and long-term competitiveness (Eisenhardt and Martin 2000). Dynamic capabilities require strong Top Management Team behavioral integration working towards common goals (Gibson and Birkinshaw, 2008). Though there is evidence of beneficial traits of all types of ambidexterity, downsides may undermine positive impact. Structural ambidexterity may lead to fragmentation if separate units lack integration. Additionally, maintaining a exploration-exploitation balance is an ongoing process, requiring constant adjustments (Lavie, Stettner and Tushman, 2010).

### **2.3 Ambidexterity and Organizational Performance**

A significant body of research supports the link between ambidexterity and enhanced organizational performance. Yet empirical work examining linkages of ambidexterity and performance remains somewhat limited. A noticeable shortfall in current literature is that most research has focused on revenue or revenue-oriented outcomes (Sarkees et al. 2010).

Nevertheless, studies mostly demonstrate that ambidextrous organizations outperform those that overly focus on one approach exclusively (Kostopoulos, Bozionelos, and Syrigos 2015; O'Reilly and Tushman 2013; Gibson and Birkinshaw 2004). He and Wong (2004) found that ambidexterity correlates positively with innovative outputs and financial performance. Raisch et al. (2009) emphasize that ambidextrous organizations exhibit higher adaptability, allowing them to respond more effectively to environmental shifts and disruptions. This adaptability gives firms a strategic advantage, enabling them to capture new market opportunities without sacrificing existing capabilities. Jansen et al. (2006) found that ambidexterity improves market responsiveness and enables organizations to sustain competitive advantage by refining current offerings while developing new ones. O'Reilly and Tushman (2013) argue that ambidexterity is critical for strategic renewal, helping firms manage the transition from mature to emerging business areas. This dual focus allows firms to generate immediate revenue through exploitation while investing in exploration to drive long-term growth and adaptability (Patel, Messersmith, and Lepak, 2013; O'Reilly and Tushman, 2013). We adopt the framework of Lavie, Stettner, and Tushman (2010), arguing that short- and long-term performance are outcomes of an exploration-exploitation balance within an organization.

#### **2.4 Recent Developments in Ambidexterity Research**

Recent studies have expanded ambidexterity research into new domains, including multinational enterprises (MNEs), high-technology industries, and business digital transformation.

For MNEs, balancing global integration (exploitation) with local responsiveness (exploration) is critical. Birkinshaw and Gupta (2013) highlight that MNEs often face the "global-local" dilemma, where they must maintain consistent global strategies while adapting to regional preferences. This balancing act requires ambidextrous strategies that facilitate worldwide standardization and local customization. The availability of advanced technologies and the

pursuit of digital transformations have intensified the need for ambidexterity as firms adopt new technologies while maintaining operational stability. Li et al. (2019) note that digital initiatives like artificial intelligence require firms to balance short-term impacts with long-term innovation goals. This dual approach is particularly relevant in technology-driven industries, where new digital capabilities must be integrated without disrupting core processes (Westerman et al., 2014). Leadership in ambidexterity, especially behavioral integration of Top Management Teams, has become an ever more prominent topic over decades. Rosing, Frese, and Bausch (2011) argue that ambidextrous leadership is critical for fostering an organizational culture that supports exploration and exploitation. Leaders play a key role in managing the tension between stability and innovation, which is essential for successful ambidexterity, particularly during strategic transformations (Zimmermann, Raisch, and Birkinshaw, 2015).

## **2.5 Future Directions in Ambidexterity Research**

Future research on ambidexterity may focus on understanding how digital transformation reshapes ambidextrous practices and structures. The rise of artificial intelligence, machine learning, and automation technologies presents new opportunities and challenges for balancing exploration and exploitation. Scholars are increasingly interested in how digital platforms, data analytics, and agile methodologies can facilitate ambidexterity in both small and large organizations (Clohessy, Acton, and Morgan, 2017). There is also growing interest in how ambidexterity can be scaled within organizations of different sizes and resources. While large organizations can often afford dedicated exploration units, smaller firms may need hybrid or adaptive models that allow for flexible shifting between exploration and exploitation within a single team. Understanding how firms of all sizes can adopt ambidextrous practices will be crucial for expanding the applicability of ambidexterity theory.

### **3 Generative AI as a Catalyst for Ambidextrous Strategies**

#### **3.1 Theoretical Background**

##### **3.1.1 Generative Artificial Intelligence**

Artificial Intelligence (AI) refers to systems that demonstrate aspects of human intelligence, such as decision-making, problem-solving, and speech recognition, using advanced algorithms. These systems adapt and improve their performance by analyzing and utilizing data, enabling applications across diverse fields (Huang & Rust 2018; Davenport et al. 2020). Generative Artificial Intelligence (Generative AI) is a significant improvement in machine learning and artificial intelligence, distinguished by its ability to generate original content such as text, graphics, data models, and code. This capability is supported by advanced neural network architectures such as large language models (LLMs), generative adversarial networks (GANs), and diffusion models that emulate human creativity and problem-solving processes. (Chen et al. 2024; Holmström and Carroll 2024). Generative AI progress is fueled by crucial architectures that enable the generation of realistic results. LLMs, like ChatGPT and GPT-3, use deep learning and large datasets to generate coherent, context-relevant text. GANs employ a dual-network architecture consisting of a generator and a discriminator, iteratively improving content to produce results nearly indistinguishable from human-created outputs. (Holmström and Carroll 2024). Diffusion models improve generating capacities through a denoising process, which is particularly beneficial for high-quality image and structured data production. (Chen et al. 2024).

##### **3.1.2 Opportunities and Challenges of Generative AI**

Generative AI revolutionizes industries by driving both exploration and exploitation. In healthcare, it accelerates drug discovery, reducing time-to-market for treatments by up to two-

thirds (Mariani and Dwivedi 2024), while generating synthetic data for predictive modeling (Mulukuntla 2022). In manufacturing, Generative AI enhances predictive maintenance, quality control, and supply chain management while aiding product design through data optimization (Fosso Wamba et al. 2024; Wang and Liu 2024; Liao et al. 2024). Consumer-focused industries leverage Generative AI for creative content generation, as seen in Coca-Cola's AI-driven Y3000 beverage concept and Wayfair's "Decorify" platform for customer engagement (Cillo and Rubera 2024; Ameen et al. 2024). By automating routine tasks, Generative AI enables organizations to allocate resources strategically. For example, UPS's MeRA system reduces email handling times by 50%, enabling human agents to focus on complex tasks (CapGemini Reports 2024). Besides optimizing processes, Generative AI also possess transformative potential, enabling organizations to innovate business models while enhancing productivity and strategic growth, serving as a cornerstone for achieving ambidexterity through dynamic capabilities and leadership. By fostering collaboration between humans and machines, Generative AI balances exploration and exploitation, enhancing creativity, decision-making, and operational efficiency through real-time guidance (Rane 2024). It also promotes sustainability by aligning green innovation with operational goals, enabling eco-friendly solutions like resource optimization and sustainable product design (Wang and Zhang 2024). With the potential to contribute trillions annually to the global economy, Generative AI empowers firms to explore new markets, create revenue streams, and enhance scalability while optimizing existing processes (Wu et al. 2024). For instance, Coca-Cola's Y3000 demonstrates how AI-driven insights enhance customer engagement through consumer-focused product co-creation (Cillo and Rubera 2024). To realize its potential, organizations must develop dynamic capabilities - sensing opportunities, seizing them, and transforming operations - supported by agile, innovation-focused leadership to integrate Generative AI into strategic initiatives

(Thomas et al. 2024). Aligning technology with leadership ensures adaptability and sustained competitive advantage.

Generative AI adoption faces technical, organizational, and societal challenges. The lack of formal policies, adopted by only 16% of enterprises, significantly limits the potential for full exploitation of generative AI (Dencik et al. 2023). Furthermore, The Integration with legacy systems and the need for high-quality data further hinder its effectiveness, particularly in sectors like healthcare and finance (Al-khatib 2023). Additionally, system errors, cybersecurity vulnerabilities, and biases in data pose significant operational risks, underscoring the importance of robust risk management frameworks (Banala 2024).

### **3.1.3 Research Gap**

Generative AI's role in task automation, decision-making, and creativity is well-documented, yet its influence on organizational ambidexterity, the balance between exploration and exploitation, remains underexplored (Mariani and Dwivedi 2024; Fosso Wamba et al. 2024). While studies address exploration and exploitation individually, the dynamic interplay between these objectives in achieving ambidexterity has not been systematically examined. This research addresses this gap, offering insights into Generative AI's strategic role in balancing competing priorities. This research gap is critical, as Generative AI's transformative potential lies in its ability to help organizations manage tensions between exploration and exploitation. The absence of studies on how Generative AI influences the processes and outcomes of ambidexterity limits our understanding of its strategic impact. By addressing this gap, this research aims to provide insights on Generative AI's role in enabling ambidexterity, offering valuable contributions for academic research and practical strategies in innovation and organizational management

## 3.2 Methodology

### 3.2.1 Research Approach

This research adopts a mixed-methods approach, combining qualitative expert interviews and case studies to explore the transformative role of Generative AI in enabling organizational ambidexterity. A mixed-methods design is appropriate for addressing the study's research questions because it allows for an in-depth understanding of both organizational practices and strategic outcomes (Nair and Prem 2020). Expert interviews provide detailed insights from professionals, enabling the study to uncover nuanced organizational dynamics (Muskat et al. 2012). The case study analysis captures real-world applications and variations in how Generative AI is implemented across industries, offering a comprehensive view of strategic practices. The study seeks to answer the overarching research question: *How does Generative AI enable organizational ambidexterity, and what implications does this have for sustaining competitive advantage in dynamic markets?*

To address this, the study is guided by the following sub-research questions:

**RQ1:** How does Generative AI facilitate the balance between exploration (innovation) and exploitation (efficiency) in organizations?

**RQ2:** To what extent can Generative AI applications provide sustainable competitive advantage, and how does this vary across industries?

**RQ3:** What organizational changes and leadership strategies are required to integrate Generative AI effectively for ambidextrous outcomes?

### 3.2.2 Expert Interviews

Purposeful sampling was used to select six senior experts from diverse industries. This sample size aligns with research suggesting that six to twelve interviews are sufficient for reaching

theoretical saturation when working with elite expertise (Guest et al. 2006). The selected experts represent both strategic leadership positions and direct AI implementation roles, ensuring comprehensive insights into how Generative AI enables organizational ambidexterity across different organizational contexts and scales. The interviews followed a semi-structured format, allowing for flexibility while maintaining consistency across discussions. This approach ensures that key areas are covered while enabling participants to provide detailed, context-rich responses (Sandelowski 2000). Thematic areas derived from the research questions shaped the interviews, exploring topics such as the role of Generative AI in balancing exploration and exploitation, its industry-specific applications for competitive differentiation, and organizational and leadership strategies for effective AI integration. The interviews were recorded or conducted in written format and analyzed using thematic analysis to identify key themes and recurring patterns relevant to the research questions. (Braun and Clarke 2006). Ethical considerations were addressed throughout the research process and informed consent was obtained from all interview participants, ensuring their confidentiality. (Kaiser 2009).

### **3.2.3 Case Studies**

To complement the expert interviews, case studies of Pfizer, GovTech Singapore, JPMorgan Chase, BMW, Siemens, Wayfair and AT&T were conducted. These organizations were chosen for their demonstrated use of Generative AI to enhance both exploration and exploitation, based on the following criteria: evidence of Generative AI adoption that supports ambidexterity, representation of diverse industries to enable cross-sector analysis, and relevance to the research questions.

The case studies were analyzed through a comparative lens, focusing on how Generative AI is used to support the balance between exploration and exploitation, the competitive advantages it provides across industries, and the organizational and leadership strategies necessary for successful integration (Dopson 2003).

### 3.3 Findings and Interpretation

#### 3.3.1 Interview Findings

The expert interviews were conducted with six professionals experienced in implementing AI-driven solutions across various industries. The interviews focused on their experiences with Generative AI implementations, including approaches, outcomes, and challenges encountered. While the detailed transcripts can be found in Appendix 16, the table below provides an overview of the experts, their roles, and their relevance to the study.

Table 3

Expert Interviews on Generative AI

Expert Name	Role	Organization	Key Expertise
<b>Christian Wuerst</b>	Managing Director and Co-CEO	Sovendus GmbH / EBUERO AG	AI in e-commerce, including meeting summaries and decision-making algorithms.
<b>Maximilian D'heur</b>	Consultant, Digital Workplace Transformation	Capgemini Invent	Integration of Generative AI for operational efficiency and innovation across client organizations.
<b>Elias Ruefenacht</b>	Data Scientist	Ypsomed AG	Application of Generative AI for proof-of-concepts in the medical technology sector, enhancing operational efficiency.
<b>Michael Voegele</b>	Chief Digital and Information Officer	Philip Morris International	Large-scale transformation projects with AI-driven tools like transcription and advanced OCR.
<b>Anna Lampl</b>	Founder's Associate	Scavenger AI	AI product development and (DACH region) implementation in startup environment
<b>Manuel Goulão</b>	Founder and CEO	MJ Agency	AI automation solutions and business workflow optimization

Generative AI has become a catalyst for innovation across organizations, enabling the development of novel products and solutions. Christian Wuerst highlighted that at EBUERO AG, AI-driven initiatives such as fully automated telephone agents have opened doors to entirely new customer engagement methods. Similarly, Elias Ruefenacht mentioned that Ypsomed is piloting Retrieval-Augmented Generation (RAG) systems to enhance research capabilities, discussing that these tools allow to retrieve and synthesize information from complex documents, accelerating our exploratory processes. Maximilian D'heur emphasized the role of Generative AI in creating tailored client solutions, noting, "by enabling the creation of AI-driven service offerings that address unique client challenges, generative AI drives

innovation and differentiates our solutions”. Additional perspectives from the startup ecosystem enriched the understanding of Generative AI's role in exploration. Anna Lampl emphasized the centrality of exploration in startup operations, noting how their focus lies in adapting existing models for business applications. This exploration-focused approach was echoed by Manuel Goulão, who described leveraging Generative AI for creating "personalized prototypes and marketing content tailored to client needs," demonstrating innovative applications in service delivery.

On the efficiency front, Generative AI is transforming routine operations. Christian Wuerst explained that at Sovendus, “AI supports decision-making algorithms for voucher placement, refining them based on user context, such as purchase history and location”. Michael Voegelé added that his organization uses tools like Microsoft Copilot and advanced optical character recognition (OCR) to streamline knowledge work and invoice processing, highlighting that, “repetitive and transactional tasks will mostly not exist anymore”. Elias Rufenacht provided an example from Ypsomed, where AI-enhanced algorithms are used for real-time quality control in production, noting that these systems not only improve efficiency but also ensure higher accuracy in operational processes. The startup and agency perspectives provided additional insights into Generative AI's efficiency applications. Anna Lampl described practical applications in their daily operations, including "code generation", "emails", "SEO content", "marketing ideas", "text rephrasing," demonstrating how even exploration-focused startups leverage Generative AI for operational efficiency. Manuel Goulão provided a service provider's perspective, highlighting how Generative AI tools "streamline repetitive tasks like data summarization and process documentation," showing its value in optimizing client service delivery.

Despite its potential, implementing Generative AI poses several challenges. Resistance to change remains a significant barrier, as Maximilian D'heur observed: “Employees often

struggle to adapt to new workflows that include AI tools” and that “scaling these experiments into routine processes requires robust alignment with organizational priorities and overcoming resistance to change”. Similarly, Elias Ruefenacht noted that establishing trust in AI’s capabilities among stakeholders required “isolated demonstrations to stress the technology’s future impact on our business”. Furthermore, ethical and data privacy concerns also persist, with Michael Voegele explained, that a responsible and people-centric approach to Generative AI is essential, especially given uncertainties in legal frameworks. Startup-specific challenges emerged from the interviews. Anna Lampl emphasized the need for testing and manual verification, particularly for product-related applications, noting that “Generative AI has to be checked manually and tested rigorously.” From a service provider perspective, Manuel Goulão identified “the occasional lack of context-specific training data and ensuring user trust in AI outputs” as key challenges, addressing these through “combining AI insights with human oversight to validate and refine results.” To successfully implement Generative AI, the experts emphasized the importance of structured approaches. Christian Wuerst suggested that organizations usually allocate resources strategically, implying that leadership must ensure a balance between exploratory projects and operational efficiency to maximize impact. Similarly, Michael Voegele advocated for governance frameworks, emphasizing a “responsible and people centric approach and Central AI Governance Council”. Additionally, proprietary AI solutions were also highlighted as an important factor. Elias Ruefenacht explained, “we developed a RAG proof-of-concept, which a limited number of employees can use to retrieve information from documents”. The startup perspective offered unique insights into implementation strategies. Anna Lampl emphasized the importance of frameworks for objective control, suggesting that “each employee should exert certain judgment, but frameworks need to be in place.” Manuel Goulão advocated for a balanced approach, proposing

"creating a dedicated task force to oversee the integration of AI tools, ensuring alignment with our mission."

### 3.3.2 Case Study Findings

This section presents seven case studies of organizations implementing Generative AI. Table 4 provides an overview of their specific applications and outcomes, while the full analyses can be found in Appendix 17. Organizations implemented Generative AI for various innovative purposes. For example, AT&T developed digital twins to simulate network behavior, pioneering advancements in network management and enabling real-time optimizations (NVIDIA Corporation 2023; Chaccour et al. 2024). Similarly, Wayfair's "Decorify" tool transformed the online retail experience, providing customers with the ability to visualize their living spaces in photorealistic designs (Tan 2023).

Table 4

Assessed cases on implementation of Generative AI

Organization	Generative AI Applications	Outcomes
AT&T (Telco)	"Ask AT&T" employee tool for HR/technical queries; Digital twins for network simulation; AI-powered customer interactions	30–50% faster software development; Real-time network optimization; Improved customer service efficiency
Wayfair (Retail)	"Decorify" virtual room styling tool; Personalized product recommendations; Demand forecasting models	Enhanced customer engagement; Improved supply chain accuracy; Faster delivery timelines
GovTech Singapore (Public)	MAESTRO for workflow automation and multilingual AI chatbots; LaunchPad for prototyping AI solutions	75% cost improvement in AI workloads; 2,000+ work hours saved monthly; Improved citizen engagement
Pfizer (Healthcare)	VOX for drug discovery; Charlie for compliance automation; Digital twins for manufacturing optimization	Vaccine development reduced to 269 days; Improved clinical trial efficiency; Enhanced manufacturing outputs
BMW AG (Automotive)	In-Console Cloud Assistant for DevOps optimization; Optical AI for supply chain traceability; Quantum-inspired AI for production planning	Improved vehicle production efficiency; Counterfeit prevention; Enhanced customer interaction
Siemens AG (Industrial)	Industrial Copilot for automation workflows; Predictive maintenance with Senseye; AI-powered document processing	Reduced machine downtime; 98% accuracy in document processing; €5M+ ROI from automation
JPMorgan Chase (Finance)	"IndexGPT" for stock index creation; LLM Suite for internal task automation; GANs for fraud detection	Enhanced financial data processing; Up to \$2B projected in AI-related benefits; Strengthened data security

GovTech Singapore facilitated innovation in public services with the MAESTRO platform, which automates multilingual AI-powered chatbots and personalized content creation (AWS

2024a). In healthcare, Pfizer harnessed AI for breakthroughs in personalized medicine, utilizing tools like VOX to streamline drug discovery and genetic research (Fonseca 2023). BMW innovated in vehicle connectivity and supply chain transparency by adopting Optical AI for counterfeit prevention and leveraging quantum-inspired AI to optimize production (Markets Insider 2022; Zapata Computing 2023). Siemens integrated predictive AI into their Senseye platform to push the boundaries of industrial innovation, while JPMorgan Chase explored advanced applications in financial services through proprietary tools like "IndexGPT" for thematic stock index creation (Abrego and Chan 2024; Heitsenrether 2024).

Generative AI has also enabled organizations to optimize existing operations. For instance, AT&T's "Ask AT&T" tool enhanced employee productivity, achieving 30–50% efficiency gains in software development and significantly improving network operations (Weinschenk 2023). Wayfair leveraged AI models to improve supply chain accuracy, reducing delivery times and refining demand forecasts (Kapoor 2023). In the public sector, GovTech Singapore's MAESTRO system reduced AI workload costs by 75%, saving over 2,000 work hours monthly while improving citizen services (Smart Nation 2023). In the healthcare, Pfizer accelerated vaccine development timelines to 269 days and improved clinical trial efficiency through AI-driven analytics (Pfizer 2022). BMW achieved significant operational improvements with cloud-based AI solutions, handling billions of daily requests within their connected vehicle ecosystem (Kohl et al. 2024). Siemens reported €5M in ROI from AI-powered document automation and achieved a 98% accuracy rate in delivery note processing (DeepOpinion 2024). JPMorgan Chase streamlined financial operations and fraud detection, projecting up to \$2 billion in AI-related benefits (Pinto 2024). Despite their successes, these organizations faced notable challenges in adopting Generative AI. AT&T encountered difficulties in synchronizing digital twins with real networks, while Siemens grappled with scalability and workforce skill shortages (Siemens 2024; NVIDIA Corporation 2023). Wayfair needed explainable AI to

ensure stakeholder trust and maintain high-quality outputs for applications like "Decorify" (Sadlgi 2023). GovTech Singapore faced challenges in data quality and governance, requiring robust frameworks for scalable solutions (Lim et al. 2024). Pfizer addressed data integration issues in clinical trials and manufacturing while ensuring compliance with regulatory frameworks (IBM 2023). JPMorgan Chase implemented internal AI systems to mitigate risks related to biased outputs and regulatory uncertainty, highlighting the importance of ethical governance and data security (Morris & Franklin 2024). To overcome these challenges, organizations adopted tailored strategies. GovTech Singapore implemented the Model AI Governance Framework, emphasizing trust and ethical standards (IMDA 2024). Siemens and GovTech leveraged public-private partnerships to enhance scalability, while Pfizer utilized centralized data platforms like the Scientific Data Cloud for secure AI integration (Fonseca 2023). AT&T and JPMorgan Chase focused on employee upskilling and no-code platforms to address workforce gaps (Abrego and Chan 2024; DeepOpinion 2024). Sustainability has also been a priority, with AT&T and Siemens integrating energy-efficient AI models to reduce environmental impacts (Chaccour et al. 2024; Siemens 2023).

### **3.3.3 Interpretation of Findings**

Our analysis of expert interviews and case studies reveals how Generative AI is transforming organizational capabilities across diverse contexts. By examining our findings through the lens of three sub-research questions, we uncover the technology's role in enabling organizational ambidexterity and sustaining competitive advantage in dynamic markets.

*RQ1: How does Generative AI support organizations in balancing exploration (innovation) and exploitation (efficiency)?*

Generative AI emerges as a powerful enabler of simultaneous exploration and exploitation improvement, a capability demonstrated consistently across our research. AT&T's experience

provides a compelling illustration – their Ask AT&T platform achieved immediate efficiency gains of 30-50% in software development while enabling innovative approaches to network management through digital twins. Similarly, Siemens leveraged the technology to both automate document processing, yielding €5M in ROI, and develop breakthrough capabilities in predictive maintenance. Expert insights reinforce these findings. At Sovendus, Christian Wuerst observed how AI tools simultaneously optimize routine operations while enabling new customer engagement approaches. Elias Ruefenacht's experience with RAG systems at Ypsomed further demonstrates this dual capability, as the technology both streamlined existing processes and opened new research possibilities. Even in startup environments, traditionally focused on exploration, Generative AI enables this dual capability. Anna Lampl's experience shows how innovation-focused organizations effectively leverage the technology for both product development and operational efficiency. Manuel Goulão's cross-industry perspective confirms this pattern, noting how Generative AI enables "faster prototyping and testing of innovative ideas" while simultaneously "automating low-value tasks.

Based on this analysis, we can conclude that Generative AI enables organizational ambidexterity through several key mechanisms. The technology facilitates simultaneous process enhancement by improving existing processes while enabling new capabilities. It optimizes resources by automating routine tasks while freeing capacity for innovation. Furthermore, it augments capabilities by enhancing both operational and innovative aspects concurrently.

*RQ2: To what extent do Generative AI applications enable sustainable competitive advantage across industries?*

The impact of Generative AI on competitive advantage varies significantly by industry, with organizations adapting the technology to their specific contexts. In healthcare, where precision and regulatory compliance are paramount, Pfizer's implementation focused on R&D and

process optimization, dramatically reducing vaccine development time from eight years to 269 days. This showcases how industry-specific applications can create substantial competitive advantages. Manufacturing firms like BMW demonstrate a different pattern, successfully combining production optimization with customer experience initiatives. Their use of Optical AI for counterfeit prevention while enhancing customer interactions illustrates how industry context shapes implementation approaches. The retail and public sectors reveal yet another pattern, with Wayfair's Decorify platform and GovTech Singapore's MAESTRO system demonstrating successful dual-purpose implementations that combine internal efficiency with external innovation. The competitive dynamics shift notably between established companies and startups. While Anna Lampl's startup experience shows Generative AI as fundamental to core product offerings, Manuel Goulão's service-provider perspective emphasizes differentiation through "proprietary AI solutions that reflect unique market positioning."

Our analysis reveals distinct patterns in how competitive advantage manifests across different contexts. The creation of value varies significantly by industry, with each sector leveraging the technology according to its specific requirements and opportunities. The impact of organizational context proves crucial, with notable differences between enterprises, startups, and service providers. Sustainability of these advantages depends heavily on continuous adaptation and organizational capabilities.

*RQ3: What organizational changes and leadership strategies are required to integrate Generative AI effectively?*

Successful integration of Generative AI demands comprehensive organizational transformation across multiple dimensions. Organizational readiness requires thorough workforce development, as demonstrated by AT&T's implementation of no-code platforms which effectively bridged skill gaps and empowered employees. Smaller organizations face unique challenges, with Anna Lampl emphasizing the importance of "good prioritization skills," while

Manuel Goulão advocates for dedicated task forces that maintain organizational alignment. Robust governance frameworks prove essential for effective integration. GovTech Singapore's experience highlights the critical nature of data governance, while Pfizer's Scientific Data Cloud initiative demonstrates how centralized data management enables secure AI integration. Michael Voegelé's insights underscore the importance of centralized oversight for ethical AI implementation, particularly in high-risk applications where human judgment remains crucial. Strategic leadership must focus on cross-departmental collaboration and resource allocation. Siemens achieved this through public-private partnerships that enhanced scalability while maintaining alignment between exploratory and efficiency-focused initiatives. This approach ensures Generative AI integration supports broader organizational goals rather than operating in isolation. From this analysis, we can conclude that effective integration requires a comprehensive approach spanning multiple organizational dimensions. Success depends on thorough workforce development and appropriate structural support, underpinned by clear data governance and ethical oversight frameworks. Furthermore, organizations must ensure strong cross-departmental collaboration and strategic resource allocation to fully realize the technology's potential.

*Main Research Question: How does Generative AI enable organizational ambidexterity, and what implications does this have for sustaining competitive advantage in dynamic markets?*

Synthesizing our findings, Generative AI emerges as a transformative force for organizational ambidexterity through its unique ability to enable both exploration and exploitation simultaneously. Industries demonstrate distinct patterns of adoption – healthcare and automotive sectors benefit from precision and scalability, while retail shows adaptability in customer engagement. These varying patterns suggest that while Generative AI provides powerful tools for ambidexterity, successful implementation depends heavily on organizational

context and industry requirements. The implications for competitive advantage are profound but nuanced. Organizations that effectively integrate Generative AI achieve both operational gains and innovation capabilities, as evidenced by Pfizer, BMW, and GovTech Singapore. However, sustainable advantage requires continuous adaptation to technological developments, strong governance frameworks, and thoughtful balance between human oversight and AI automation. Our comprehensive analysis reveals that Generative AI's role in enabling ambidexterity operates through a technological foundation that inherently supports both exploration and exploitation. The effectiveness of this capability depends heavily on industry requirements, organizational readiness, and implementation approach. Furthermore, achieving sustainable competitive advantage through GenAI-enabled ambidexterity requires organizations to maintain continuous adaptation, establish strong governance, and implement balanced approaches to human-AI collaboration. Our research concludes that while Generative AI provides powerful tools for achieving organizational ambidexterity, sustainable competitive advantage depends on organizational factors including leadership approach, industry context, and implementation strategy. Success requires more than technological adoption – it demands thoughtful integration aligned with organizational capabilities and market demands. In dynamic markets, this alignment becomes particularly crucial as organizations must constantly balance the drive for innovation with the need for operational excellence.

### **3.4 Discussion**

This research reveals transformations in how organizations achieve ambidexterity through Generative AI, challenging several core theoretical assumptions. Traditional theory, particularly Jansen et al.'s (2006) argument that exploitation requires centralized, formalized structures, is partially questioned by the findings of this research. For instance, Siemens achieved remarkable efficiency gains (98% accuracy and €5M+ ROI in document processing) without rigid formalization. This demonstrates how Generative AI's ability to handle

unstructured data and variable processes fundamentally decouples exploitation from its traditional organizational prerequisites. Additionally, the study also uncovers distinct patterns in how different industries leverage Generative AI for ambidextrous purposes, extending beyond Jansen et al.'s (2006) work on environmental dynamism. Regulated sectors like healthcare and finance prioritize precision and compliance, as seen in Pfizer and JPMorgan Chase's implementations. In contrast, consumer-facing industries like retail and telecommunications emphasize customer experience innovation, exemplified by Wayfair's Decorify platform and AT&T's service enhancements. Manufacturing firms like BMW and Siemens demonstrate a third pattern, successfully balancing operational efficiency with innovation. Perhaps most significantly, the findings challenge March's (1991) fundamental assumption about inherent tensions between exploration and exploitation. Where March saw unavoidable resource trade-offs, Generative AI creates new possibilities for simultaneous achievement. AT&T's implementation demonstrates this transformed reality, delivering both immediate efficiency gains in software development and enabling innovative capabilities through digital twins. Similarly, Pfizer's dramatic acceleration of vaccine development from 8 years to 269 days shows how Generative AI can enhance both precision and operational efficiency simultaneously. The findings of this research also extend Teece et al.'s (1997) dynamic capabilities framework by demonstrating how Generative AI transforms organizational abilities. Traditional market scanning evolves into predictive sensing, as shown by Pfizer's VOX system. Opportunity capture shifts from sequential to parallel processes, evidenced by BMW's simultaneous optimization of supply chains and customer experience. This bridges the gap between operational optimization (Makridakis 2017) and innovation capabilities (Chui et al. 2018) that previous literature treated separately. The study also reveals how Generative AI enables ambidexterity across organizational scales, challenging Marín-Idárraga's (2022) assumptions about size constraints. Large organizations maintain fluid

structural boundaries rather than rigid separations, while even resource-constrained startups achieve contextual ambidexterity through Generative AI implementation. This democratization of ambidextrous capabilities represents a departure from traditional theory (Gibson and Birkinshaw 2004).

### **3.4.1 Practical Implications**

This research offers significant practical insights for organizations seeking to leverage Generative AI for ambidexterity. Our findings reveal four critical areas that managers must address for successful implementation.

First, strategic implementation requires a unified approach to AI platforms that can simultaneously serve operational and innovative purposes. Siemens exemplifies this approach, achieving €5M ROI through AI-driven maintenance while fostering innovation initiatives. Organizations must tailor their AI applications to industry-specific needs - healthcare organizations should prioritize research acceleration and clinical process optimization, while manufacturers need to focus on predictive maintenance and production innovation. The second critical area concerns governance and leadership frameworks. AT&T's success demonstrates the effectiveness of centralized oversight for AI implementation while maintaining departmental autonomy in application. Organizations should establish comprehensive risk management frameworks, particularly for data security and ethical considerations, following GovTech Singapore's governance model. This often requires creating new organizational roles, such as AI Strategy Officers, to ensure alignment between AI initiatives and strategic goals. Strategic partnerships emerge as the third crucial element for successful implementation. Our findings show how organizations can leverage different types of alliances based on specific needs - Siemens' collaboration with Google Cloud focused on scalability, while AT&T's partnership with OpenAI targeted technical expertise. However, these partnerships must align with industry-specific requirements rather than pursuing general AI capabilities. Organizations

should also ensure robust knowledge transfer mechanisms to build internal capabilities. Finally, organizational readiness proves fundamental to success. This includes implementing targeted workforce development programs that address both technical skills and AI literacy. Organizations should create hybrid structures that combine AI-driven efficiency tools with innovation-focused teams. Equally important is developing metrics that can effectively measure both efficiency gains and innovation outcomes.

### **3.4.2 Final Remarks**

This study addresses the research question: "How does Generative AI enable organizational ambidexterity, and what implications does this balance have for sustaining competitive advantage in dynamic markets?" Generative AI serves as a catalyst for organizational ambidexterity through its dual capabilities: driving efficiency via data processing and fostering innovation through novel solution generation. These features allow organizations to automate routine tasks while uncovering new opportunities, effectively bridging the gap between exploitation and exploration. For example, companies like Pfizer and Siemens demonstrate how Generative AI integrates efficiency-driven and innovation-focused strategies, transforming the traditional trade-off into a synergistic relationship. Its adaptive learning capabilities, including real-time learning, pattern recognition, and creative problem-solving, make it uniquely suited for ambidextrous strategies. Future research could explore how organizations can maximize Generative AI's potential to sustain long-term ambidextrous capabilities.

## **4 Conclusion**

### **4.1 Summary of Research**

This thesis investigated the concept of ambidexterity as a critical element in corporate strategy, focusing on how organizations balance exploration and exploitation to sustain adaptability and competitive advantage in dynamic markets. To provide a comprehensive understanding, the

research was divided into three distinct but interconnected perspectives. Our two cases analyze companies from opposite extremes of the ambidexterity continuum: While Amazon continuously adapted as it grew from a startup into a global leader, exploiting and exploring along the way with fundamental impact on its scope of business, Philips's case depicts the other extreme. An established global conglomerate that had increasingly faced pressure in its core businesses, with decreasing performance in almost all crucial financial KPIs. Its radical strategic transformation complied with many elements of ambidexterity literature and enabled the company to pave its way for future growth – so far, with only limited returns. Both cases are listed as part of HBR's Top 20 Transformations, reflecting the years 2010 – 2019. We revealed significantly different execution and outcomes of both transformations – especially regarding cumulative stock return. This highlights the need for a multi-level approach to ambidexterity, as the baseline might vary between companies. Besides inter- and intra-industry considerations, we argue that growth trajectory, restructuring or transformation efforts, and sector-specific influences might impact stock performance – even though organizations are deemed to operate ambidextrously, according to literature. The growth trajectory at the moment of initiating an ambidextrous transformation or action may have a significant impact on how outcomes are perceived by markets. Furthermore, as there is a fundamental difference in how markets value companies based on their operating sectors, it may take time for the results of ambidextrous strategies to be visible in stock returns.

Complementing these case studies, we explored the role of Generative Artificial Intelligence as an enabler of ambidexterity across industries, offering insights into how this emerging technology reshapes organizations, processes, and leadership strategies. Together, these findings provide a holistic perspective on ambidexterity's importance in corporate strategy and insights for organizations navigating complex and rapidly changing environments.

To synthesize findings, we apply the "Corporate Strategy Triangle" framework that examines three critical dimensions: Resources, Organization, and Scope of Business. It structures the analysis of how firms manage their tangible and intangible assets, define the scope of their operations, and design systems to align resources with strategic goals. Focusing on these dimensions ensures coherence between resource allocation, business scope, and organizational processes. By combining these dimensions with organizational ambidexterity concepts, we provide a practical lens through which organizations can manage complexity in strategy development.

## **4.2 Resources**

Our practical evidence suggests that resource reallocation can be driven in a sequential or dynamic approach, yielding different short—and long-term performance prospects as Philips and Amazon's cumulative returns vary significantly. In comparison, we can assess significant differences in ambidextrous answers to fundamental questions of resource allocation aiming to maximize returns from a corporate strategy perspective.

Philips redirected significant financial and human resources towards exploring new growth areas within health technology. This was enabled by divestments of former core businesses, such as lighting and consumer electronics, providing the capital to strengthen its existing health technology operations as well as operational focus that had long been split between units within the conglomerate. Licensing agreements showcased efficient utilization of existing assets to support realignment. Subsequently, resources were reallocated primarily through acquisitions. With its innovation fund, it promoted explorative initiatives for organic growth. While it initiated resource reallocation in its strategic transformation primarily through its initial downsizing, striving for a balance between the exploiting former core businesses and exploring health technology, Amazon continuously reallocated resources for optimized growth. Financial

and human resources were mainly reallocated internally with exploitative businesses' funding exploration, complementing existing businesses.

To reallocate resources, we argue that divestments may be an appropriate way to enhance long-term performance (especially in a sequential setting) through subsequent reinvestment of capital to gain a competitive advantage in new business areas. If its cumulative returns increase, Philips can be an example of the "ultima ratio" exploitation strategy to enable its exploration. However, immediate trade-offs in operational efficiency and short-term financial performance reflect inherent challenges in managing a resource-intensive strategy. A more promising approach seems to be a "flywheel" model, continuously building primarily on organic resources inherent to the firm when developing corporate strategies in dynamic capabilities.

Building on the contrasting resource allocation strategies of Philips and Amazon, Generative AI introduces a transformative mechanism to reshape how organizations approach resource management. Generative AI enhances strategic approaches by offering a new way to align resources with strategic goals, supporting short-term operational stability and long-term growth. It drives efficiency by automating repetitive tasks and streamlining workflows, allowing businesses to optimize existing resources. Unlike divestment-driven reallocation, Generative AI offers an internal mechanism to balance exploitation and exploration without significant trade-offs, allowing companies to maintain core operational stability while expanding into new domains. For dynamic resource allocation, Generative AI aligns closely with the flywheel model, where exploitative activities fund continuous exploration. By embedding it in processes, businesses can create synergies that strengthen both short-term exploitation and long-term exploratory growth. The iterative nature of AI enables companies to refine resource allocation dynamically as market conditions evolve while leveraging internal resources without over-relying on acquisitions or divestments, promoting a balanced development of exploitative and exploratory units. Furthermore, it enables real-time decision-

making, fostering strategic adaptability. Through AI-driven forecasting, organizations can accurately predict resource requirements and dynamically adjust allocations to match evolving market conditions. In regulated or resource-intensive industries, Generative AI streamlines compliance and operational planning, reducing costs while facilitating faster entry into exploratory markets. We argue that Generative AI requires an adaptive framework that harmonizes resource exploitation with strategic exploratory investments. Anticipated advancements promise greater precision and flexibility, empowering businesses to achieve ambidextrous outcomes with minimized risk. Generative AI equips organizations to sustain competitive advantage and drive dynamic resource allocation in a rapidly changing business landscape.

### **4.3 Organization**

The organizational design must support the efficient management of resources and execution of strategy across the defined scope of business. For our practical evidence analysis, we find that a mix of contextual and structural ambidexterity is a prominent way to achieve ambidexterity – despite business-specific differences in execution and performance outcomes.

Philips redesigned its operating model, fostering global standardization while maintaining local adaptability. This dual approach allowed teams to focus on market-specific innovations and customer needs, operating independently but adhering to global operating standards, ensuring efficiency. The PBS provided a unified framework for balancing innovation and efficient operational execution by blending contextual ambidexterity within teams and structural ambidexterity across its value chain. Although this approach creates agility and integration, the complexity of “matrix” setups might impede efforts to increase short-term operational efficiency. Amazon developed a similar approach with its two-pizza teams. Empowered to make their own decisions, teams operate independently within the various business units, each being led by an executive officer directly reporting to the CEO. This structure helps foster

global alignment at the top executive level and promotes behavioral integration, enhancing ambidexterity at all levels structurally, contextually, and sequentially.

We find a set of global operating standards key – optimally as a business system integrating value chain, hierarchical structures, and processual ways of working – to ensure multi-dimensional organizational alignment. It appears beneficial for a business system to embody a combination of different ambidexterity concepts deployed across all operative and hierarchical levels. High-performing organizational structures seem to leverage both global and exploitative benefits as well as provide flexibility for explorative initiatives on a local level. Hence, we argue that the global-local approach is an appropriate way to solve the explore-exploit paradox in the organizational dimension of corporate strategy development. This characterizes both organizations and seems appropriate in pursuit of short- and long-term performance, though we acknowledge the complexity of such setups and – in the case of Philips – unclear evidence of performance impacts.

Generative AI adds a new dimension to managing organizational structures as it offers a powerful tool to integrate contextual and structural ambidexterity with greater precision and adaptability, creating integrated yet fluent structures. It enhances contextual ambidexterity by equipping teams with AI-driven tools for autonomous decision-making. These systems dynamically allocate resources and prioritize tasks, enabling teams to adapt to market or project-specific needs without compromising broader strategic alignment. At the structural level, Generative AI strengthens organizational coherence by integrating global processes with local flexibility. Predictive analytics and standardized workflows enable consistency across the value chain and teams. Its dual capability reduces the complexity inherent in global-local models, improving coordination while maintaining adaptability. Leadership integration is another critical area where Generative AI drives impact. Real-time insights into performance metrics and resource utilization enable leaders to align decentralized operations with strategic

objectives. AI-powered analytics foster behavioral integration, ensuring coherence in decision-making across the organization. These tools also enhance transparency and accountability by providing data-driven support for performance management. Generative AI holds significant potential to redefine organizational design. Future advancements could enable adaptive organizational ecosystems where workflows, processes, and team structures adjust dynamically to changing market conditions. AI-driven tools may further facilitate seamless integration of exploration and exploitation, creating collaborative ecosystems across industries and unlocking new synergies. In conclusion, Generative AI enhances organizational design by enabling ambidextrous frameworks that balance global coherence with local flexibility. By empowering teams, streamlining processes, and aligning leadership, Generative AI addresses the explore-exploit paradox in new ways. As advancements continue, its role as a cornerstone of adaptable organizational development will be pivotal to creating, e.g., fluent network organizations.

#### **4.4 Scope of Business**

Defining the boundaries of the corporation in terms of markets, customers, and products or services, we find differences in trajectories corporate strategy sets take to reshape focus over time. While our practical evidence shows that portfolios fundamentally changed in analyzed periods, there are significant differences in approaches and outcomes. While we deem their strategic nature to be ambidextrous, deployment of acquisitions or organic growth and chosen business models mark an important point of differentiation.

The transition from a large conglomerate to a focused player in health technology marked a fundamental change in Philips' scope of business and embodied significant traits of sequential ambidexterity. Moving from a product- to a solutions-oriented business model was exploratory as it marked a departure from transactional sales. The delay in translating exploratory gains into financial performance underscores the temporal complexities of balancing scope redefinition with operational sustainability. The broad nature of its acquired businesses and integration

challenges played an essential role in this shortfall. Therefore, we argue that rapid portfolio changes through untargeted M&A in ambidextrous strategies do not hold short-term performance potentials but seem likely to negatively impact cumulative stock returns – yet this needs to be assessed by further studies. Conversely to Philips, Amazon continually broadened its scope of business. It now offers platforms for various digital services and infrastructure, (digital) products and logistics operations. By deploying structural separation focused on either exploitation of established services or exploration focused on developing and venturing new products or services, it consistently grew to become more diversified in its offerings. Supported by acquisitions, partnerships, and joint ventures along the way, it primarily broadened its scope through in-house innovation. Hence, we argue that managers must develop corporate strategies incorporating organic and inorganic ways to exploit and explore portfolio growth. Additionally, acquisitions – especially in low-synergy environments – should remain close to the core business and only gradually expand broader to limit integration challenges and increase short-term performance prospects. A series of related acquisitions that literature would deem exploitative could globally result in an exploratory gain over a more extended period as the portfolio gradually broadens. When rapidly acquiring many businesses, it could be helpful to build separate ecosystems under the structural ambidexterity thought – holding a portfolio of unrelated ecosystems (businesses) based on center businesses with surrounding satellites that hold synergies within their ecosystem but are not reliant on widespread synergies throughout the portfolio, enhancing integrability and short-term exploitation potential.

We observe that Generative AI introduces a new perspective on how businesses redefine their scope. While traditional corporate strategies relied on portfolio divestments, acquisitions, and organic innovation to reshape focus, Generative AI increases strategic adaptability and precision. By supporting ambidextrous strategies that balance exploration and exploitation, it provides a dynamic toolkit for aligning strategic goals with evolving market demands. It

enhances exploration by identifying and unlocking new market opportunities through advanced data analysis and predictive capabilities. It facilitates tailored solutions and new value-creation models, allowing businesses to penetrate untapped markets and diversify offerings. Simultaneously, Generative AI strengthens exploitation by optimizing operations and sustaining core business performance. This dual capability enables companies to simultaneously innovate and consolidate, reflecting the principles of strategic ambidexterity. However, the integration of Generative AI into corporate strategy brings its own challenges. Rapid adoption without a precise alignment to core capabilities risks diminishing short-term performance, particularly in industries with fragmented value chains.

Strategically, managers must consider how Generative AI can influence their scope decisions. In cases of diversification, unraveling synergies within specific domains rather than relying on widespread integration across unrelated acquisitions can reduce complexity and enhance both short- and long-term outcomes. Generative AI reshapes the scope of business by fostering adaptability and innovation. Its ability to support “proactive” ambidextrous strategies allows firms to adjust their portfolios dynamically. As firms increasingly integrate Generative AI into their strategic frameworks, they position themselves to capitalize on new opportunities and create competitive advantage.

## **5 Limitations**

Our study aimed to take innovative perspectives on the connection of corporate strategy and ambidexterity in practice, its impact on stock performance and the influence of Generative AI in the context of solving the resource conflict. Though we were able to draw both differences and similarities as well as development opportunities and theoretical insights from our practical evidence, there are noticeable limitations to this study. The methodological construction of this study corresponds with other works in ambidexterity literature by analyzing cases but differs in the amount analyzed as well as broad industry scope. While other studies focus on more cases

from one industry, we chose to analyze only two cases that show an opposing growth trajectory and only operate broadly in the “technology sector”. Another critical methodological aspect of this study is the choice for cumulative stock return as a performance proxy. While it eliminated the bias for outcomes of revenue-based approaches, especially in the context of frequent acquisitions that enhance revenue inorganically, we relied on fair pricing of our analyzed securities by the market. This poses a challenge as it is unclear on how ambidextrous strategies are priced when there are no significant short-term gains visible as well as industry specific differences or timelines. Furthermore, analyzing open-source information, we lack deep organizational insights of C-Level members that other researchers might rely on. This results in our qualitative analysis being result of subjective interpretation. Regarding AI, determining whether the analyzed applications rely solely on Generative AI is difficult, as many systems integrate multiple technologies – a common challenge in studying emerging tech. While findings offer insights into Generative AI’s influence on exploration, exploitation and related concepts, additional case studies across diverse industries are needed for a more comprehensive understanding. As Generative AI is still in its early adoption stages and not widely implemented at scale, its full impact on corporate strategy and ambidexterity remains uncertain and subject to future evolution. The reliance on publicly available data for case studies may limit the accuracy of reported implications, as real-world outcomes could differ. Moreover, the focus on specific industries, such as healthcare and manufacturing, may restrict the generalizability of findings to other sectors. The qualitative nature of expert interviews introduces potential biases shaped by participants’ subjective experiences. Lastly, this study does not quantitatively assess the economic or performance outcomes of Generative AI adoption, leaving room for future empirical validation. Despite these limitations, the research provides a strong foundation for understanding how Generative AI supports ambidexterity and highlights key areas for further exploration.

## 6 Outlook

With our study we provided a new perspective on strategic ambidexterity as well as its practical implementation and extended the knowledge base of ambidexterity's influence on performance. Using cumulative stock returns as a performance proxy opens paths for future research as to how ambidextrous corporate strategies translate into increased shareholder value. We argue that an intra-industry analysis with larger set of companies analyzed, paired with in-depth financial statement analysis could lead to significant insights on which ambidextrous strategies perform best. This would provide insights on timelines in specific industries for ambidextrous strategies to materialize. Additionally, research may expand on divestments as an ambidextrous tool as M&A is already prominent in literature. Another path is to analyze transformation periods based on *ex ante* growth trajectories: How well – if at all – do ambidextrous strategies translate into tangible performance improvements when there are differences in “starting position”, which strategies are successful and what are implications for companies striving for turnarounds? There are plenty fields of research that require more research – especially as the new digital technologies is prone to reshape abilities to strategically solve the explore-exploit challenge. Therefore, future research should explore how Generative AI supports ambidexterity in settings where unique challenges and opportunities may arise – expanding to industries beyond the high-tech contexts examined. Quantitative validation through longitudinal studies is essential to assess the economic and organizational impacts of Generative AI adoption. Research could examine how AI reshapes employee roles and dynamics in pursuing efficiency and innovation. Finally, emerging technologies like quantum AI or advanced language models present opportunities to study their effects on ambidextrous strategies and organizational structures. By addressing these areas, future research can enrich understanding and expand practical and theoretical implications of Generative AI in fostering ambidexterity across industries.

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## Appendix

### Appendix 1– Expert Interviews

#### *Interview Design*

<b>Section</b>	<b>Questions</b>
1. Background of the Expert	Could you please briefly describe your current/most recent role, the department you work in, your overall experience in the industry, and your involvement with Generative AI initiatives?
2. Current Situation and Challenges	<p>Could you please describe the current state of your organization? In which areas does your company exploit and in which does it explore?</p> <p>Which approach (Structural, Contextual, or Sequential) to balancing these areas do you find most applicable to your organization, and what are the primary challenges in achieving this balance? (see blue box on page one)</p>
3. Vision for the Future	What does the ideal future look like for your organization in balancing exploration (innovation) and exploitation (efficiency), and what key improvements are needed to achieve this vision?
4. Generative AI in Supporting Ambidexterity	<p>(How) does your organization or department currently use Generative AI to support both innovation and efficiency? Could you provide specific examples?</p> <p>What challenges have you encountered in using Generative AI for both exploration and exploitation, and how have these been managed?</p>
5. Expected Impact of Generative AI on Adaptability and Competitive Advantage	Do you see Generative AI contributing to your organization's competitive advantage in the future? If so, in which ways do you imagine it could do so?
6. Strategic Considerations for Generative AI and Ambidexterity	<p>What strategic implications does Generative AI have for achieving ambidexterity, and how should leaders approach its integration to balance innovation and efficiency effectively?</p> <p>In maintaining the balance of innovation and efficiency, what role do you believe human judgment will play in integrating Generative AI, and who within the organization should be responsible for exercising this judgment (e.g., leadership board, a specific task force, or all employees)?</p> <p>How do you foresee Generative AI reshaping or evolving your organization's structure, including communication flows,</p>

- departmental organization, and strategic alignment, in the next 5–10 years?
7. Future Industry Standards and Differentiation Do you think Generative AI will become a standard across the industry?
- How can organizations use Generative AI to create a unique market position, and what role might proprietary AI solutions or human creativity play in maintaining competitive differentiation?
8. Concluding Question Do you have any thoughts you would like to share regarding this interview?

## **Appendix 2 – Interview Transcripts**

### **Interview 1 – Anna Lampl**

#### **1. Background of the Expert**

*Could you please briefly describe your current/most recent role, the department you work in, your overall experience in the industry, and your involvement with Generative AI initiatives?*

I am a founder's associate in an AI startup in the DACH region and have worked with AI and tech for the past three years. As an AI startup we are always looking out for the newest models on the market and are following AI trends closely.

#### **2. Current Situation and Challenges**

*Could you please describe the current state of your organization? In which areas does your company exploit and in which does it explore?*

As a startup we are mainly exploring, as we are trying to use the existing models to make them behave in a way that is easily usable by businesses.

*Which approach (Structural, Contextual, or Sequential) to balancing these areas do you find most applicable to your organization, and what are the primary challenges in achieving this balance?*

*(see blue box on page one)*

As a startup with a limited team size, we are mainly working in the contextual aspect, trying to balance these aspects within our every day tasks. This is sometimes challenging, as it requires good prioritization skills to know when to work on which part.

### **3. Vision for the Future**

*What does the ideal future look like for your organization in balancing exploration (innovation) and exploitation (efficiency), and what key improvements are needed to achieve this vision?*

Our vision thrives mainly through innovation, as we are a new start up and it is essential to us to keep being innovative to keep our competitive edge. But on the other hand, with growth more efficiency will be necessary, as the organisation grows and more people join the team.

### **4. Generative AI in Supporting Ambidexterity**

*(How) does your organization or department currently use Generative AI to support both innovation and efficiency? Could you provide specific examples?*

We use Generative AI in our product and for code generation. Further in our business department, we use it to generate emails, SEO content, marketing ideas, rephrase text.

*What **challenges** have you encountered in using Generative AI for both exploration and exploitation, and how have these been managed?*

Generative AI has to be checked manually and tested rigorously, at least within our product. In our daily usage, we face less challenges as it is used for non-sensitive topics.

### **5. Expected Impact of Generative AI on Adaptability and Competitive Advantage**

*Do you see Generative AI contributing to your organization's competitive advantage in the future? If so, in which ways do you imagine it could do so?*

Yes, Generative AI's further development is essential for our competitive advantage as it is part of our core product and business.

## 6. Strategic Considerations for Generative AI and Ambidexterity

*What **strategic implications** does Generative AI have for achieving ambidexterity, and how should **leaders approach** its integration to balance innovation and efficiency effectively?*

I think it might save time for efficiencies by being able to automate or semi-automate elements of daily business which provides more time for innovative thought processes.

*In maintaining the balance of innovation and efficiency, what role do you believe **human judgment** will play in integrating Generative AI, and who within the organization should be **responsible** for exercising this judgment (e.g., leadership board, a specific task force, or all employees)?*

Depending on the tool used and the company it's used in, human judgment will be imperative for the integration of AI, especially in high risk companies or tools. In the end, probably each employee should exert certain judgment but frameworks need to be in place for objective control.

*How do you foresee Generative AI reshaping or evolving your organization's **structure**, including communication flows, departmental organization, and strategic alignment, in the next 5–10 years?*

As an AI startup that is quite difficult to answer, as Generative AI will reshape our business entirely in the next few years and ideally will be significant in making us the next unicorn.

## 7. Future Industry Standards and Differentiation

*Do you think Generative AI will become a standard across the industry?*

Yes, 100%. This is already visible in the industry, as most companies are wanting to introduce Ai in their company. Further, the AI Act is already coming into place forming certain standards in the EU especially.

*How can organizations use Generative AI to create a unique market position, and what role might proprietary AI solutions or human creativity play in maintaining competitive differentiation?*

Make data-driven decisions that are better than competitors, recognize new opportunities faster, increase efficiencies and therefore lower costs, climate change impacts by AI automation

## **8. Concluding Question**

*Do you have any thoughts you would like to share regarding this interview?*

### **Interview 2 – Christian Wuerst**

#### **1. Background of the Expert**

*Could you please briefly describe your current/most recent role, the department you work in, your overall experience in the industry, and your involvement with Generative AI initiatives?*

Christian Würth is the Managing Director and Co-CEO of Sovendus, an online marketing voucher network with 50 employees across Europe. Additionally, he serves as a board member at e AG, which operates a remote secretarial service.

Christian has over 20 years of experience in sales and marketing, with a significant focus on e-commerce.

At EBUERO AG, Generative AI is used to create meeting summaries during calls, reducing post-call processing time and improving cost efficiency. At Sovendus, AI supports decision-making algorithms for voucher placement, refining them based on user context, such as purchase history and location.

#### **2. Current Situation and Challenges**

*Could you please describe the current state of your organization? In which areas does your company exploit and in which does it explore?*

At EBUERO AG, exploration involves developing fully automated, AI-driven telephone systems. Exploitation focuses on refining existing products, such as a secretarial service app, supported by a product management team and developers.

At Sovendus, two-thirds of resources are allocated to exploitation, optimizing current models like voucher distribution and customer dashboards, while one-third is used for exploratory initiatives, such as AI-enhanced email marketing.

*Which approach (Structural, Contextual, or Sequential) to balancing these areas do you find most applicable to your organization, and what are the primary challenges in achieving this balance? (see blue box on page one)*

EBUERO AG: Primarily follows structural ambidexterity, with a dedicated team working exclusively on exploratory tasks, separate from exploitation-focused teams.

Sovendus: Operates project-dependent ambidexterity, where exploration and exploitation activities vary based on project needs.

Challenges in Achieving Balance:

Exploitation offers predictable outcomes and immediate returns, while exploration involves higher risk and uncertainty, often with lower success probabilities.

### **3. Vision for the Future**

*What does the ideal future look like for your organization in balancing exploration (innovation) and exploitation (efficiency), and what key improvements are needed to achieve this vision?*

Christian believes that while Generative AI can streamline certain processes, it is unlikely to significantly alter the balance between exploration and exploitation. Existing economic configurations, where exploitation delivers predictable payoffs, will remain dominant. However, AI may reduce the resource intensity required for development, potentially increasing exploratory activities.

### **4. Generative AI in Supporting Ambidexterity**

*(How) does your organization or department currently use Generative AI to support both innovation and efficiency? Could you provide specific examples?*

- Exploration: AI-driven initiatives at EBUERO AG include experimenting with fully automated telephone agents.
- Exploitation: At Sovendus, AI supports voucher optimization algorithms, improving efficiency and predictive accuracy.

*What **challenges** have you encountered in using Generative AI for both exploration and exploitation, and how have these been managed?*

Christian noted that technical challenges are handled by colleagues in product management and development. His perspective highlights the necessity of human oversight and decision-making to ensure successful implementation and management of AI-driven initiatives.

### **5. Expected Impact of Generative AI on Adaptability and Competitive Advantage**

*Do you see Generative AI contributing to your organization's competitive advantage in the future? If so, in which ways do you imagine it could do so?*

Christian anticipates that AI will enable companies to improve efficiency and explore new business models. However, the timeline for achieving significant advancements, such as fully autonomous systems, remains uncertain and industry-specific.

### **6. Strategic Considerations for Generative AI and Ambidexterity**

*What **strategic implications** does Generative AI have for achieving ambidexterity, and how should **leaders approach** its integration to balance innovation and efficiency effectively?*

Organizations must balance current operations with future opportunities. Leadership should foster teams dedicated to exploratory projects while ensuring effective integration of AI into existing workflows.

*In maintaining the balance of innovation and efficiency, what role do you believe **human judgment** will play in integrating Generative AI, and who within the organization should be **responsible** for exercising this judgment (e.g., leadership board, a specific task force, or all employees)?*

Christian emphasizes the enduring importance of human creativity and managerial oversight.

Managers must understand AI's capabilities and allocate resources effectively.

*How do you foresee Generative AI reshaping or evolving your organization's **structure**, including communication flows, departmental organization, and strategic alignment, in the next 5–10 years?*

Christian predicts the emergence of specialized teams dedicated to exploratory AI projects, complementing existing structures focused on exploitation.

## **7. Future Industry Standards and Differentiation**

*Do you think Generative AI will become a standard across the industry?*

Christian believes that Generative AI tools will become a standard across industries, with every organization leveraging them to enhance efficiency and productivity.

*How can organizations use Generative AI to create a unique market position, and what role might proprietary AI solutions or human creativity play in maintaining competitive differentiation?*

The integration of proprietary AI solutions and human creativity will remain crucial for creating unique market positions.

## **8. Concluding Question**

*Do you have any thoughts you would like to share regarding this interview?*

Christian underlined the importance of aligning AI initiatives with organizational goals. He believes that while AI will significantly impact various industries, human decision-making and creativity will continue to play a central role in navigating these advancements.

## **Interview 3 – Elias Rufenacht**

### **1. Background of the Expert**

*Could you please briefly describe your current/most recent role, the department you work in, your overall experience in the industry, and your involvement with Generative AI initiatives?*

I work for Ypsomed Selfcare Solutions AG, a mid-sized family-run medical technology company dedicated to simplifying self-care treatment. I'm a data scientist in the information technology department, where I work on integrating data-driven innovations (including AI) into business operations. I'm actively participating in and leading multiple data-oriented proof-of-concepts and product developments, including Generative AI. Previously, I developed AI algorithms for neuro-radio-oncology treatments (pre- and post-op tumor and metastasis, as well as OAR segmentation algorithms) for five years, considered Generative AI nowadays.

## **2. Current Situation and Challenges**

*Could you please describe the current state of your organization? In which areas does your company exploit and in which does it explore?*

From the product portfolio perspective, Ypsomed is active in exploration and exploitation. Ypsomed offers a hybrid closed-loop algorithm for the YpsoPump insulin pump (exploitation) while developing novel product offerings based on Generative AI methods (exploration). However, the distinction between control theory, AI, and Generative AI in our business seems somewhat blurred from a scientific perspective. Most algorithms can also be considered advanced control algorithms that rely on forecasting models for upcoming drug demand.

From the operational perspective (internal activities), Ypsomed focuses on exploration, and some exploitation is expected in the upcoming reporting periods. The current Generative AI exploration consists of RAGs for various applications (e.g., chat with your documents, document summarization, document improvement, and information skeleton generation). Apart from Generative AI, Ypsomed is exploring AI-based solutions to improve production effectiveness and efficiency (exploitation), including real-time quality control.

*Which approach (Structural, Contextual, or Sequential) to balancing these areas do you find most applicable to your organization, and what are the primary challenges in achieving this balance?  
(see blue box on page one)*

Based on our organizational model (Viable System Model), the company size, and the available resources, contextual ambidexterity is the best fit for Ypsomed regarding Generative AI activities. Nevertheless, increasing interest in Generative AI-based solutions and the additional allocation of resources may require future adaptation.

From my perspective, contextual ambidexterity is the best fit for small teams with employees passionate about AI. Furthermore, it is a good choice for working with agile methods. However, challenges still need to be addressed regarding balancing exploration and exploitation. For me, the most pressing challenge is motivating experts to self-balance the mostly laborious perceived exploitation with fancy exploration. Furthermore, contextual ambidexterity requires constant resource allocation reassessment and the willingness and flexibility of an organization to adapt depending on the projects, project phases, and strengths of participating experts.

### **3. Vision for the Future**

*What does the ideal future look like for your organization in balancing exploration (innovation) and exploitation (efficiency), and what key improvements are needed to achieve this vision?*

In the future, we aim to introduce a simple set of value-oriented key performance indices (KPIs) for every Generative AI product to render its organizational value measurable. Paired with a constantly evolving value-oriented roadmap, this is a pivotal element to maximize value while automatically balancing exploration and exploitation. Another approach for balancing will be to adapt the organization towards a structural ambidexterity where boundaries between exploration and exploitation are more strictly defined. However, this requires a sufficiently large team to allow for both directions to be covered appropriately.

### **4. Generative AI in Supporting Ambidexterity**

*(How) does your organization or department currently use Generative AI to support both innovation and efficiency? Could you provide specific examples?*

Yes, Ypsomed uses Generative AI to support innovation and efficiency. For example, we developed a RAG proof-of-concept, which a limited number of employees can use to retrieve information from documents. Furthermore, we apply Generative AI tools to boost efficiency and productivity in code development (e.g., Github Copilot) and various other tools. Most applied solutions are publicly available (open source or purchasable), but we aim to develop our self-developed solutions for specific use cases.

*What **challenges** have you encountered in using Generative AI for both exploration and exploitation, and how have these been managed?*

We've experienced various challenges regarding the application of Generative AI for both aspects. In the beginning, the most pressing challenge was that Ypsomed had a limited policy regarding using publicly available Generative AI tools (chatGPT). However, the executive management mitigated the risks associated with using these tools by establishing an AI policy applicable to all employees and all activities involving Generative AI.

Another significant challenge lies in understanding the potential related to this technology and what is required to realize this potential. While most people in the company were quick to understand what Generative AI-based chats can perform, only a minority understood the implications the technology behind it would have on our industry. Thus, convincing stakeholders required strong efforts and delayed internal activities on the topic for a prolonged period. Overcoming this challenge required many discussions and was best supported by isolated demonstrations to stress the technology's future impact on our business.

There are many other challenges regarding Generative AI. Some of them persist, while others could have been resolved. Resolving remaining challenges seems essential to yield the full power of Generative AI developments and realize its business value.

## **5. Expected Impact of Generative AI on Adaptability and Competitive Advantage**

*Do you see Generative AI contributing to your organization's competitive advantage in the future?*

*If so, in which ways do you imagine it could do so?*

Generative AI and AI will definitively contribute significantly to Ypsomed's competitive advantage in the future. Generative AI will increasingly influence internal communication, reducing the number of meetings and time spent clarifying information (e.g., RAGs, real-time translation during meetings, meeting summarization). Additionally, Generative AI agents will increasingly support document generation for all potential purposes (e.g., product or production process documentation) to speed up processes. Generative AI will also be part of upcoming product generations, making patient lives easier while increasing therapy adherence. However, other innovations besides Generative AI disrupt our business, too, such as AI in general.

Personal note: Generative AI is becoming increasingly a buzzword for all possible AI applications generating insights, and the distinction between AI in general and Generative AI is diminishing in society's understanding. It's essential to separate Generative AI from other AI applications, which will contribute similarly to the next technological revolution. However, AI, in general, will be less visible and accessible to the general audience because it's integrated into many products without direct interaction by the user.

## **6. Strategic Considerations for Generative AI and Ambidexterity**

*What **strategic implications** does Generative AI have for achieving ambidexterity, and how should **leaders approach** its integration to balance innovation and efficiency effectively?*

Generative AI has the potential to enhance decision-making by processing vast amounts of information throughout a company. However, high-quality and structured data is a prerequisite. Another strategic implication is that Generative AI can accelerate innovations by providing new insights or reducing repetitive work from creative personnel so that these people can focus on creating innovation. Furthermore, Generative AI can optimize processes, reduce costs, and improve productivity (increase operational efficiency).

Leaders should approach Generative AI with appropriate and balanced investments in this technology. Furthermore, they should integrate Generative AI into the strategy and in their strategic decision-making process. Additionally, Generative AI is part of an AI-affine organization that is open to continuous learning and exploration. Mastering the integration of Generative AI in a company requires the right leaders with an open mindset and trust in their subordinates, as well as skilled experts dedicated full-heartedly to AI.

*In maintaining the balance of innovation and efficiency, what role do you believe **human judgment** will play in integrating Generative AI, and who within the organization should be **responsible** for exercising this judgment (e.g., leadership board, a specific task force, or all employees)?*

Human judgment will be crucial in integrating Generative AI into a company, and approaches will be very culturally and industry-dependent. Each company must take its journey to find answers to ethical and risk management questions. This journey involves many unique aspects, such as strategy, market position, and legal risks.

Responsibility within a company should be shared according to the contribution.

*How do you foresee Generative AI reshaping or evolving your organization's **structure**, including communication flows, departmental organization, and strategic alignment, in the next 5–10 years?*

Generative AI and AI will generate new organizational elements that are unknown today at Ypsomed. Furthermore, Generative AI will help distribute information more tailor-made and faster to meet the limit of digestibility. Additionally, Generative AI and AI will gain weight within Ypsomed's strategy.

## **7. Future Industry Standards and Differentiation**

*Do you think Generative AI will become a standard across the industry?*

Generative AI will be a significant standard in the industry of tomorrow. There are vast use cases for Generative AI, which will have a significant economic impact and drive Generative AI's adoption in the industry.

*How can organizations use Generative AI to create a unique market position, and what role might proprietary AI solutions or human creativity play in maintaining competitive differentiation?*

Including Generative AI in product development to find novel solutions can help reach a unique market position. Furthermore, Generative AI can leverage shorter product development cycles and more personalized products that better suit customers' needs. Furthermore, Generative AI can improve customer interactions by providing 24/7 service and customized advertisements.

Human creativity will still be a significant asset. However, Generative AI solutions will generate multiple solutions to a problem, fostering human creativity and finding solutions that have yet to be encountered. Furthermore, within the upcoming years, human beings will remain in control of what Generative AI does and decide which proposed solution to select for further consideration. I believe that Generative AI tools will be more supportive than fully automating current tasks, leading to efficiency improvements instead of people-less companies. Such a fully automated industry still lies within an unrealistic future for the next few years.

## **8. Concluding Question**

*Do you have any thoughts you would like to share regarding this interview?*

Thank you for the interview questions. They allowed me to rethink and resonate with what I'm doing and where I should realign. I am very interested in your work and would like you to send me a digital copy of the final version. Thank you.

I wish you all the best for your work on the thesis and hope that you will progress quickly and without obstacles to finalizing your studies.

## **Interview 4 – Manuel Goulão**

## **1. Background of the Expert**

*Could you please briefly describe your current/most recent role, the department you work in, your overall experience in the industry, and your involvement with Generative AI initiatives?*

At MJ Agency, I serve as the founder and CEO, overseeing our work in AI automation and generative AI solutions. Our agency specializes in helping businesses streamline their workflows, enhance efficiency, and unlock innovation through customized AI applications. With several years of experience in this field, I've led projects that span industries, including implementing generative AI for customer experience enhancements, process automation, and data analysis. My direct involvement in deploying AI solutions has provided insights into its strategic impact on both innovation and efficiency.

## **2. Current Situation and Challenges**

*Could you please describe the current state of your organization? In which areas does your company exploit and in which does it explore?*

Our organization continuously balances exploration and exploitation. On the exploration front, we innovate by creating prototypes for potential clients, leveraging AI to demonstrate the value of automation and optimization. On the exploitation side, we refine and scale existing solutions for clients, ensuring consistent performance and measurable results.

Which approach (Structural, Contextual, or Sequential) to balancing these areas do you find most applicable to your organization, and what are the primary challenges in achieving this balance? (see blue box on page one)

We lean toward contextual ambidexterity, encouraging cross-functional collaboration within teams. The primary challenge is managing resource allocation—ensuring sufficient focus on developing innovative solutions without compromising the optimization of existing projects.

## **3. Vision for the Future**

*What does the ideal future look like for your organization in balancing exploration (innovation) and exploitation (efficiency), and what key improvements are needed to achieve this vision?*

The ideal future for our organization is achieving a seamless integration of AI-driven innovation while maintaining operational excellence. To achieve this, we need:

Advanced tools for predictive analytics and real-time automation.

Stronger partnerships with tech providers for access to cutting-edge AI technologies.

Continued investment in upskilling our team to adapt to AI advancements.

#### **4. Generative AI in Supporting Ambidexterity**

*(How) does your organization or department currently use Generative AI to support both innovation and efficiency? Could you provide specific examples?*

Generative AI plays a critical role in our operations. For innovation, we use it to create personalized prototypes and marketing content tailored to client needs. For efficiency, generative AI tools streamline repetitive tasks like data summarization and process documentation.

Example: We recently employed generative AI to develop a chatbot prototype for a hospitality client. The chatbot provided personalized guest assistance while collecting insights for operational improvement.

*What **challenges** have you encountered in using Generative AI for both exploration and exploitation, and how have these been managed?*

Challenges include the occasional lack of context-specific training data and ensuring user trust in AI outputs. We address these by combining AI insights with human oversight to validate and refine results.

#### **5. Expected Impact of Generative AI on Adaptability and Competitive Advantage**

*Do you see Generative AI contributing to your organization's competitive advantage in the future?*

*If so, in which ways do you imagine it could do so?*

Generative AI will undoubtedly enhance our adaptability and competitive edge by:

Enabling faster prototyping and testing of innovative ideas.

Offering scalable solutions that allow clients to adapt to market demands quickly.

Providing data-driven insights that improve decision-making and resource allocation.

By automating low-value tasks, we can allocate more resources to strategic growth and client engagement.

## **6. Strategic Considerations for Generative AI and Ambidexterity**

*What **strategic implications** does Generative AI have for achieving ambidexterity, and how should **leaders approach** its integration to balance innovation and efficiency effectively?*

Leaders must view generative AI as a complement to human judgment. While AI can process and generate insights rapidly, strategic decisions require a nuanced understanding of business goals and client needs. At MJ Agency, we propose creating a dedicated task force to oversee the integration of AI tools, ensuring alignment with our mission.

*In maintaining the balance of innovation and efficiency, what role do you believe **human judgment** will play in integrating Generative AI, and who within the organization should be **responsible** for exercising this judgment (e.g., leadership board, a specific task force, or all employees)?*

See question before

*How do you foresee Generative AI reshaping or evolving your organization's **structure**, including communication flows, departmental organization, and strategic alignment, in the next 5–10 years?*

In the next 5–10 years, we foresee generative AI reshaping organizational structures by:

Enhancing cross-department communication through centralized AI systems.

Allowing for more dynamic workflows tailored to immediate market needs.

Enabling more collaborative environments by automating mundane tasks.

## **7. Future Industry Standards and Differentiation**

*Do you think Generative AI will become a standard across the industry?*

Generative AI is likely to become an industry standard as it becomes more accessible.

*How can organizations use Generative AI to create a unique market position, and what role might proprietary AI solutions or human creativity play in maintaining competitive differentiation?*

To maintain differentiation, organizations must:

Develop proprietary AI solutions that reflect their unique market positioning.

Combine generative AI with human creativity to produce innovative, value-driven offerings.

For example, MJ Agency plans to invest in building proprietary AI tools that align with specific client challenges, setting us apart in a competitive market.

## **8. Concluding Question**

*Do you have any thoughts you would like to share regarding this interview?*

Generative AI is not just a tool but a transformative force shaping how businesses innovate and operate. Organizations that embrace its potential while balancing it with human insight will lead the way in adaptability and competitive differentiation.

Thank you for the opportunity to share our experiences. I look forward to learning more about the findings of your research.

## **Interview 5 – Maximilian D'heur**

### **1. Background of the Expert**

*Could you please briefly describe your current/most recent role, the department you work in, your overall experience in the industry, and your involvement with Generative AI initiatives?*

I currently work in the digital workplace transformation unit of a consultancy with 10,000 employees. Our team focuses on integrating generative AI technologies into client organizations to enhance operational efficiency and support innovation.

With substantial experience in consulting, I have worked across diverse projects that emphasize technology-driven organizational transformation. Recently, I've been actively involved in initiatives that leverage generative AI to revolutionize client service offerings and internal processes.

My role involves both strategic advisory and hands-on implementation of generative AI solutions. This includes integrating AI capabilities into our service delivery frameworks and exploring innovative applications to align with client needs and market trends.

## **2. Current Situation and Challenges**

*Could you please describe the current state of your organization? In which areas does your company exploit and in which does it explore?*

Our organization is in a dynamic phase where we are both exploiting existing capabilities and exploring new opportunities.

Exploration: We are innovating by embedding artificial intelligence, particularly generative AI, into our service offerings. This involves piloting novel AI use cases and developing AI-driven solutions tailored to client challenges.

Exploitation: We focus on integrating AI into internal working processes, ensuring we leverage efficiencies to stay competitive while streamlining workflows and improving decision-making.

*Which approach (Structural, Contextual, or Sequential) to balancing these areas do you find most applicable to your organization, and what are the primary challenges in achieving this balance?*

*(see blue box on page one)*

The organization employs a contextual ambidexterity approach. This means fostering a culture where employees can pivot between innovative experiments and established routines as needed.

The integration of experimental AI initiatives into day-to-day operations remains challenging.

Employees often struggle to adapt to new workflows that include AI tools. Additionally, scaling these experiments into routine processes requires robust alignment with organizational priorities and overcoming resistance to change.

### **3. Vision for the Future**

*What does the ideal future look like for your organization in balancing exploration (innovation) and exploitation (efficiency), and what key improvements are needed to achieve this vision?*

The organization envisions a future where it can simultaneously innovate and operate efficiently.

Success will involve:

- Leveraging AI's benefits while ensuring employees remain engaged and motivated.
- Establishing a seamless integration between innovative AI experiments and regular workflows.
- Balancing the dual demands of efficiency and creativity.

Key Improvements Needed:

- Enhanced change management strategies to ensure smooth adoption of AI tools.
- Continuous training and upskilling to empower employees in using AI effectively.
- Strong leadership to champion the adoption of generative AI while maintaining alignment with strategic goals.

### **4. Generative AI in Supporting Ambidexterity**

*(How) does your organization or department currently use Generative AI to support both innovation and efficiency? Could you provide specific examples?*

Generative AI supports both innovation and efficiency within the organization:

Exploration: By enabling the creation of AI-driven service offerings that address unique client challenges, generative AI drives innovation and differentiates our solutions.

Exploitation: AI tools enhance productivity by automating repetitive tasks, improving decision-making through advanced data insights, and streamlining operations.

*What **challenges** have you encountered in using Generative AI for both exploration and exploitation, and how have these been managed?*

1. Misuse and Ethical Concerns: Employees may misuse AI tools, leading to unintended consequences.
2. Data Security Risks: Potential breaches and compliance issues are significant challenges.
3. Resistance from Senior Management: Gaining buy-in from leadership for experimental projects often requires clear evidence of ROI.

Management Strategies:

- Establishing clear guidelines and policies to mitigate risks.
- Providing training to ensure employees understand both the potential and limitations of AI.
- Presenting compelling business cases to secure leadership support.

## **5. Expected Impact of Generative AI on Adaptability and Competitive Advantage**

*Do you see Generative AI contributing to your organization's competitive advantage in the future?*

*If so, in which ways do you imagine it could do so?*

Generative AI will play a pivotal role in maintaining and advancing competitive positioning:

AI-Focused Offerings: Clients increasingly demand AI-integrated solutions, and developing proprietary generative AI applications will be essential.

Efficiency Gains: Staying competitive also requires leveraging AI to match or exceed the efficiency improvements achieved by industry peers.

Imagined Benefits:

- Improved client satisfaction through personalized, AI-driven solutions.
- Reduced operational costs and faster time-to-market for projects.
- Enhanced capacity for strategic innovation.

## 6. Strategic Considerations for Generative AI and Ambidexterity

*What **strategic implications** does Generative AI have for achieving ambidexterity, and how should **leaders approach** its integration to balance innovation and efficiency effectively?*

Generative AI fosters ambidexterity by acting as both a motivator for employees and a catalyst for discussions around innovation and efficiency. Leaders must focus on:

- Creating a supportive environment that encourages experimentation without compromising routine efficiency.
- Establishing clear metrics to measure the success of AI integration efforts.

*In maintaining the balance of innovation and efficiency, what role do you believe **human judgment** will play in integrating Generative AI, and who within the organization should be **responsible** for exercising this judgment (e.g., leadership board, a specific task force, or all employees)?*

Human judgment remains indispensable for guiding AI applications. Responsibilities should be distributed as follows:

- Leadership Board: Define strategic priorities and governance frameworks.
- Task Force: Handle the technical and operational aspects of AI integration.
- All Employees: Participate in feedback loops to refine AI implementation.

*How do you foresee Generative AI reshaping or evolving your organization's **structure**, including communication flows, departmental organization, and strategic alignment, in the next 5–10 years?*

- Communication Flows: Real-time collaboration and decision-making will improve through AI-driven insights.
- Departmental Structures: Cross-functional AI teams will become integral.
- Strategic Alignment: AI will be embedded into the organization's target operating model, aligning with broader business objectives.

## **7. Future Industry Standards and Differentiation**

*Do you think Generative AI will become a standard across the industry?*

Yes, generative AI is poised to become a standard across the industry as organizations recognize its potential for driving both innovation and efficiency.

*How can organizations use Generative AI to create a unique market position, and what role might proprietary AI solutions or human creativity play in maintaining competitive differentiation?*

- Proprietary AI Solutions: Investing in proprietary generative AI systems tailored to unique needs will be critical for differentiation.
- Human Creativity: Combining AI capabilities with human ingenuity will allow organizations to develop truly unique offerings.

## **8. Concluding Question**

*Do you have any thoughts you would like to share regarding this interview?*

The interview was thoughtfully designed, covering a comprehensive range of questions that effectively explore the nuances of generative AI in fostering ambidexterity within organizations.

## **Interview 6 – Michael Voegele**

### **1. Background of the Expert**

*Could you please briefly describe your current/most recent role, the department you work in, your overall experience in the industry, and your involvement with Generative AI initiatives?*

Chief Digital and Information Officer. Co-Leading responsible AI together with Chief HR and Chief Strategy Officer at Phillips Morris International

## **2. Current Situation and Challenges**

*Could you please describe the current state of your organization? In which areas does your company exploit and in which does it explore?*

10 years of transformation journey introducing Smoke Free Products. After 10 years and 12Bio USD Investment SFP Products today make 40% of total revenue. So in this sense Combustible Cigarettes is exploit and SFP is explore.

See <https://www.pmi.com/our-progress/our-smoke-free-vision>

*Which approach (Structural, Contextual, or Sequential) to balancing these areas do you find most applicable to your organization, and what are the primary challenges in achieving this balance? (see blue box on page one)*

It's a mix of Structural and Contextual. The Categories are setup in a structural way, the Commercialization is using the same existing resources and channels in the markets. Challenge is when new products are not yet contributing to the P&L in the beginning to have people focus on it when not structural organized.

## **3. Vision for the Future**

*What does the ideal future look like for your organization in balancing exploration (innovation) and exploitation (efficiency), and what key improvements are needed to achieve this vision?*

For any company this is the basic challenge of Top Line and Bottom-line growth. I don't think this is specific to only a few. If you do not explore, what is your future going to look like ? Irrelevant ...

## **4. Generative AI in Supporting Ambidexterity**

*(How) does your organization or department currently use Generative AI to support both innovation and efficiency? Could you provide specific examples?*

Yes:

1. Innovation: e.g. Knowledge Database on Scientific research, Transcribing Consumer Call Center conversation for sentiment and early product defect detection
2. Efficiency: Microsoft Copilot 360 for Knowledge Workers, Advanced OCR for Invoices

*What **challenges** have you encountered in using Generative AI for both exploration and exploitation, and how have these been managed?*

- Early stage uncertainty on legal framework (Responsible and people centric approach and Central AI Governance Council)
- Knowledge Gap internally (Augmenting with externals, building new graduate education path, Companywide AI learning initiative)
- Costs for Licenses and Training LLM's (poc and mvp approach before scaling and clear business cases)
- Data Ocean with missing AI capabilities (needed to adapt own cloud platform)

## **5. Expected Impact of Generative AI on Adaptability and Competitive Advantage**

*Do you see Generative AI contributing to your organization's competitive advantage in the future?*

*If so, in which ways do you imagine it could do so?*

Don't really believe in it, at a certain point in time it will be commodity. Also Tech/LLMs are improving/developing fast which might eliminate early mover advantage.

## **6. Strategic Considerations for Generative AI and Ambidexterity**

*What **strategic implications** does Generative AI have for achieving ambidexterity, and how should **leaders approach** its integration to balance innovation and efficiency effectively?*

Not sure that Generative AI is the sole driver for achieving ambidexterity but rather believe that is something all successful organizations have been driving already in the past (pre Generative AI). AI can be an accelerator, currently mostly in the space of driving efficiency and speed.

*In maintaining the balance of innovation and efficiency, what role do you believe **human judgment** will play in integrating Generative AI, and who within the organization should be **responsible** for exercising this judgment (e.g., leadership board, a specific task force, or all employees)?*

Fostering a culture of collaboration between AI systems and human teams is essential. Leaders should encourage teams to view Generative AI as a tool that augments their capabilities rather than replaces them. At the end all leaders will be in charge to maintain a people centric approach to AI. A governance Body could lead the effort to set ethical standards supported by Legal and Data Privacy.

*How do you foresee Generative AI reshaping or evolving your organization's **structure**, including communication flows, departmental organization, and strategic alignment, in the next 5–10 years?*

Hard to judge, but communication flows will change for sure and we will see shifts in how much Headcount is deployed in which part of an organization (e.g. repetitive and transactional task will mostly not exist anymore)

## **7. Future Industry Standards and Differentiation**

*Do you think Generative AI will become a standard across the industry?*

Of the shelf Generative AI will become a commodity over time

*How can organizations use Generative AI to create a unique market position, and what role might proprietary AI solutions or human creativity play in maintaining competitive differentiation?*

Of the shelf Generative AI will become a commodity over time with significant proliferation with specific LLMs for specific business functions and use cases. Multi LLM orchestration will be an important technical element to generate value incl. access and availability to specific training data.

## **8. Concluding Question**

*Do you have any thoughts you would like to share regarding this interview?*

## **Appendix 3 – Case Study Analysis**

### **Case Study 1 – AT&T**

#### **Context**

AT&T is a telecommunications corporation focusing on connectivity services, including 5G/6G networks, broadband, and customer engagement technologies. The company positions itself as one of the earliest adopters of artificial intelligence, integrating Generative AI across various operations (Microsoft 2023; NVIDIA Corporation 2023; Chaccour et al. 2024). By the end of 2023, AT&T had provided 68,000 employees with access to their flagship Generative AI platform, Ask AT&T, which utilizes Large Language Models like OpenAI's ChatGPT and Meta's LLaMA2 (Weinschenk 2023).

#### **Generative AI Integration**

The company implemented "Ask AT&T," a Generative AI-powered employee assistance tool using OpenAI's GPT models for HR and technical queries. The platform integrates into AT&T's internal workflows through web interfaces and Microsoft Teams, enabling natural language interaction (Anderson 2024). In software development, Ask AT&T has achieved efficiency gains of 30-50%, significantly accelerating the coding process and automating vulnerability remediation (Kadia 2024). They also developed digital avatars and conversational AI for customer interaction, while using AI tools to optimize technician routing for reduced fuel usage. In network management, generative models create synthetic datasets for training digital twins, enabling real-time network behavior simulations (Markus 2023; Chaccour et al. 2024).

#### **Impact Assessment Through Ambidexterity**

AT&T's implementation of generative AI demonstrates a balanced approach to organizational ambidexterity, simultaneously pursuing operational excellence and innovation initiatives. In terms of

exploitation (operational excellence), the company achieved significant improvements in existing operations through reduced fuel consumption and optimized technician routing. Employee productivity enhanced substantially with AI-powered tools, particularly through features like AskData for efficient data querying (Sweeney 2024). The software development process demonstrated measurable efficiency gains of 30-50%, while customer service improvements manifested through faster complaint resolution and automated interactions (Kadia 2024).

On the exploration (innovation) front, AT&T pioneered several transformative initiatives. The company developed advanced digital twin applications for proactive network planning and introduced innovative semantic communication frameworks that revolutionized network data exchanges (Chaccour et al. 2024). New customer interaction paradigms emerged through digital avatar development, while the integration of generative AI established technological foundations for future service innovations (Markus 2023). This balanced approach to ambidexterity positions AT&T to maintain current operational excellence while pursuing future growth opportunities.

### **Lessons Learned**

Key challenges included data integration, particularly synchronizing digital twins with real networks (Markus 2023). Data security and AI misuse emerged as significant concerns, leading AT&T to collaborate with Microsoft to protect sensitive company data and implement strict security measures, including role-based access control (Anderson 2024). The company addressed these through workforce training, leveraging NVIDIA and Microsoft Azure frameworks, and employing causal AI and explainable AI for trust and transparency. They maintained a strong focus on sustainability through energy-efficient AI models and green computing frameworks (Chaccour et al. 2024).

### **Case Study 2 - BMW**

#### **Context**

BMW Group, a global luxury vehicle manufacturer, actively adopts Generative AI across manufacturing, development, and customer service functions. The company operates in an automotive sector undergoing rapid digital transformation, facing challenges in managing large-scale operations, ensuring scalability, and maintaining data privacy for connected vehicles (AWS 2024b). Through BMW i Ventures, they've strategically invested in AI technologies, including Alitheon's Optical AI technology, demonstrating their commitment to innovation across automotive, aerospace, and luxury goods sectors (Markets Insider 2022).

### **Generative AI Integration**

BMW developed the In-Console Cloud Assistant (ICCA) using Amazon Bedrock for DevOps infrastructure optimization. The BMW Intelligent Personal Assistant, powered by Alexa's large language model, enhances in-car voice interactions. Quantum-inspired Generative AI optimizes vehicle production planning, while the EKHO Platform, developed with Accenture, analyzes enterprise data for real-time insights (AWS 2024b; BMW Group 2024). Additionally, they've integrated Alitheon's Optical AI technology to enhance supply chain traceability and prevent counterfeiting without requiring special hardware modifications to existing processes (Markets Insider 2022).

### **Impact Assessment Through Ambidexterity**

From an exploitation (operational excellence) perspective, BMW achieved significant operational improvements through cloud optimization, reducing costs and accelerating infrastructure deployment. The company successfully scaled operations to handle 14.3 billion daily requests in their connected vehicle ecosystem (AWS 2024b). Their implementation of quantum-inspired AI techniques outperformed traditional methods in reducing production inefficiencies (Zapata Computing 2023). The integration of Optical AI technology has enhanced supply chain traceability and product safety without requiring significant infrastructure changes (Markets Insider 2022).

On the exploration (innovation) front, BMW has pioneered new approaches in vehicle connectivity and manufacturing processes. Through their investment in cutting-edge technologies like Alitheon's Optical AI, they're exploring innovative solutions for counterfeit prevention and product authentication across multiple industries (Markets Insider 2022). Customer engagement has improved through enhanced in-car and showroom experiences, while new technological implementations continue to push the boundaries of automotive innovation (AWS 2024b).

### **Lessons Learned**

Key challenges included managing over 1,300 microservices and 450 AWS accounts globally, ensuring data security, and incorporating quantum-inspired techniques into existing workflows. Solutions involved partnerships with AWS, Zapata Computing, and Accenture, implementing modular multi-agent systems, and adopting the AWS Well-Architected Framework (AWS 2024b; Accenture 2024). Additionally, scaling new technologies like Optical AI across supply chains presents ongoing challenges, though initial deployments show promise for wider adoption (Markets Insider 2022).

### **Case Study 3 – JPMorgan Chase**

#### **Context**

JPMorgan Chase, a global financial services leader, operates across investment banking, asset management, and private banking sectors. The company integrates Generative AI to enhance performance and customer experience while maintaining regulatory compliance (J.P. Morgan Chase & Co 2024). By late 2024, they had provided 140,000 employees across various departments access to their in-house developed LLM Suite, created in collaboration with OpenAI (Abrego and Chan 2024).

#### **Generative AI Integration**

The company deployed multiple AI initiatives, including GPT-4-powered "IndexGPT" for automated thematic stock index creation and the proprietary LLM Suite for employee assistance. The suite helps with tasks including drafting emails, summarizing documents, and idea generation (Abrego and Chan 2024). They use generative adversarial networks (GANs) for synthetic datasets in risk modeling and fraud detection, while restricting external AI tools to ensure data security in their highly regulated environment (Morris and Franklin 2024).

### **Impact Assessment Through Ambidexterity**

From an exploitation (operational excellence) perspective, JPMorgan has forecast up to \$2 billion in AI-related upside, particularly in fraud prevention and operational efficiencies (Pinto 2024). The implementation accelerated stock indexing processes and enhanced productivity through automated financial data processing. In asset management, employees use the LLM Suite to generate marketing content, create client itineraries, and summarize meetings efficiently (Abrego and Chan 2024).

On the exploration (innovation) front, JPMorgan is pioneering new approaches in financial services AI. They're developing autonomous AI assistants tailored to specific roles, shifting employee focus toward strategic decision-making rather than routine tasks (Pinto 2024; Heitsenrether 2024). The company's investment in proprietary AI systems demonstrates their commitment to innovation while maintaining security, particularly through their decision to build rather than buy AI solutions (Morris and Franklin 2024).

### **Lessons Learned**

Key challenges included ensuring secure handling of sensitive client data, addressing risks of biased outputs, and managing regulatory uncertainty. JPMorgan addressed these through building proprietary systems that keep client data within their secure environment (Morris and Franklin 2024). They maintain human oversight to prevent AI hallucinations and ensure reliability, while implementing ethical AI governance and upskilling employees (Abrego and Chan 2024). The

decision to restrict external AI tools in favor of internal solutions demonstrates their commitment to data security in a highly regulated environment.

## **Case Study 4 - Pfizer**

### **Context**

Pfizer, a leading global pharmaceutical company, specializes in innovative healthcare solutions, integrating Generative AI across R&D, marketing, manufacturing, and compliance operations through partnerships like AWS. The company operates in a highly regulated pharmaceutical and biotechnology sector, facing industry-specific challenges including prolonged drug development cycles, stringent compliance requirements, and operational inefficiencies (Pfizer 2024). Through their partnership with AWS, they developed VOX, a generative AI tool utilizing Amazon SageMaker and Amazon Bedrock models to enhance drug discovery and treatment delivery (Fonseca 2023).

### **Generative AI Integration**

The company leverages AWS services for drug discovery and manufacturing data analysis, while deploying AI-powered compliance copilots for marketing review automation. They developed "Charlie," an AI platform for content creation, legal reviews, and fact-checking using risk-based categorization (Pfizer 2024). Their AI infrastructure supports clinical trial site selection and recruitment while enabling manufacturing optimization through digital twin models for real-time anomaly detection (Pfizer 2024). Notably, Pfizer utilized supercomputing capabilities in developing PAXLOVID, successfully converting intravenous treatments into oral medications (Pfizer 2022).

### **Impact Assessment Through Ambidexterity**

From an exploitation (operational excellence) perspective, Pfizer achieved remarkable efficiency gains, reducing vaccine development timelines to 269 days from the typical 8-10 years and realizing double-digit million-dollar annual savings through AI and cloud technologies (Pfizer 2024). Clinical

trials now run 50% faster through AI-driven analysis and quality checks (Pfizer 2022). Manufacturing optimization through AI-driven supply chain analysis has reduced production bottlenecks and increased batch yields (Pfizer 2022).

On the exploration (innovation) front, Pfizer has pioneered new approaches in drug discovery and development. Their AI initiatives have enabled breakthrough innovations in personalized medicine and genetic research, with plans to further tailor treatments to individual genetic profiles (Fonseca 2023). The development of their Scientific Data Cloud facilitates global research sharing and improved collaboration across the healthcare ecosystem (IBM 2023).

### **Lessons Learned**

Key challenges included data integration across clinical trials and manufacturing pipelines, ensuring governance across global operations, and addressing data privacy in compliance applications. Solutions involved developing the Scientific Data Cloud for centralized data aggregation and establishing governance frameworks to standardize AI adoption across business units (IBM 2023). Additional challenges include addressing AI bias through diverse datasets and promoting transparency in decision-making processes, while advocating for patient-centric regulatory frameworks that support innovation while ensuring safety and privacy (Pfizer 2023).

### **Case Study 5 - Siemens**

#### **Context**

Siemens, a global leader in automation and digitalization, integrates Generative AI through collaborations with Microsoft, AWS, and Google Cloud. The company operates across manufacturing, healthcare, infrastructure, energy, and automotive sectors, facing challenges of workforce shortages and increasing demand for sustainable processes (Siemens 2023). Their

partnership with Microsoft to develop the Industrial Copilot demonstrates their commitment to advancing AI implementation in industrial settings (Siemens 2023).

### **Generative AI Integration**

The company implemented multiple AI-powered solutions, including Siemens Xcelerator for improved collaboration and Senseye Predictive Maintenance, which now incorporates generative AI to enhance machine learning capabilities. The Industrial Copilot, developed with Microsoft, assists engineers in generating and optimizing automation code, identifying problems, and providing repair instructions (Siemens, 2024). Their AI-driven document automation achieved 98% accuracy in delivery note processing, while developing AI-powered search capabilities for enhanced user experiences (DeepOpinion 2024; Siemens 2024).

### **Impact Assessment Through Ambidexterity**

From an exploitation (operational excellence) perspective, Siemens achieved remarkable operational improvements, including 90% touchless processing of delivery notes within two weeks and 80% reduction in simulation times using Industrial Copilot (Siemens 2024). Companies using Siemens' Senseye platform reported 40% reductions in maintenance costs, 55% increase in workforce productivity, and 50% decrease in machine downtime (Sweeney 2024). The ROI exceeded €5 million annually from document automation alone (DeepOpinion 2024).

On the exploration (innovation) front, Siemens continues to pioneer new approaches in industrial AI applications. Their Teamcenter for Microsoft Teams app, launched in December 2023, represents their vision for enhanced collaboration across product lifecycles (Siemens 2024). They're exploring AI's potential in product design, enabling faster and higher-quality creation of product variations, particularly in sectors like automotive (Sweeney 2024). The integration of generative AI with predictive maintenance systems demonstrates their commitment to pushing technological boundaries in industrial applications.

## **Lessons Learned**

Key challenges included data integration across systems, global scalability, skill shortages, and ethical concerns. Solutions involved workforce development through no-code platforms and implementing robust AI governance frameworks (Siemens 2024). Their collaboration with Google Cloud and Microsoft aims to streamline AI deployments by integrating cloud and edge computing technologies (Siemens 2024). Data security remains a crucial focus, with emphasis on maintaining data control and protecting proprietary information used in AI models (Siemens 2024).

## **Case Study 6 – Singapore**

### **Context**

GovTech Singapore, a statutory board under the Singapore Government responsible for integrating AI into public services, leads Generative AI adoption through public-private collaborations (AWS 2024a). With 43% of Singapore enterprises actively implementing Generative AI and 41% exploring applications by 2023 (Statista 2023), the government has established key partnerships with AWS, AI Verify Foundation, Microsoft Azure OpenAI, and Google Cloud (IMDA 2024; Smart Nation 2023). The LaunchPad platform, developed by GovTech, enables various government agencies to explore, prototype, and implement AI solutions across multiple ministries (GovTech 2024).

### **Generative AI Integration**

GovTech developed MAESTRO for cost-efficient AI/ML operations across government agencies, enabling automated government workflows, personalized educational content creation, and multilingual chatbots for citizen services (World Economic Forum 2024). The LaunchPad platform has facilitated the development of over 400 ideas and 20 prototypes, including the Appraiser tool, which has generated over 40,000 personalized teacher testimonials (GovTech 2024). Additionally,

the Artificial Intelligence Government Cloud Cluster (AGCC) collaboration with Google Cloud provides AI-optimized infrastructure and no-code AI developer tools (Smart Nation 2023).

### **Impact Assessment Through Ambidexterity**

In terms of exploitation (operational excellence), MAESTRO achieved 75% improvement in AI workload cost performance, saving 2,000 work hours monthly (AWS 2024a). The implementation of explainable AI and data governance toolkits ensures secure and responsible deployment while adhering to Singapore's stringent data protection standards. Infrastructure optimization through NVIDIA's A100 GPUs in Google Cloud's data centers has improved cost-efficiency and reduced environmental impact (Smart Nation 2023).

On the exploration (innovation) front, Singapore's Generative AI market is projected to grow from USD \$515.2 million in 2024 to \$5.09 billion by 2030 (Statista, 2023). The initiative enhanced trust in AI and improved citizen engagement through personalized services (IMDA, 2024). Future innovations include expanded use of LaunchPad for hackathons and ideathons, with planned implementations in fraud detection, public health, and emergency response (Smart Nation 2023; GovTech 2024).

### **Lessons Learned**

Singapore faced challenges in data quality, scalability costs, and governance (AWS 2024). Solutions included implementing the Model AI Governance Framework with nine dimensions of trust and safety (IMDA 2024) and establishing public-private partnerships. Additional challenges include maintaining confidentiality of government data and ensuring effective upskilling of over 150,000 public officers through training programs and Digital Academy initiatives (GovTech 2024).

### **Case Study 7 – Wayfair**

#### **Context**

Wayfair specializes in furniture and home goods with a catalog exceeding 14 million products. As a digital-first retailer, the company leverages Generative AI for personalized experiences and operational efficiency (Wayfair 2023). In July 2023, they launched Decorify, a generative AI-powered virtual room styling tool, marking a significant milestone in their AI implementation strategy (Sadalgi 2023).

### **Generative AI Integration**

The company's flagship Generative AI implementation, Decorify, allows customers to upload images of their spaces and reimagine them in various styles such as bohemian, mid-century modern, or industrial, generating photorealistic, shoppable images (Wayfair 2023). Since launch, users have uploaded over 10,000 images and generated more than 70,000 designs (Tan 2023). The platform operates across mobile and desktop interfaces, integrating directly with Wayfair's catalog for seamless purchasing. Beyond Decorify, they use machine learning models for personalized product recommendations based on browsing history and preferences, while implementing AI models for demand forecasting with explainable AI to enhance supplier trust (Wayfair 2023; Kapoor 2023).

### **Impact Assessment Through Ambidexterity**

In terms of exploitation (operational excellence), Wayfair achieved significant improvements in supply chain accuracy and delivery timelines through advanced forecasting systems. The implementation of AI-supported tools enhanced employee productivity, while refined KPIs for pricing and recommendations improved operational efficiency (Kapoor 2023; Schrage et al. 2024). The platform's integration with existing systems has streamlined the purchase process, making it more efficient for both customers and internal operations.

On the exploration (innovation) front, Decorify represents a breakthrough in customer experience innovation, enabling unlimited design possibilities and personalization options (Wayfair 2023). The company continues to pioneer new features, including planned expansions for seasonal themes like

holidays and special occasions, and innovative layout change capabilities (Tan 2023). These developments demonstrate Wayfair's commitment to pushing the boundaries of retail technology while maintaining operational excellence.

### **Lessons Learned**

Key challenges included maintaining AI model accuracy and ensuring high-quality room reimaginings (Wayfair 2023). Supplier trust in recommendations required implementing explainable AI, while governance frameworks were needed for ethical AI use and ROI demonstration to stakeholders. Solutions involved cloud infrastructure migration for scalability and governance mechanisms for KPI development (Kapoor 2023; Schrage et al. 2024). The company continues to balance technical complexity with user interface simplicity, using customer feedback for continuous improvement (Sadalgi 2023).