A multi-case study on generative AI use in work and decision-making: exploring applications and potential departmental effects

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Abstract:

Despite many bold claims of generative AI being a transformative force for many organisations, there is very little empirical evidence on its actual use in organisations and of the potential productivity impacts. This study aims to address this lack of knowledge by offering nuanced empirical insights into how generative AI is being used in work and decision-making in organisational contexts, and what the potential organisational implications of such use might be. Through a multi-case study, this study explores the use of generative AI in five different departments within a Nordic multinational retail organisation.

This study shows that since the introduction of generative AI tools, their use within departments has increased, mostly in supporting and augmenting individuals' work and decision-making. The utilisation of generative AI extended a wide array of tasks, from creative to technical, reportedly speeding up individuals' tasks, elevating individuals' capabilities in various work scenarios, as well as in providing considerations which might have been overlooked during decision-making processes. In departments where generative AI use was encouraged actively, and where active AI use culture had formed, departmental productivity benefits were reported and observed. Such productivity benefits on a departmental level stemmed most likely from the productivity benefits gained of individual generative AI use. What is more, it seems very likely that active generative AI use might increase the departmental flexibility in task allocation, enabling a more effective use of the workforce in operational tasks.

Theoretically, this study provides evidence to support speculations the utility of AI use in work and decision-making is in increasing in a variety of ways. Further, this study provides reason to believe that a department where individuals actively explore utilisation of generative AI in work and decision-making can access departmental productivity benefits through generative AI use. For practitioners, this study highlights how departments can increase their productivity in subtle ways by encouraging active generative AI use in various operational tasks and decision-making scenarios.

Keywords: Generative AI, Artificial intelligence, LLM, Multimodal AI, Decision Making, Productivity

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Sammandrag:

I diskussioner om generativ AI i näringslivet har det spekulerats kring dess enorma potential, men bevis för generativ AI användning och dess produktivitetseffekter i organisatoriska sammanhang är minimalt. Syftet med denna studie är att undersöka genom empiriska metoder hur generativ AI används i arbete och i beslutsfattande i organisatoriska sammanhang, samt vilka de potentiella organisatoriska konsekvenserna av sådan användning kan vara genom en multipel fallstudie av fem olika avdelningar inom en nordisk multinationell detaljhandelsorganisation.

Denna studie visar att användningen av generativ AI, som ChatGPT, har i de flesta avdelningarna ökat, främst genom att stödja och förstärka individers arbete och beslutfattande, främst i operativa kontext. Användningen av generativ AI omfattade ett brett spektrum av uppgifter. Generativ AI användes inte i något fall för att automatisera arbete eller beslutsfattande. Effekterna på produktiviteten av generativ AI-användning var främst på nivån av en individuell arbetare inom avdelningarna. I allmänhet beskrevs användning av generativ AI försnabba arbetet, höja individernas kapacitet i arbetsuppgifter, samt ge perspektiv som kunde ha förbisetts under arbets- och beslutsprocesser. I avdelningar där generativ AI användning hade aktivt uppmuntrats, rapporterades och observerades produktivitetseffekter på avdelningsnivå. Dessa positiva effekter härstammade sannolikt från aggregerade produktivitetseffekter av individuell användning av generativ AI. Dessutom verkar det troligt att aktiv användning av generativ AI verktyg kan öka avdelningars flexibilitet i fördelning av uppgifter, vilket kan möjliggöra mer effektiv användning av arbetskraften i operativa kontext.

Teoretiskt sett ger denna studie bevis för att stödja spekulationer om att AI-användning i arbete och beslutsfattande ökar på olika sätt. Denna studie ger även anledning att tro att en avdelning där individer aktivt utforskar användningen av generativ AI i arbete och beslutsfattande kan få tillgång till ökad produktivitet genom generativ AI-användning. Ur ett praktiskt synvinkel belyser denna studie hur avdelningar kan öka sin produktivitet på subtila sätt genom att uppmuntra aktiv användning av generativ AI i olika operativa uppgifter och beslutsscenarier.

Nyckelord: Generativ AI, Artificiell Intelligens, Beslutsfattande, Produktivitet

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1 INTRODUCTION

The development of artificial intelligence (AI) systems is progressing at an unprecedented rate. Notably, the Chat Generative Pre-trained Transformer, known as ChatGPT, launched by OpenAI in November 30, 2022, reached 100 million monthly active user just two months after its launch, making it the fastest-growing application in history (Hu, 2023). For many years, AI has been used in various organisational tasks, but recent developments and public discourse suggests that we are entering a new phase in the adoption of multimodal generative AI tools and technologies within organisations (Mollick, 2022; Fridman, 2023a; Fridman, 2023b; Chui et al., 2023a).

Experts and practitioners quickly began speculating about the immense potential of generative AI technologies in business – some stating that generative AI "is poised to unleash the next wave of productivity" (Chui et al., 2023b), others predicting Generative AI use could increase global GDP by up to 7% (Goldman Sachs, 2023). Yet, despite bold claims, very little empirical evidence has been published regarding the actual use of generative AI in organisations and about the productivity impacts of such use.

Despite the present enthusiasm around the potentials of these advanced generative AI tools and technologies, there is still only much guessing and speculation, and not much actual evidence on how organisations are adapting to the fast improvements in the capabilities of generative AI technology. The empirical understanding of how generative AI is used in work and decision-making within organisational contexts is limited. This study aims to address this problem in our lack of knowledge. Specifically, this thesis will explore empirically how these accessible generative AI technologies are being used in work and decision-making processes in the context of five different departments in a Nordic multinational organisation. Furthermore, based on the information gathered, the potential departmental effects of such generative AI use will be addressed.

1.1 Problem statement and knowledge challenge

It is generally considered that AI can be used to either augment or automate decision-making processes (Edwards et al., 2000; Raisch & Krakowski, 2021; Wilson & Daugherty, 2018). For instance, AI systems are often used to augment decision-

making by collecting and analysing information, leaving decision-making to the human (Trunk et al. 2020). In other contexts, human decision-making has been delegated to an AI system, such as in loan approvals or automated high-frequency trading (Talia, 2023). What is similar for many previous AI based solutions is the necessity for a specific use case or context in which the system is used. Furthermore, often AI based work and decision-making automation necessitates specialised expertise and investments of both time and money to develop an AI application tailored to specific contexts.

However, with the introduction of accessible and low-cost generative AI tools, like ChatGPT, it is still unclear how they are being used in organisations compared to previous AI-based enterprise systems and applications. Some preliminary results are emerging, showing utility of generative AI use in supporting in problem solving tasks leading to improvements in speed and quality of work outputs (Dell'Acqua et al. 2023), as well as showing utility of generative AI use in supporting newer workers becoming more effective in customer service contexts (Brynjolfsson et al., 2023). Some researchers have also expressed concerns, presenting results of generative AI use affecting the judgements of decision-makers in hypothetical moral decision-making scenarios (Krügel et al. 2023). Yet, much is still uncertain, and more evidence from a vast array of contexts is needed. This uncertainty leads to several unanswered questions regarding how generative AI is being utilised in organisations.

The importance of studying the use of generative AI in work and decision-making in organisational contexts extends across many aspects. Fundamentally, this research delves into how the use of generative AI might be altering work and decision-making dynamics due to the possible increase in human-AI collaboration. More specifically, this study can highlight the diverse contexts in which generative AI is employed for work and decision-making, possibly identifying areas where the use of generative AI systems is beneficial, and where the capabilities of current generative AI systems fall short. Moreover, the research will also provide a window into how ways of working and human-AI collaboration might be evolving. Interestingly, this theme might also further shed light on the dynamics of human intuition and AI systems' reckoning capabilities within decision-making in organisational contexts.

From a practical perspective, this study will describe insights to organisational leaders on beneficial possibilities with generative AI use, and on possible risks associated with such generative AI use. Such insights should support leaders in deciding on how to address the increasing presence of generative AI in all domains. Additionally, the findings of this study might provide insights which are relevant for policy development within organisations, particularly in formulating guidelines for AI usage in decision-making.

1.2 Study objectives and research questions

There is much that needs to be explored, and due to the recent advancements in technology, much to be revealed and described in detail in organisational contexts. As our world often is too complex to reduce to generalisable rules and theoretical frameworks, the aim of this study is to provide nuanced information of how this phenomenon of interest is taking place and what the implications might be from an organisational perspective, thereby providing theoretical insights derived from empirical analysis. This study will focus on providing context-rich information of how generative AI is used, which allows for a more nuanced discussion of the potential productivity effects of such use and what might contribute to said effects. Such information can hopefully contribute to improving productivity in organisations through ethical and sustainable ways.

The contemporary phenomenon of generative AI use in work and decision-making in organisational contexts will be explored with a multi-case study research design. To address the research problem, and to provide as much learning insights as possible, the following research questions will be the focus of this study:

1. How are generative AI systems being used in work and decision-making in organisational contexts?
2. What are the potential effects of generative AI use in work and decision-making?

The first research question will be explored empirically by collecting information of examples of generative AI use in organisational contexts, to reveal information of the potential dynamics of human-AI collaborative work and decision-making. Based on the insights gathered during the study, the potential implications of generative AI use

in work and decision-making will be addressed, providing potential answers to the second research question.

Exploring these research questions is important not only for advancing theory by providing theoretical insights, but also for understanding practical implications. By providing perspective to how the phenomenon of how increasing generative AI use in organisations is taking place, this study can identify opportunities for further research and suggest insight-rich practical implications and recommendations to improve productivity and decision-making sustainably and ethically.

1.3 Research significance

This research is significant for several reasons. Ultimately, through playing a small role in the grand scheme of things, this study can provide yet some more information to the world, facilitating learning and understanding for anyone interested in topics of AI. From a theoretical perspective this study provides empirical evidence of how this phenomenon is taking place, providing empirical evidence for further research and for further knowledge creation. Also, this study helps in addressing the speculations of practitioners, either through supporting claims or providing alternative perspectives. Furthermore, this study will help to amend or complement existing research on the topic of generative AI in organisational contexts. Moreover, either through showing contrasting or similar results, other researchers can use this study to further the knowledge within this field, so that we can collectively better understand the dynamics of human-AI collaboration in work and decision-making in organisational contexts and try to predict future trends. Ultimately, studies like this can help in improving the way organisations are led, managed, and organised, hopefully contributing to a more sustainable and productive society overall.

1.4 Thesis Structure

This thesis structure follows a rather traditional structure. After the introduction, where the research problem, research questions and aim of the study has been communicated, this thesis moves to a chapter on the theoretical background. The theoretical background chapter discusses previous research, providing a short background on how AI technology has evolved, how humans make decisions, and how AI has been used in decision-making in organisations until now. Subsequently the methods of this study are described, including a presentation of selection of research

method, case selection, participants, data collection procedures, data analysis strategy, ethical considerations, use of generative AI in this thesis, and limitations. After the methods chapter, the case findings are described. Each case is described individually, followed by a short cross case analysis, providing a description of main similarities and differences between cases. Based on the study findings, this thesis moves to a discussion around how the findings might complement or amend earlier research, considering the findings from this multi-case study. Finally, a conclusive summary is presented, further research opportunities are proposed, and theoretical and practical implications are discussed.

2 THEORETICAL BACKGROUND

This chapter delves into the theoretical background of our understanding of decision-making and the use of generative AI systems in work and decision-making in organisational contexts. This chapter delves into two central themes: decision-making and artificial intelligence. It begins with a discussion around AI to establish a context for the subsequent short discussion of decision-making in organisational contexts, and what is known generally about the integration of AI technologies in these decision-making processes. The aim of this chapter is to highlight what is known about the topic, to showcase limitations in our understanding due to the lack of empirical evidence.

2.1 Artificial intelligence

Recent advances in artificial intelligence systems by companies such as OpenAI, Google, Amazon have surged the discussion around and usage of AI into new heights. Many now have access to cutting-edge technologies to help in a wide variety of tasks, which before were done completely manually by humans. AI has become an integral part of modern work, and many practitioners and scientists see both immense benefits (e.g. Mollick 2022) and serious concerns (see e.g. Moser et al. 2022). This section discusses the evolution of AI, setting the context for the discussion around how it can be used and how it might influence organisational decision-making processes.

While the term AI has often been associated with hype, this has not always been the situation. The development of AI has been generally described by some in terms of different "waves" of AI (e.g. Smith, 2019). First-wave AI systems, which generally were a significant achievement in the early days of AI research, was based on so-called symbolic representation (Smith 2019). These systems were rule-based and knowledge intensive, requiring manual coding of rules and knowledge into the system for it to function. First-wave AI systems were designed to solve a complex problem within a specific area but were brittle in the way that they could not handle unexpected inputs or changes. Although important for the overall development of our information systems and computers overall, first-wave AI faced several challenges and was not widely adopted (Smith, 2019).

Second-wave AI-technologies began emerging in the 80s and 90s. Fast forward a few decades, machine learning and deep learning technologies made substantial progress in their efficiency and applicability. AI now encompasses various systems that are capable of sensing, cognising, and performing with an ability to learn and adapt over time (Akerkar, 2018). AI techniques include deep learning, machine learning, natural language processing, computer vision and more. Machine learning involves training algorithms on data to statistically classify and predict patterns (Smith, 2019). Deep learning, a subfield of machine learning, employs artificial neural networks to model and solve problems of differing complexity. Natural Language Processing (NLP) focuses on the interaction between computers and human language, enabling computers to understand, interpret, generate, and respond to human language. Computer vision, a subset of machine learning, processes visual data to extract information of the image's contents. Computer vision applications learn mappings between objects in an image and the names or other information associated with the objects that are detected in the image (Smith, 2019).

These second-wave technologies, have for a while now been used in a wide range of tasks, such as in medicine (e.g. IBM Watson), in the legal field (e.g. the COMPAS algorithm, that has been used to predict re-offense (Jackson & Mendoza, 2020)) and in marketing (e.g. image tagging for more specific targeting).

More recently, generative AI has generated significant traction as AI technologies have advanced further (a 'third wave'?). Large language models (LLM), which are a significant advancement in NLP, use sophisticated techniques within large computational infrastructures to communicate fluently with humans (Teubner et al., 2023). Machine learning techniques such as computer vision models can be combined with large language models. Such technologies and tools are often labelled as multimodal AI tools. Such combination of AI models allows the AI application to for instance, process an image, detect its contents, process that data to the LLM, which then provides a textual explanation of the likely depiction in the image (this can be tested, for example, with OpenAI's GPT-4).

If we consider the positive discussions and investments into AI in previous times as AI "springs" (Smith, 2019), then what occurred in late 2022 and has continued ever since could aptly be labelled as an AI "summer." Some consider the introduction of ChatGPT

as a critical moment for AI (Mollick, 2022). The wide introduction of generative AI technologies has prompted an unprecedented leap in AI usage at scale, providing genuine utility across various tasks through its capacity to generate highly sophisticated text and code (Chui et al., 2023a). Moreover, its accessibility to anyone with internet access and an email account further distinguishes its importance in the AI landscape.

The introduction of a 'new wave' of AI tools to a wide user base is expected to have significant effects on organisations and to the economy. New skills and professions will be needed, while some professions will be affected or replaced by generative AI (Orchard & Tasiemski, 2023). For instance, according to Google Cloud CEO Thomas Kurian, interest in novel AI technology usage and development is moving beyond IT departments in organisations (Ishwarbharath, 2023). Additionally, the development of digital solutions and coding will most likely become faster, as generative AI tools can suggest and review code (Fridman, 2023b). More generally, some predict significant global productivity improvements (Chui et al., 2023b, Goldman Sachs, 2023)

The emergence of accessible generative AI tools represents a significant leap in technology, altering how many interact with AI in both business and personal domains. This phenomenon prompts an examination of how such generative AI tools are being used in organisations, to provide empirical evidence on how generative AI systems are being used in decision-making, and what effects the use of generative AI systems might have on organisations.

2.2 Decision-making in organisational contexts

Generally, social science theories support the notion that almost all human actions are the results of decisions (Brunsson, 2007). Decision-making, therefore, has been selected as a theoretical approach to view how generative AI is being used in work and decision-making generally. A general assumption is shared among scholars that decisions are intentional acts – the intention of which is to select options for future action (Brunsson, 2007). In practice, this means that we select an option (or several options) of many potential future action scenarios, such as deciding which wine to select for dinner this evening, or deciding between a hybrid engine car, an entirely electric car, or a car which works with only an internal combustion engine. The

examples of decisions we make daily are practically endless. Understanding decision-making, in broad terms, helps in understanding how people end up choosing to do whatever they do, including how they work and how they decide to solve various problems in organisational contexts.

Three general models of decision-making have been developed in judgement and decision-making research – descriptive models, normative models and prescriptive models (Kim, 2018). Descriptive models are attempts to describe how people actually judge and decide, without considering whether the actual decision-making processes are good or bad. Generally, based on the descriptive theories, decisions are made through the result of decision-making processes, where a combination of intuition and cognitive processing is present, often to varying extents (Kim, 2018, Evans, 2021).

Organisational decision-making can be understood as decisions made by an individual or a group of individuals on behalf of the organisation. Organisational decision-making usually involves organisational goals and can sometimes be complex in nature, often impacting organisational outcomes such as performance, employee morale, customer relations and more. However, many decisions made in organisational contexts relate to more subtle things, such as how an individual approaches to solving a problem, or how a team decides to assess options or plan for a project. Such decisions characterise how work is conducted on a more general level. For this reason, in this thesis, the study of generative AI use will not be limited to strictly organisational decision-making, but more broadly on decision-making in organisational contexts.

2.2.1 Decision-making on the individual level

In exploring the use of AI in decision-making in organisational contexts, it is essential to understand the cognitive mechanisms by which individuals—such as managers, directors, and executives—arrive at decisions that steer organisational outcomes. Therefore, understanding the theoretical background around how individuals come to decisions is appropriate for studying how the use of AI might be impacting such decision-making processes.

The process of decision-making is a multifaceted cognitive function, which is shaped by many factors that influence decision outcomes (De Acedo Lizárraga, 2007). The concept of bounded rationality, introduced by Herbert A. Simon (1916-2001), has

become an anchor to our understanding of human decision-making, suggesting that humans do not make decisions in theoretically optimal ways due to cognitive constraints (Gigerenzer, 2021). However, forming single unifying theories of bounded rationality and decision-making processes has been challenging. Despite this, some theories have gained broad acceptance. The dual-process model, which represents descriptive models of bounded rationality (Evans, 2021), suggests that human decision-making operates by two simultaneous types of mental processing (Kim, 2018; Evans & Stanovich, 2013). Type 1 is traditionally meant to refer to processing, which is intuitive, fast, emotion-driven, automatic, and not always consciously accessible (Kim, 2018; Evans & Stanovich, 2013). Type 2, is generally referred to as the reflective, controlled, reason-driven, cognitively taxing and often consciously accessible processing (Kim, 2018; Evans & Stanovich, 2013).

It has been proposed that with sufficient time and reflection, initial judgements by type 1 processing, can be reassessed and altered by the more analytical type 2 processing (Evans, 2011; Kim, 2018). Influenced by factors such as motivation, available time, cognitive capacity, information available, and even a gut feeling-of-rightness, type 2 processing validates the initial intuitions (Evans, 2021). This nuanced interplay of humans' gut instincts and analytical deliberation is where the effects of generative AI use might become rather interesting, as for example decision-makers can introduce more information to the decision-making processes when using generative AI in their work.

Although subject to criticism (e.g. Keren & Schul, 2009; Osman, 2004) the dual-process framework has become increasingly popular in discussions around decision-making due to the ways in which it helps describe bounded rationality in ways that have also been supported by evidence from the neuroscience field (Sadler-Smith & Sparrow, 2008). Therefore, the dual-process framework will be useful when exploring and describing how the use of generative AI systems in different decision-making contexts might be affecting the cognitive processing of individual decision-makers.

Naturally, it is recognised that the dual-process framework applies only to individuals, and that many decisions in organisational contexts often involve group dynamics or consensus practices. Yet, it is to be expected that generative AI tools, like ChatGPT are used in departments by individuals, and in understanding the individual use of

generative AI, we might uncover trends of broader departmental use of generative AI. Understanding the rationale behind the individuals' decisions are therefore relevant for this study.

2.2.2 Decision-makers in organisations

As already stated, decision-making in organisations is typically carried out either by individuals or by collective entities such as teams or committees. Almost all organisations have managers or other people who bear responsibility for a certain element of the organisation's operations, often influencing the tasks and activities of other members in the organisation (Brunsson & Brunsson, 2017). Further, decision-making authority varies widely in organisations (Brunsson & Brunsson, 2017). For example, some make major financial decisions, while others handle only minor operational ones. Roles also differ in scope, with some focusing on e.g., organisational structuring and staffing, whereas others focus on day-to-day operational tasks. Therefore, in organisations, people in many different levels within the organisation are decision-makers.

2.2.3 How decisions are made in organisations

Understanding the mechanisms of decision-making in organisational contexts is helpful, when considering the adoption of generative AI systems to operational practices. Organisational decisions vary widely in processes. These can vary from routine and repetitive decisions with predictable outcomes and well-known contexts, to highly uncertain decisions with ill-defined contexts, often leading to more problem-solving behaviour (Egidi & Sillari, 2021). For the discussion around generative AI use in decision-making in organisational contexts, this distinction is rather important. In repetitive and routine situations, generative AI might be considered to function as a replacement for human decision-making, automating processes and streamlining operations. However, in non-routine, and uncertain situations the role of generative AI use might shift to a more analytical supportive role, enhancing human problem-solving capabilities in work and decision-making.

A distinction must be made, then, between different types of behaviours. Egidi and Sillari (2021) argue that routinized behaviours take place when there is no learning and problem-solving present, and the mental load required to decide is reduced, and the decision-making process becomes rather automated and a familiar process. The

authors further discuss that this routinized behaviour is relevant for both individuals and for groups. In the context of the phenomenon of interest for this study, that is, the supposed increase of the use of generative AI tools in work and decision-making, this raises the question of how generative AI systems are used in these different routine and non-routine contexts and how generative AI systems are affecting such decision-making processes. Thus, in exploring how generative AI is being used in work and decision-making, understanding potential differences in how generative AI is being used in routine contexts with predictable outcomes, and in non-routine contexts with uncertain outcomes is interesting considering furthering the knowledge within this field.

2.3 AI use in work and decision-making in organisations

It has now been widely reported and documented that AI systems are capable of outperforming humans in many tasks (Duan et al., 2019). Therefore, it is of no surprise that using AI for decision-making has been one of the main applications of AI systems. Generally, AI systems can be used either to support/augment our decision-making, or to automate/replace our decision-making (Edwards et al., 2000; Raisch & Krakowski, 2021; Wilson & Daugherty, 2018). Early research by Edwards et al. (2000) found that AI systems (also called expert systems), when replacing human decision-makers, enhance operational and tactical efficiency but fall short in strategic contexts. However, in a supportive capacity, they could aid decision-making across all levels, although their success depended on how the user interacted with the systems. The authors also presented that while AI systems in supportive roles didn't necessarily save time, those in replacement roles streamlined decision-making processes. (Edwards et al. 2000)

However, advancements in AI technology invite a deeper exploration of these concepts. For instance, although AI systems necessarily might not save a user's time, they often provide additional insights that can lead to better-informed decisions, as seen, for example, in big data analysis and machine learning-generated recommendations (Akerkar, 2018). Furthermore, natural language processing (NLP) technologies were only recently not yet capable of operating with the level of human speech (Akerkar, 2018). However, with the recent release of several generative AI systems capable of processing and generating text and images, it is to be expected that

the use of AI systems to support or replace human decision-making has increased notably. The effects of these advancements on organisations are not yet fully understood.

Regarding the use of AI in decision-making, many argue that AI should be used to augment human judgement rather than automating it (Smith, 2019; Wilson & Daugherty, 2018; Jarrahi, 2018). Smith (2019) argues that human level judgement, which has evolved over thousands of years is of different order than what AI is capable of. He further elaborates that AI systems should be used for what they are formidable at, namely in tasks which require reckoning, that is, calculative prowess (Smith, 2019). Smith (2019, p. 17) argues that non-living systems "lack ethical commitment, deep contextual awareness, and ontological sensitivity of judgement". Other researchers support these ideas. For instance, Jarrahi (2018) discusses that humans can offer more holistic and intuitive approaches to dealing with uncertain situations, whereas AI can address issues which demand complex calculations and information processing. This concept reflects the principle of intelligence augmentation, advocating for the design of AI systems to enhance, rather than substitute, human input (Jarrahi, 2018).

2.3.1 How AI has been used for work and decision-making in the past

When it comes to employing AI in work and decision-making in organisational contexts the utility of AI use seems to vary, especially under strategic, high-consequence, and uncertain situations that require the gathering and interpreting of information, as well as the formulation and assessment of various options. Trunk et al. (2020) reviewed the literature on combining human and AI for strategic organisational decision-making (i.e., decision-making under uncertain conditions), and concluded that AI would be helpful in information collecting and interpreting. However, the authors present that in defining goals, defining alternatives, weighing options and ultimately making a decision, the human is still outperforming AI in many ways (Trunk et al., 2020). One reason for this is that, at that point in time, AI systems were dependent on a clear goal and could not handle uncertainty or input complexity (von Krogh, 2018, Jarrahi, 2018).

This would mean that in situations characterised by uncertain conditions and unclear decision outcomes, the best way to use AI would be to support or augment your decision-making by letting AI gather and interpret information, but that human

judgement should be used in assessing options and ultimately making decisions. However, with the introduction of generative AI systems, and with the developments of the capabilities of AI natural language processing, AI systems might have become more useful in defining goals, alternatives and weighing options. The breadth of generative AI use in work and decision-making should therefore be re-assessed in the light of the recent significant developments in AI systems' capabilities.

All in all, for decision-making under uncertainty, there seems to be a consensus that AI should not replace human judgement. However, for decision-making in repetitive and routine scenarios, where circumstances are familiar and outcomes predictable, AI tools are being implemented to automate tasks traditionally performed by humans within decision-making. For example, in fast-moving consumer goods industries, intelligent image processing has been used to automate shelf monitoring to enhance inventory management and thereby improve product sales (Deng et al., 2023). Furthermore, in customer service contexts, AI natural language processing has been used for some time already to help with basic tasks in customer service (Aguiar-Costa et al., 2022). Also, a large application area is in marketing and in sales where AI systems are used for recommendation of products that a user would likely be interested in (Akerkar, 2018). There are many more examples one could discuss. AI systems have been employed in the gig economy where algorithms make decisions about work assignment and execution, while evaluating worker performance and service quality through different means (Talia, 2023). Other areas where AI technologies such as machine learning algorithms are being used include risk-level evaluations, credit score calculations, loan approvals, automated high-frequency trading, survey coding, land mapping, receipt of governmental assistance, among many others (Talia, 2023).

What is common for all these examples is the need for specialised skills and investments of both time and money in developing AI-applications for the specific context. However, with the introduction of accessible generative AI tools, like ChatGPT, it is unclear how these generative AI tools are being used in organisations, compared to AI-based enterprise systems and applications. Furthermore, the difference in outcomes is also not yet necessarily understood, as there is a lack of empirical evidence of the organisational outcomes of generative AI use in organisations.

2.3.2 Challenges with the use of AI in decision-making

The use of AI systems in decision-making includes many challenges, some of which have been documented in both automated and assistive contexts. For example, many decision-makers using AI systems to support decision-making experience significant issues regarding explainability and transparency of the outcomes of AI systems as the logic and functioning of the AI systems are opaque to individuals and organisations using such systems (Talia, 2023). This opacity can lead to a disconnection between the AI-generated outcomes and the human user's intuitive judgement, potentially leaving decision-makers without a clear sense of validity of the AI's output. Particularly in high-stakes fields such as in healthcare, this causes moral issues for decision-makers (Stiglic et al., 2020).

The literature as well as recent incidents reveal that the use of AI has led to substantial problems when the outputs of AI systems are not adequately scrutinised or understood. For example, an attorney used ChatGPT to research and present precedents in a suit against Colombian airline Avianca, finding himself in trouble as it was revealed that the cases generated by ChatGPT did not exist (Weiser, 2023). Similarly, racial bias was found in a widely used algorithm used by the U.S. health care system to guide health decision, in that Black patients assigned with same level of risk by the algorithm were sicker than White patients (Obermeyer et al., 2019). It was estimated by the authors that the racial bias reduced the number of Black patients identified for extra care by more than half (Ibid.). In the case of Amazon's recruitment tool, it showed gender biases, leading to the discontinuation of the solution (Dastin, 2018). These instances reveal the severe consequences the use of AI in decision-making might have if the outputs are not understood, or if the algorithms in the system are trained on data with quality issues, such as biases. One can then wonder, will people use generative AI tools differently in work and decision-making depending on the potential consequences of a poor decision?

Not all challenges with the use of AI in work and decision-making are algorithm related. Trunk et al. (2020) discuss that the efficacy of AI supported decision-making is also related to the training and literacy of the users. Double checking AI generated outputs should therefore be common practice in organizational contexts if AI generated outputs are considered to be used in decision-making.

These examples of earlier technologies highlight the need for a critical approach in using generative AI systems for decision-making in organisational contexts, especially in high-consequence scenarios. To facilitate responsible use of generative AI in businesses, it is important to explore how this phenomenon of increased AI use in organisations is taking place, and how decision-making processes might have changed since the introduction of generative AI. Further, considering facilitating responsible generative AI use in business, it is important to understand whether users are aware of the potential challenges and risks associated with the use of generative AI systems in decision-making, especially considering the possible limitations of explainability in high-consequence decision-making.

2.3.3 Bounded rationality in organisational decision-making and Artificial Intelligence

Bounded rationality is present even in organisational decision-making, particularly in uncertain and variable situations. This concept is important when exploring how the use of generative AI might influence decision-making processes. Intuitive processing in decision-making is present in both familiar and uncertain situations, especially when not all facts are known and when consensus is difficult to reach (Sadler-Smith & Sparrow, 2009). Indeed, in such situations it is impossible to fully rely on rational processing. The impact of generative AI use might become more pronounced when examining common heuristics and biases in organisational decision-making.

For instance, when considering biases like the availability and anchoring heuristics, which people usually resort to when assessing, for example, risk (availability heuristic) or quantities such as time estimates (anchoring heuristic) (Wright & Goodwin, 2008) the use of generative AI might mitigate flawed initial judgements by providing more objective, and data driven insights to human considerations. However, the reliance on algorithms might introduce complexities as there might be biases built into the algorithm itself (for examples, see e.g. Obermeyer et al., 2019).

The planning fallacy (Kahneman & Tversky, 1979) is another area where specifically the use of generative AI might play a role. People hold a tendency to confidently believe that one's own projects will proceed as planned although historically vast majority of similar projects have run late (Buehler et al., 1994). For instance, generative AI tools, such as ChatGPT, can offer project plan estimations (Barcaui & Monat, 2023), which

might counter the human tendency to underestimate project timelines. Whether generative AI use might have an impact on the presence of other cognitive biases such as the confirmation bias (Belton & Dhami, 2021) or the framing effect (Tversky & Kahneman, 1981) is unclear. Some preliminary findings suggest that ChatGPT can possibly be used to reduce human financial analysts' optimistic biases, showing indications that generative AI systems can mitigate human bounded rationality (Xiaoyang et al., 2023). However, the literature regarding the effects of the use of generative AI on decision-making is only beginning to develop and empirical evidence regarding the effects of the use of generative AI is still missing.

The reason why these have been presented in discussion around decision-making in organisational contexts is to highlight the seriousness of heuristics in organisational decision-making. In organisational decision-making, uncertainty is very common, and therefore heuristics are the solution for many decision-makers (Gigerenzer, 2021). Heuristics are not necessarily bad, but they can lead to biased outcomes. In many situations, unconscious and intuitive processing is necessary to produce decisions quickly, often leading to good enough outcomes. Further, Gigerenzer (2021) argues that in the study of decision-making, one should understand the interplay between rationality and human judgement.

As discussed during this chapter, people are not reasoning machines, but are not without reason either. The increased use of generative AI systems might change the dynamics between rationality and intuitive judgements. Therefore, in exploring how generative AI technology is being used in work and decision-making in organisational contexts, an eye is kept on whether there are indications of the use of such AI systems altering some of the complex mechanisms underlying decision-making processes.

2.3.4 Generative AI, decision-making and where we might be heading

With the introduction of multimodal generative AI systems, which are capable of complex natural language processing, and with the rapid speed of which other AI systems are evolving, the way AI systems will be used in work and decision-making is proposed to be evolving. Firstly, it has been suggested that especially generative AI might play a big role in decision-making as a virtual advisor and possibly save time and energy in various tasks, problems and decision-making scenarios individuals and teams in organisations face (Purdy & Williams, 2023). The shift that is seen here is the

capability of AI systems to handle complex human language input, even in situations where the quality of input might not be very high (an example of such low context, low quality input can be seen in Appendix 1).

Secondly, it has been proposed by experts and practitioners that generative AI systems will not necessarily increase the replacement of humans in decision-making, but rather will enhance the human-machine collaboration to enhance organisational decision-making and operational activities (Daugherty et al., 2023; Britt, 2023; Chuma & de Oliveira, 2023). Additionally, there has been much speculation regarding the potential effects of wider integration of generative AI tools like ChatGPT into organisational work and decision-making contexts in various industries (e.g. Fui-Hoon Nah et al. 2023)

In terms of empirical evidence of generative AI use in working contexts, a few papers were found. Dell'Acqua et al. (2023) present in their working paper early empirical evidence of effects of generative AI use on problem solving tasks, showing impressive benefits in both speed of task completion and quality of work output. The authors present, however, that it is not always clear when and in which tasks generative AI is useful (Ibid.).

Brynjolfsson et al. (2023) present in their working paper preliminary findings from studying customer support agents using generative AI, providing evidence that a generative AI tool can augment workers to be more able and helping newer workers to become more effective. Generative AI was used as a conversational assistant. Access to the generative AI tool increased productivity especially with the novice and low-skilled workers, while having a minimal impact on experienced and skilled workers (Brynjolfsson et al., 2023). Fosso Wambda et al. (2023) presented complementary findings from the operations and supply chain management area, presenting preliminary findings of general enhancements to performance from the integration of generative AI in organisational practices. However, lack of nuance to such findings are still apparent. The findings by the Fosso Wambda et al. (2023) did not describe how generative AI was used or in which ways benefits to performance was reached.

The nature of human-AI collaboration was discussed by Göndöcs and Dörfler (2024), suggesting three metaphors for role of AI: a tool, an assistant, or a 'peer colleague'. The authors further discussed how medical professionals needed to adjust to new ways

of working and to new decision-making processes in collaborating with AI tools (Ibid.). Such findings complement the arguments by Fosso Wambda et al. (2023), where the authors highlighted the importance of processes for facilitating the adoption of generative AI.

From a general decision-making perspective, it has been proposed that the use of generative AI affects the users' judgements in hypothetical moral questions (Krügel et al. 2023). Yet, any evidence of such impacts has not been described in business contexts. Furthermore, one might wonder if there might be nuances to these preliminary findings in organisational contexts, where decision-making scenarios can vary greatly.

There is, however, only much speculation and very little empirical evidence of how organisations have reacted to the fast developments in generative AI systems' capabilities and how these systems are being integrated into working practices and decision-making processes in organisational contexts. Therefore, additional nuanced descriptive empirical evidence is needed to provide information about how these generative AI tools are being used in decision-making processes in organisational context as well as providing information of the potential departmental effects of such use. Especially case-based information will be helpful in potentially providing clarity to the different contexts in which generative AI might be helpful in augmenting human decision-making, and what the impacts of use might be in organisations.

From a regulatory perspective the rapid advancement of AI has raised ethical concerns, prompting calls from top AI experts and industry leaders for regulatory standards to mitigate associated risks (Future of Life, 2023; Perrigo, 2023; Costigan, 2023). The European Union released the first regulation on artificial intelligence: EU AI Act, setting up rules for AI use based on risk levels from unacceptable risk, high risk, and limited risk AI systems (European Parliament, 2023). Considering the emerging AI regulation, providing empirical evidence which can form a backdrop for organisational policies is therefore also important. Businesses must understand and guide how AI should and should not be used in work and decision making in organisations.

2.4 Summary of theoretical background

This chapter has discussed the intricacies of AI, decision-making, and the use of AI and specifically generative AI in work and decision making in organisational contexts. It has provided a foundation for a later discussion around how the findings from this study might amend or complement earlier findings and theory. The complexity of decision-making in organisational contexts warrants a nuanced exploration of how generative AI systems are being used in organisational decision-making and what effects such use of generative AI systems might have on individuals and departments, in order to provide empirical evidence of said phenomenon and thereby address significant knowledge limitations in the literature.

In general, organisations are faced with decision-making scenarios that are routine, demanding less cognitive effort, and non-routine, necessitating more cognitive processing and problem-solving abilities. How generative AI is used in these routine and non-routine scenarios should be investigated thoroughly considering the specific contexts. Also, it is not known whether there might be differences in generative AI use behaviours depending on the potential consequences of a bad decision. Furthermore, considering that organisational decision-making is characterised by boundaries in rationality, the impacts of the use of generative AI on these aspects of organisational decision-making is intriguing.

AI systems have been used either to augment or to replace human decision-making in different contexts. Here, too, the introduction of generative AI systems leads us to raise a few questions regarding how the use of such systems are influencing the decision-making processes. Is the use of generative AI systems a time saver in decision-making, and if so, then why? Furthermore, are generative AI tools being used more broadly, for example in assessing alternatives, weighing options or in developing plans or analyses? Are organisations looking to use generative AI to replace human decision-makers in some contexts, and if so, how? Are generative AI systems being used as virtual advisors, and how, then, might they be enhancing human-machine collaboration in organisational decision-making?

There is only much speculation and very little empirical evidence of how organisations have reacted to the fast developments in the capabilities of generative AI technology and how these technologies are used in work and decision-making in organisational

contexts. Therefore, empirical evidence is needed to provide information about how the introduction of these generative AI systems is influencing organisational decision-making. The contributions of this study will be theoretically insightful, as well as practically useful, as the aim is to provide information which can facilitate learning and nuanced understanding of the topic, contributing to more informed decision-making regarding adoption of generative AI in organisational contexts.

Moving forward in this thesis, the focus will shift from a discussion of theory to the presentation of the methods of this study, articulating the research design as well as ethical considerations and limitations.

3 METHOD

The limited knowledge available about the use of generative AI in organisational contexts invites an exploration in how generative AI systems are used in work and decision-making in organisations and what the organisational impacts of such use might be. We should be interested in not only understanding the scope and breadth of AI usage in decision-making, but also in understanding more nuanced aspects of the phenomenon. Considering the lack of previous empirical evidence on this specific topic there is much to be explored.

Providing case-based knowledge facilitates learning and nuanced understanding of a phenomenon (Flyvbjerg, 2011). Regarding the aim of this study, which is to explore how accessible generative AI technologies are being used in work and decision-making processes in organisational contexts, and what effects might be observed of such use, it makes sense to present nuanced information instead of attempting to present generalised rules (Flyvbjerg, 2011). In exploring the contemporary phenomenon of increasing use of generative AI in organisations, I have selected research questions which aim to primarily answer 'how' such generative AI systems are used in organisational decision-making and 'what' effects such use of AI systems might have. In order to sufficiently be able to answer the research questions, I have decided to use the multi-case study methodology.

The main purpose of this study is to facilitate learning through providing nuanced insights and information through the results of the explorations of this study, which can be used theoretically for further research and practically to enhance organisational decision-making regarding work, management, organisation and organising. Therefore, this study can be thought of as a descriptive study revealing empirical evidence of a new phenomenon.

3.1 Case selection

According to Robert Yin's (2018, p.46) definition, a case study is an "empirical method that investigates a contemporary phenomenon (the "case") in depth within its real-world context". For this study, the contemporary phenomenon is the use of generative AI in organisations. The cases in this study are five separate departments within a single organisation. Cases have been selected based on the anticipation to generate

interesting findings provide revelatory information about the topic of this study, regardless of whether the cases provide similar or contrasting results.

3.1.1 Screening of organisations

For the exploration of generative AI use in work and decision-making, a one-phase approach to case selection (see Yin, 2018) has been made. I firstly listed organisations which I could study, to which I had connections to. I quickly concluded that any organisation should be interesting with regards to this phenomenon. As I want to describe what is the ordinary in the selected organisation, I should not attempt to explicitly seek out an organisation which have reached an extraordinary AI development maturity. This allows this case study to describe how an organisation might be adopting generative AI systems to their work and decision-making and describe the potential individual and departmental effects of such AI use. Secondly, I evaluated whether the organisations might have a structure which allows for replication. However, Yin (2018) suggests that intensive screening should be avoided at all costs, and that the screening procedure should be as streamlined as possible.

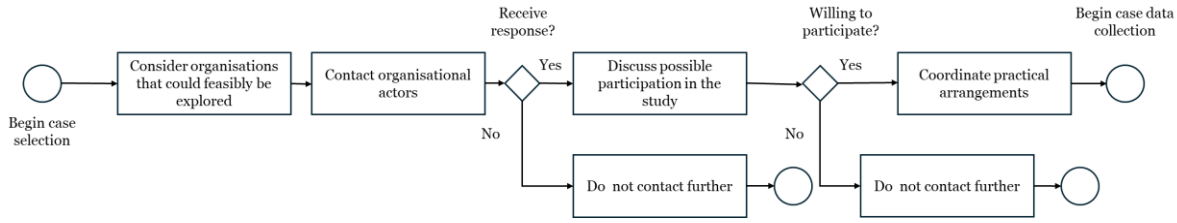


Figure 1 Case selection process. (a subprocess within the process of conducting the case study)

Therefore, representatives within several organisations were contacted and a few discussions were held with representatives of four different organisations. Ultimately, the organisation for this study was selected after a meeting with the representative of the organisation, who expressed interest in being part of the study.

I concluded that this organisation is suitable for this study for two main reasons. Firstly, it represents a relatively standard organisation in a standard industry. If studied, it should be a good example of an organisation operating in the age of increasing use of generative AI. Regardless of this organisation's AI adoption maturity, this organisation will provide us empirical evidence of how this phenomenon is taking

place in an ordinary[1] organisation. Secondly, due to the ordinary structure and operational nature of the organisation, the selection of this specific organisation allows for replication of this study.

The meeting with the organisation's representative was held in November 2023. From here on, a pseudonym, Lambda, will be used when referring to the organisation in which the entities of the multi-case study operate. We agreed that Lambda's representative would provide a non-disclosure agreement (NDA) for me to review and sign. Furthermore, we agreed that I would draft a research contract which outlined the aim of the study and my position as a researcher in their organisation. The main function of this contract was to ensure clarity of that I am neither a consultant nor an employee of Lambda, and that I will have access to Lambda's operating environment, documents, IT-systems as agreed with Lambda's main representative, and that I will be interviewing and observing parties of interest within the organisation. In the beginning of December 2023, I signed the NDA, and both me and the representative of Lambda signed the research contract.

3.1.2 Selecting cases for multi-case study

It is usually considered that when compared to a single-case study design, a multiple-case study tends to provide more trustworthy findings (Yin, 2018; Bryman & Bell, 2011). For this study, the primary unit of analysis is departments[2]. This approach provides the opportunity to conduct a multi-case study of several departments within one organisation to highlight contextual differences in generative AI use in work and decision-making and of the potential effects of such use. The decision regarding unit of analysis was made addressing the limitations of this study, which, being a Master's thesis, requires the work to be completed in a limited time and only by one researcher and with limited resources. Through conducting a multi-case analysis of several departments within a single organisation I try to provide interesting findings through a workload that is manageable for a student to conduct in limited time. This is also addressed as a limitation of this study later in this chapter.

[1] Ordinary in the sense that although the performance and operations are impressive, the structure and operations of the organization are like many other in the world.
[2] However, due to the nature of the study of generative AI and work and decision-making in organisational contexts, there will be a significant amount of describing of how individuals are using generative AI and what effects such use has on individuals, because it leads on an aggregate level to a department-level analysis.

Cases for this study was selected together with the representative of Lambda. During a meeting on 15.12.2023 together with Lambda's main representative and an employee from the HR department, we discussed potential departments of interest. We concluded together that the cases would be departments from the so-called back-end functions of the organisation. Although I first considered that 3-4 departments would suffice, being aware of the workload of analysing a single case, we ultimately ended up with selecting five departments as the cases for my study. The departments in question are 1) the HR department (HR), 2) the purchasing department (PU), 3) the customer service department (CS), 4) logistics department (LOG), and 5) the marketing department (M).

The reason for opting for five departments was done based on the anticipation of gaining information from as many contexts as possible, which ultimately would provide more empirically interesting information for all. However, considering the constraints of the length of this thesis, a strategic choice was made to balance the breadth of contexts with the depth of detail in describing each case. Thus, while the study covers many cases, a more concise description of each case will be presented, adhering to the length limitations of this thesis.

3.2 Participants

In this study, only the relevant information for presenting the results of the study will be described to the reader, and much effort will be placed in anonymising the organisation, the departments (i.e., the cases) and the units of data collection (such as individuals).

The organisation in which the multi-case study takes place is a group organisation led mostly by its retail store business in the Nordics. Lambda employs totally around 1700-2200 employees, operating through a few subsidiaries. The turnover during 2022 was between 400-600 million euros with an operating profit ranging from 30-60 million euros. If simplified, the group operates retail operations with 30-65 stores and outlets in the Nordics with consumer goods products. The group has a logistics subsidiary operating advanced warehouse management and logistics operations, supporting Lambda's store operations among a few other Lambda's subsidiaries with their own smaller operations. Within Lambda, the parent organisation supports each

subsidiary with a group level IT-department, HR department, Security-department, and Purchasing-department.

As described, five cases were selected to participate in this study. In total, 31 separate employees of Lambda have participated in providing insights for this study. 12 scheduled interviews were conducted, and 19 persons were interviewed during a field day in Lambda's offices. All personnel but one was part of one of the five departments. The only interviewee not part of any of these case departments was Lambda group's CEO.

3.3 Data collection

Case study evidence can come from several sources such as documents, archival records, interviews, direct observations, participant-observation, physical artifacts, and more. Each source of evidence has their strengths and weaknesses, but in aggregate they form what is the strength in case studies; nuanced and well-grounded information about the case being studied. Much evidence in this study was gathered through interviews.

3.3.1 Scheduling interviews

Case study interviews were scheduled and coordinated in the following way. Firstly, Lambda's main representative for this study kindly made meeting proposals for each of the managers of each department, where they were asked if they wanted to participate in the study and if the proposed time of meeting was suitable. After the meeting proposal was sent to each manager through a meeting calendar invite, I sent a new invitation for a meeting, where I asked if the time of the meeting is still suitable, and where I presented a personal data collection consent form (Appendix 2) and asked the participants to familiarize themselves with it.

From the initial interviews with the managers of each department, I asked whether there were others from their department I could interview, which in all cases led to the scheduling of further interviews within the case departments. In total, 12 scheduled interviews were conducted with the average length of the interview being approximately 59 minutes (lengths varied from 30min - 85min).

Furthermore, 19 persons were interviewed during field work. The interviews during the field day were more unstructured in nature than the scheduled interviews. The

average length of these interviews was approximately 16 minutes. Full list of participants can be found in Table 1.

Case department	**Role**	**Code**	**Interview date**	**Length (min)**
Human Resources	HR Director	HR1	02-Jan-24	80
Human Resources	HR specialist	HR2	03-Jan-24	71
Purchasing	Commercial Manager	PU1	03-Jan-24	60
Customer Service	Customer Service Manager	CS1	05-Jan-24	70
Purchasing	Category Manager	PU2	05-Jan-24	63
Logistics	Logistics Director	LOG1	08-Jan-24	41
Marketing	Marketing Director	M1	10-Jan-24	85
Customer Service	Customer Service Supervisor	CS2	10-Jan-24	41
Logistics	Production Manager	LOG2	12-Jan-24	30
Human Resources	Human Resources Specialist	H3	15-Jan-24	10
Purchasing	Data management specialist	PU3	15-Jan-24	5
Purchasing	Translator	PU4	15-Jan-24	10
Marketing	Ecom media content creator	M2	15-Jan-24	30
Marketing	Digital media content creator	M3	15-Jan-24	30
Marketing	Digital media content creator	M4	15-Jan-24	30
Marketing	Marketing content creator	M5	15-Jan-24	3
Marketing	Marketing content creator	M6	15-Jan-24	3
Customer Service	Customer service team member	CS3	15-Jan-24	30
Customer Service	Customer service team member	CS4	15-Jan-24	30
Customer Service	Customer service team member	CS5	15-Jan-24	30
Purchasing	Data management responsible	PU5	15-Jan-24	15

Purchasing	Buyer	PU6	15-Jan-24	10
Purchasing	Buyer	PU7	15-Jan-24	10
Purchasing	Category Manager	PU8	15-Jan-24	15
Purchasing	Category Manager	PU9	15-Jan-24	10
Purchasing	Category Manager	PU10	15-Jan-24	10
Marketing	Studio producer	M7	15-Jan-24	15
Marketing	Studio content creator and editor	M8	15-Jan-24	15
Group	Group CEO	G1	19-Jan-24	50
Marketing	Loyalty manager	M9	22-Jan-24	30
Communications Manager	Communications Manager (External and Internal Communications)	HR4	26-Jan-24	60

Table 1 Case participants

3.3.2 Preparing for and conducting interviews

All recorded interviews were semi-structured. Preparing for the interviews a broad interview guide was developed (see Appendix 3) according to broad themes that I considered could be interesting based on the literature. Each interview question in the guide can be connected to a broader theme. The questions were designed to prompt descriptions of examples of real-world scenarios. Such descriptions usually provide reliable and relevant material from which to draw interpretations during the analysis (Kvale, 2007).

The beginning of the interview always consisted of a briefing of what the purpose of the interview is, how data will be handled, my confidentiality agreement with Lambda, among other consent of participation related matters. Furthermore, with a few people, we agreed that they would be able to read the draft of the analysis to ensure, firstly, that whatever is published does not contain any details that should not be published, and secondly, that the analysis fairly depicts the interviewees' perspectives.

The interview guide was used as a structure that was followed to the extent that seemed reasonable with each interviewee. In some interviews we discussed aspects which were not directly outlined in the interview guide, but which were relevant considering the overall themes of the interview questions. In all interviews I as the interviewer was the

one who directed the discussion, in a semi-structured manner, allowing for some off-topic discussion too, in case such discussions would prompt interesting findings from the respondents.

Each scheduled interview was recorded and transcribed using the transcription tool provided in Microsoft Teams. The recorded interview was archived in my personal SharePoint environment (Hanken School of Economics -owned Office 365 licence), and the recordings and transcriptions could be accessed through Microsoft Stream. During the same day of each interview held, a preliminary analysis of the specific interview was conducted by writing notes and highlighting and writing up comments that were interesting for this study.

3.3.3 Other forms of data collected

Documentation was also available in the study, which has its strengths of being broad, covering a longer period and can be rather specific and stable (Yin, 2018). Documentation, that has been analysed as part of this study have varied from intranet content such as blog posts and guides, organisation structure documentation, logistics operations diagrams, images of facilities, as well as digital reports.

As already mentioned, I was kindly invited to spend a day at Lambda's office facilities interviewing employees and observing their daily work. I arrived at their offices at 9am and left the premises at 4.30pm. Most data collected during the field day was through unstructured interviews with employees. I took notes of these conversations with my notebook and pencil, which I then digitized into my case study database as digital notes.

Furthermore, I was able to observe the employees in their daily activities. I could listen to their conversations during their coffee breaks. I participated in the lunch break with a group of 15-20 persons. I observed meetings being held. I heard what operative problems some were facing. I could observe the customer service agents at work. These casual observations provided rich insight into the human intricacies of organisational daily life at Lambda, such as office culture, the mood of employees, and the nature of interactions held between employees.

The general atmosphere of all interactions with Lambda's personnel was nothing but welcoming and positive. Everyone were interested in what I was doing, and we had interesting discussions ranging from the nature of human rationality to the humorous

examples where generative AI had been used. For the welcoming nature of my time interacting with Lambda's personnel I am very grateful.

3.4 Case study database

As per the recommendations by Yin (2018) I used a case study database to consolidate notes for each interview. In a Microsoft Excel file, I had sheets for

a) the interview guide
b) the overall themes of the questions
c) a table consisting information per held interview, such as name of interviewee, department, role, code, interview date, interview length, and overall notes of the interview
d) freely written thoughts written after the field day based on my experiences there
e) spreadsheet for thematic analysis
f) pivot table regarding for thematic analysis, and
g) a sheet for a table summarising the findings for each case.

Detailed notes from each scheduled and recorded interview were kept in the transcription Microsoft Word-files of each interview. Transcription files were labelled according to the code of the interviewee. This database allowed for structured storage and analysis of findings.

3.5 Data analysis

Although data collection can be done from multiple units of data collection, the units of analysis i.e., the cases, are only the selected departments. The strategy for data analysis was based on Yin's (2018) discussion around different data analysis strategies for case studies. From the outlined strategies, the inductive approach of working with the data from "the ground up" was deemed appropriate. This approach is suitable for the discovery of new concepts or patterns which might guide for further analysis (Yin, 2018).

The initial analyses of data started almost immediately after initial data collection by conducting preliminary analyses of the interview transcripts. Comments were added to interview transcripts noting interesting insights. Furthermore, an overall summary of the interview discussions was added in the case study database. This process was

conducted for each scheduled long-form interview. Furthermore, as data had been collected from the field work, as well as from analysing documentation and Lambda's intranet, a more holistic analysis of all data was done to understand possible patterns, insights, or concepts.

With all interview transcriptions available, I decided to improve the structure and holistic analysis of the interviews by conducting a thematic analysis of the qualitative interview data, based on the Gioia Methodology (Gioia et al., 2013). A depiction of the logic of thematic analysis is shown in Figure 2

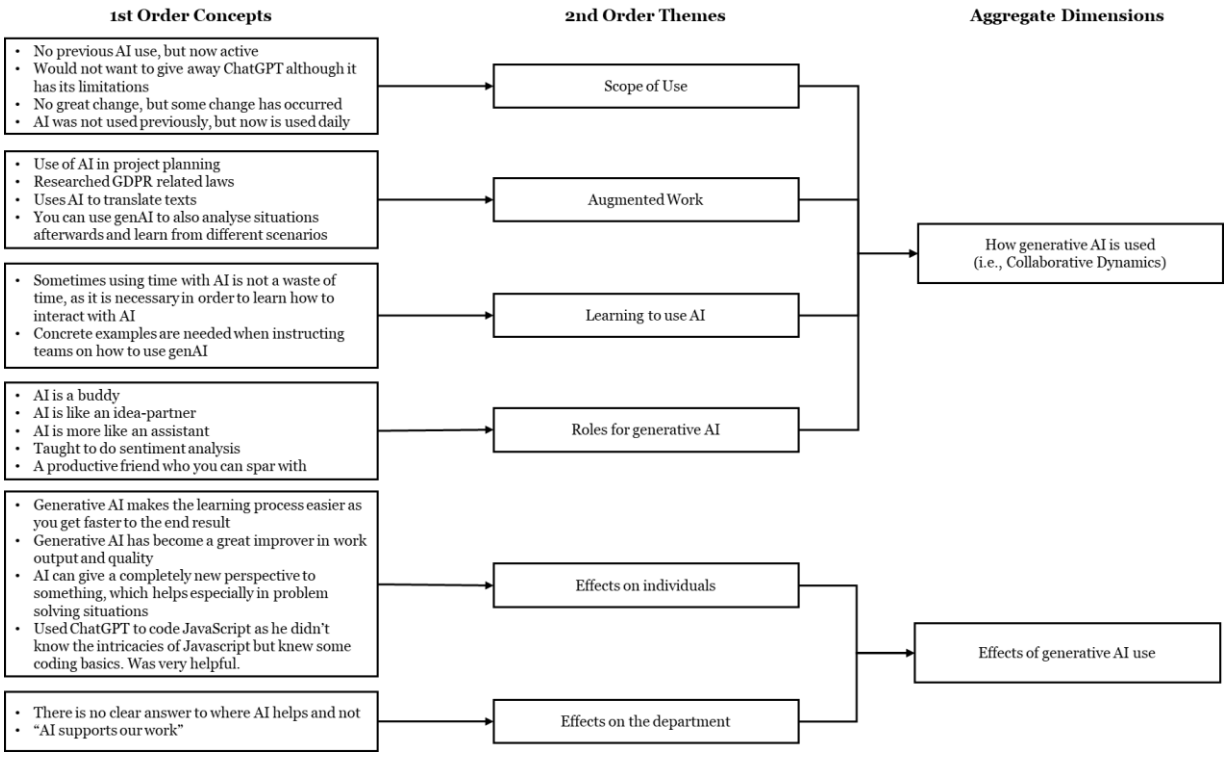


Figure 2 Visualisation of thematic analysis of qualitative data

This thematic method of qualitative data analysis helped in creating structure for a more cohesive cross-case analysis, as it became easier to analyse similarities and contrasts across cases. With a thematic analysis, notes in the interview transcripts, notes of field discussions and experiences, notes regarding visual imagery and documentation, a process of holistic, but nuanced data-analysis was conducted. This process led to the case descriptions, which ultimately form the form the essence of my cross-case analysis and structure for discussion of results.

This method of data analysis has supported the exploration of vast amounts of qualitative data in a coherent and structured manner. Yet, quantity of themes and

aggregate dimensions has not been the end all be all of data analysis. Importance has been placed on nuanced experiences gained during the case study period, such as the observations of daily life at Lambda's office and non-verbal cues and other forms of communications.

3.6 Ethical considerations

This study follows the ethical principles and guidelines laid out by Hanken School of Economics, which complies with the guidelines by the Finnish National Board on Research Integrity. As Lambda's representatives have kindly let me study their organisation in relation to a topic which is sensitive and, in some cases, contain information which relates to Lambda's competitive advantage, a prioritised effort has been placed on protecting the anonymity of Lambda. In keeping with that theme, much information that are not necessary for describing the findings has not been published. Only such information of Lambda will be presented which is highly relevant to support the presentation of the study results. Therefore, the focus in presenting the results from this case study will be in concisely presenting the results. Context will be provided only as much as is necessary to ensure that the study can be replicated in the future, and that the reader can understand important contextual differences in generative AI use in organisational decision-making.

Consent has been asked by every participant in this study. No data has been gathered from anyone who has not approved consent for participating in this study. Only the minimum amount of personal data has been collected. Such data will be securely stored. Risks for data subjects has been evaluated. Data has been anonymised immediately to protect the confidentiality of the case organisation including the employees. No sensitive personal data will be obtained. Data is stored securely according to Hanken School of Economics guidelines.

This thesis has been reviewed and approved by the responsible representative of Lambda before the submission of this thesis. Personal data, including anonymised data which is connected to identifiers such as personal identity codes, which no longer are needed for the purposes will be removed immediately after they no longer serve any purpose to carry out the research.

3.7 Use of generative AI in the process of writing this thesis

In working on this thesis, ChatGPT has been utilised in a supportive manner to spar with regarding improving the clarity and cohesiveness of some of the original textual drafts generated by me. Furthermore, I have asked ChatGPT of feedback on how to enhance the structure of certain chapters. Nothing in this thesis has been directly copied from ChatGPT and added to this thesis. I have merely considered if some of the ChatGPT generated outputs could be used to improve my original writing. All thinking and argumentation are my own. Furthermore, from a practical perspective ChatGPT helped in sparring with reminding things to consider when conducting the case data collection.

3.8 Limitations

This study has several limitations, which will be addressed shortly here. Sample diversity is limited to one organisation and its departments, due to the lack of time and resources available. Furthermore, despite the efforts to remain objective, researcher bias and subjectivity can influence the interpretation of data. Similarly, respondent bias is possibly present, as the views expressed by some participants might be influenced by a common bias of willingness to provide answers that they believe are what are expected or favourable, instead of their true thoughts.

It must also be acknowledged that the data collection methods and the relatively short period of data collection limits the accuracy and completeness of the information available from the organisation. Furthermore, the limited information that I can present about Lambda to ensure anonymity and confidentiality is a limitation due to the compromise in amount of contextual nuance that can be presented.

4 CASE FINDINGS

This chapter delves into the essence of this multi-case study by presenting the empirical findings from the data collection and analysis efforts. As is usual for a multi-case study, each case will be explored individually, highlighting the unique insights and revelations specific to their operational context. This approach allows capturing the nuanced dynamics within each department. Following the individual case descriptions, this chapter transitions to a compact cross-case analysis.

4.1 The HR department

At Lambda, the HR department is a compact organisation that manages Lambda group's HR-related matters such as payroll (managed internally), retirement matters, insurances, employee development, recruitment guidelines, promotions guidelines as well as general employer image. Furthermore, the HR department is responsible for Lambda's security related matters, which includes employee safety from both a physical and mental standpoint, as well as store and product safety, including the management of alarms, cameras, guards, and security. The HR department also provides the basis for decision-making around ethical guidelines, as it manages Lambda's ethical workgroup. Finally, the HR department manages information security and GDPR-related matters.

The HR department decides on guidelines, operating models and procedures as well as manages operational aspects around these matters for Lambda group with 2,000-2,500 employees in several countries. All this is done by a compact team of under 15 persons, led by the HR-director. Teams within the HR department include payroll, security, and a general HR-team.

Apart from the operational aspects of the HR department's work such as payroll, much the HR department's work consists of supporting and helping other departments and managers within the group to function effectively and according to Lambda's overall strategy. The HR department therefore advices other departments' managers in employee, security, and ethics related topics, ensuring that there are sufficient guidelines and information available in order to support the group's operations. However, whenever there is need for work that is significantly outside of the HR

department's capacity from a resourcing standpoint, the HR department outsources that work.

In their role at Lambda, the HR director (HR1) plays a crucial role in advising Lambda's managers to align their decisions with future considerations and to ensure they are lawfully and strategically sound. HR1, an individual interested in digital transformation and the constantly changing dynamics of modern work, acknowledges the growing importance of generative AI in current and future work environments. Therefore, HR1 has placed a great emphasis in their department on the need for AI-related competencies. In addition to interviewing the HR director, three employees in the department were interviewed (HR2-4).

The HR department is primarily responsible for creating guidelines and decision-support materials for Lambda. While HR1 handles most major and strategic decisions within the department, operational decisions like developing learning module content or templates for recruitment postings are made by other HR employees such as HR2 and HR3. Depending on the role, some staff may make organisational decisions on their own, such as in the case of HR4, who works as the external communications manager. Yet, in HR4's case, often other department members are involved. For decisions that significantly impact the group in various ways, the CEO is also involved. The HR-director noted that most of their work is making organisational decisions every day.

4.1.1 Use of generative AI at the HR department

For decision-making processes within both individuals and in the HR department as an entity, generative AI is being used in some contexts but not all. In the HR departmental context, AI tools had not been used in operations before 2023. In other words, the level of AI use in the HR department has risen from non-existent to relatively active. Yet, the current scope of generative AI use in decision-making still varied from person to person. The HR-director (HR1), who is the main decision-maker in the HR department, reported using generative AI tools like ChatGPT daily. The other respondents (HR2-4) also reported using ChatGPT in much of their work. However, HR1 reported that some at the HR department were not active users of generative AI tools yet.

As will be described, the role of AI in human-AI collaboration in organisational decision-making at the HR department was not to automate, but to augment, often used in operational work scenarios to assist human work and decision-making processes, for example in generating reports, writing texts, creating employment opportunity announcements, developing learning modules, translating messages, developing excel formulas, generating images for intranet, and more. In other words, it seemed clear that the respondents were experienced users of ChatGPT, and used it to support them in their operational work,

For example, I had a discussion with HR3 during my visit at Lambda's offices, who shared insights into their frequent use of generative AI, particularly ChatGPT, in work and decision-making processes. They described that ChatGPT had become a significant tool in their daily work, often kept open on their computer as a ready assistant for various situations. Most notably, HR3 said to use generative AI to spark initial ideas for creating content such as job advertisements. In a way, this initial ideation by generative AI effectively initiated the type 2 processing phase, enhancing the intuitive, type 1 processing of the individual. Thus, it seems generative AI not only supports but sometimes even lays the groundwork for organisational outcomes in certain operational tasks. HR3 perceived generative AI as a valuable tool, describing generative AI as a very knowledgeable work buddy and assistant, implying AI's role in their work as more than a mere tool.

Another employee, HR2, whom I had interacted with actively during this case study described their use of generative AI in a similar way. They described generative AI as an "idea generator". Furthermore, they added on the utility of ChatGPT reminding the user of something when collaborating with it. *"When you discuss things with the AI you always get something like – aha, didn't remember that thing"* (HR2). They noted that the use of generative AI often streamlines their thought processes, providing an overall boost in work efficiency. HR2 highlighted the benefits of ChatGPT providing fresh perspectives or providing aspects which HR2 had forgotten to include, particularly in e.g. planning content for organisational training modules.

In planning and in content creation, HR2 saw ChatGPT as a helpful sparring partner, due to the iterative way they worked with the AI tool, discussing different options and ideas in developing content for the employee learning module. The same could be

concluded by what HR1 described. HR1 described their use of generative AI in operational decision-making as in speeding up work a lot when generating blog posts or organisational reports. *"In my work I need to write a lot of reports and messages, and in different languages etc., so it (ChatGPT) basically speeds up the work a lot"* (HR1).

In the HR department, generative AI had also in some situations been used in enhancing decision-making in more complex tasks, requiring planning and specialised knowledge. A practical example of this was shared by HR1 using ChatGPT in project planning, noting how it contributed significantly to creating a comprehensive project plan structure, saving multiple days of work by several individuals. The quality of the plan, produced together with generative AI was of good enough quality to use in moving ahead with the issue at hand.

> *"It (the project plan) considered many different perspectives and was presented in generally a very holistic way. /.../ We humans think often in tunnel vision, and that was lacking completely in there (the plan generated by AI). There was a lot of unnecessary stuff, too. But much rather that way. If a human had made it, then there would've been a risk that some stuff would've been missing. /.../ I liked it when the human subjectivity was lacking. It was a really good draft." -HR1*

This example highlights how the use of generative AI can broaden the capabilities of the human in areas where the initial skill level would not be sufficient to perform the task at similar speeds and with similar quality. Furthermore, it is possible that ChatGPT had also helped counteract the planning fallacy[3], by providing a broader, more comprehensive, and arguably objective plan. HR1 also reported having used ChatGPT to support in assessing various options using the SWOT-method.

From a teamwork perspective, HR2 provided examples where they had used generative AI to discuss what an employee development discussion process should be like. Yet another example of a task in which the humans had collaborated with generative AI, as if it was a colleague part of the team, contributing with ideas and drafts.

[3] The common tendency of individuals or organisations to underestimate the time, costs and risks related to one's own plan (Kahneman & Tversky, 1979)

Lambda's communications manager, HR4, on the other hand specifically noted the usefulness of having ChatGPT as an accessible personal helper for sparring in more complex work-related situations, where one might not have anyone else to easily discuss the matter with.

> *"The threshold to ask for help from AI is very low. /.../ When I think I would want to discuss this with someone I remember that I have the AI there, with which I can spar my decision. For that, ChatGPT is actually surprisingly good. Sometimes the outcome is that you notice that you did quite a good job yourself, but sometimes you notice some detail, which you can add to your decision. /.../ In large parts it also develops one's own thinking in the way that you might remember it next time yourself."*

Interestingly, HR4 notes that one must remember to use the generative AI tool. It appears that the contexts in which using generative AI might not always be evident, but when exploring whether tools like ChatGPT can be of help, one can be positively surprised. This subtle notion provides nuance to how individuals learn to use generative AI in a broader array of tasks, possibly unlocking new and innovative applications to generative AI tools in organisational contexts. For instance, HR4 shared their experience of utilising ChatGPT to anticipate questions from external media reporters when they had reached out for comments on specific topics. Such approach for preparation appeared to be effective, arming HR4 with thought-out responses for potential additional questions.

Although the general sentiment towards generative AI tools like ChatGPT was very positive at the HR department, there naturally were instances where the use of ChatGPT had not led to a helpful outcome. For instance, regarding a certain detailed questions relating to employment law, ChatGPT had generally been able to answer correctly, but missed a key detail, which was noted by the HR employee. Such an example highlights the risks of relying on AI extensively in important, for instance legal matters. Yet, it seemed clear that the staff used generative AI to support one's thinking, and not replace the human judgement, balancing the use of generative AI in a responsible manner. Whenever ChatGPT had been able to provide utility in either minor ways or in more profound ways, it was seen as a positive thing.

Despite some limitations, generally all respondents from the HR department described that ChatGPT generally produces very good outputs, and that it most often

than not is a useful tool to work with in various work-related situations. These observations highlight the value of generative AI use in expanding and enriching the cognitive process in working with tasks that require thinking, planning and developing a structure and ideas.

For the HR department it seemed like the accessibility, low transaction cost and consistent utility associated with using AI tools like ChatGPT are paramount when understanding how AI is being used in a departmental context. Regarding the potential department level productivity effects of broad active use of generative AI tools like ChatGPT, some reflected that multimodal AI tools can equalise skills of employees in various ways. For instance, HR4 suggested that those less proficient in writing can augment their capabilities with LLM AI tools, leading to a more capable department overall, and to more flexible task allocation options from a management perspective.

Furthermore, based on the discussions with the department members, in situations where they themselves are experts, the utility of generative AI use was more in its capacity to remind of things to consider. On the other hand, in situations where they only held limited knowledge, AI was experienced as a knowledgeable assistant, elevating the individuals' capabilities in performing a more complex task, such as project planning or conducting more complex technical work, for instance in Microsoft Excel. It seemed also that ChatGPT is helpful in helping individuals to consider multiple perspectives in difficult situations, where we humans might have limitations in our perspective due to lacking knowledge of many different topics.

These examples would suggest that although the utility of broad use of generative AI tools to augment work and decision-making in various operational tasks can be subtle, the broader impact of an active use of generative AI tools by the workforce can be significant, considering the impact on the department's performance overall.

4.1.2 AI use culture at the HR department

Through the active encouragement towards exploring AI tools by the HR-director, it appeared that there were many who were using generative AI actively in their work, augmenting their decision-making most often in more operative contexts rather than strategic. HR1 commented that the HR department in their bi-weekly meetings,

among other things, often discussed the practical examples in which generative AI tools had been used in their working contexts. It is possible that this team-level discussion of AI and the exploration of practical examples has influenced the broader scope of AI use among the staff.

Regarding collaborating with AI, for the experienced users of ChatGPT it was apparent that one naturally must modify the AI generated outputs to tailor them to one's own context. Furthermore, the way in which ChatGPT was described as useful as a buddy and work assistant implies that the utility of generative AI use in work and in decision-making comes from persistent dialogue with the AI tool, instead of expecting utility from one-prompt outputs. Working with multimodal generative AI tools to find utility seems like an iterative and a multi-phased process, which in many ways is different than working with machine learning AI tools, where the AI solution generates an outcome which cannot be reiterated through discussion or additional context provided by the human.

Department staff also reported that they always evaluate the AI generated outputs based on their own expertise, and naturally never blindly trust the generative AI outputs. All respondents seemed aware of many of the limitations of current generative AI solutions. For instance, HR1 discussed regarding the notion that if you write a prejudiced prompt to ChatGPT, then you might receive an answer that somewhat aligns with your prejudices. Therefore, there was a consensus that the human should be in the driving seat and should stay somewhat critical to the AI generated outputs. Regarding the role of AI at the department, HR1 summarised it as a "g*ood servant, bad master"* (HR1).

HR2, an experienced ChatGPT user, suggested that the lack of familiarity and the reluctance to experiment with generative AI tools might be a reason why many at Lambda generally have yet to start using generative AI more actively in their work and decision-making processes. It was indicated that without taking some time to explore and learn to use these AI tools, individuals might have challenges in recognising the breadth of opportunities where generative AI tools could be used to significantly enhance their effectiveness on an individual level, which in turn could lead to departmental productivity benefits overall. Based on the experiences from the HR department, it seems likely that the department-level encouragement and individual

willingness to experiment with generative AI tools might play a crucial role in generating an avid AI culture, where staff would use generative AI in innovative ways to help being more productive. As speculated, such active AI culture encouraging use of generative AI in various working contexts to augment one's decision-making processes, might lead to significant productivity benefits for the department overall.

4.1.3 Summary of case HR

In summary, the HR department at Lambda is an example of a department where the approach to integrate generative AI into work and decision making has been proactive and highly encouraged by the department leader. While usage of generative AI still varies among individuals, the use of generative AI in work is rising, and already active among many. Generative AI is used to augment decision-making processes, in various operational situations. Currently, no organisational decisions were being automated by AI in the HR department. Nor had generative AI been used in augmenting human judgement in strategic and higher risk decisions. These findings suggest that generative AI is used as a valuable tool in enhancing operational efficiency of individuals within the department, leading to possible improvements in decision outcome quality, and in offering new insights and perspectives that might have been otherwise overlooked.

4.2 The purchasing department

The second case is the purchasing department of Lambda. Although all departments are important at Lambda, the purchasing department has a relatively driving role at this organisation, as the purchasing department is not only responsible for managing the portfolio of products sold at Lambda, but also for steering Lambda's emphasis in market offerings and sales initiatives. Therefore, the purchasing department is in many ways in the heart of all things commercial at Lambda.

The purchasing department is led by a management team, including the Purchasing Director, Head of Assortment, Commercial Manager, among others. The retail sales product offering is organised into categories, each managed by a Category Manager, supported by Product Specialists and Buyers. The size of each category can vary depending on the commercial focus of the product category. Furthermore, in the department, there is a team manging the supply chain, as well as a team managing product information. Essentially, the purchasing department plans, manages, and

makes decisions regarding demand, offering, commercial targets, sourcing, suppliers, purchasing, retail pricing and more. Furthermore, the purchasing department plays an important role in cooperating with the marketing department in planning and managing campaigns. The department also manages supply chain planning (however, logistical operations are managed by the logistics department, which will be covered later) and product information. In total, the purchasing department consists of ca 60 persons.

In decision-making, each Category Manager is accountable for driving all important purchasing related activities for respective product category. However, for important decisions the Category Managers lean on members of the purchasing management team to make final decisions. In this department, it was stated that a fair number of important decisions regarding business outcomes are made based on human reasoning, intuitions, and gut feelings. Many of such decisions are often done together with the sales and marketing departments. Yet the foundation of many decisions originate from earlier choices made by the Category Managers or the purchasing management team members.

Regarding decision-making in the purchasing department, there is a noted tendency towards more traditional, less analytical decision-making approaches among some department leaders. Nonetheless, Lambda employs data-driven tools, such as a purchasing planning system to, among other things, forecast future sales volumes for products. However, human instincts are still much valued. *"There simply is no system in the world that can tell us that a certain thing will become a trend, or that by focusing on these products you can quadruple sales volumes in this category…"* (PU1). Therefore, the estimates by the purchasing planning system are frequently adjusted based on the Category Managers' insights and judgements, reflecting a blend of utilising data and human judgement in the decision-making process.

During the case study, discussions were held with ten purchasing department team members (PU1-10) with roles ranging from Commercial Manager, Category Manager, Buyer, Translator and Data Management Specialist (see table 1).

4.2.1 Generative AI use at the purchasing department

The utilisation of generative AI tools in work and decision-making in the purchasing department was limited throughout the duration of this case study. Out of ten individuals that I engaged in discussions with, only three reported relatively active use of generative AI tools, mainly ChatGPT, in their daily work. While the majority were aware of ChatGPT, its application in their work was minimal. Despite this, everyone showed a universal interest and curiosity about the potential applications of AI technologies in an organisational context. In other words, the sentiment towards AI seemed positive. Where generative AI tools were used, it was evident that their role was augmentative, used to support decision-making rather than automating it.

PU4, a translator within the product information management team, described their use of generative AI as a foundational part of their current work. They demonstrated use of a generative AI tool for translating product descriptions, including critical safety information. Essentially, this process involved allowing the AI tool to produce the initial translation, which then is reviewed and refined by PU4 to ensure translation quality. The use of generative AI in the translation work context has significantly accelerated the pace of their work, for which PU4 expressed deep appreciation. Despite the efficiency gains, PU4 emphasised the continuing need for human oversight in the translation process.

The use of generative AI technologies was seen as levelling the playing field in some work contexts, enhancing the overall productivity in routine tasks and decision-making by augmenting individual capabilities. Although their use of generative AI was rather sporadic, a few category managers at Lambda had started leveraging ChatGPT for creating product information and product sales texts for marketing materials. A few category managers, both sitting in an office room, commented that some individuals, who previously may have delegated writing tasks due to their perceived weaknesses in the area, now find themselves capable of producing high-quality texts with the assistance of ChatGPT. PU2, one of the Category Managers, highlighted how generative AI tools like ChatGPT might allow those who might not excel in writing to nonetheless contribute effectively to creating product descriptions and marketing content. This adoption of ChatGPT reflected a slight shift in how some tasks traditionally requiring creative, and grammatically correct writing skills is approached.

From a departmental standpoint, the purchasing department also contributes to different marketing campaigns regarding the product related content. PU1 illustrated the impact of ChatGPT use on this type of work.

> *"I use it (ChatGPT) in my own work in e.g. campaigns to broaden my own thinking. So, if we want to create a certain campaign in the spring, and I know these elements and these products, but I use the AI to generate some ideas for me, then the AI produces almost annoyingly good, you know, in a way creative outputs." -PU1*

This AI augmented idea generation had enriched the content with new perspectives which might have not been considered otherwise, broadening the scope of human cognitive processing.

> *"If given a good prompt, the AI gives really good thoughts. And the human cognitive capacity is very limited. Well so is the AI's capacity, but it is at least much broader than ours. That means that it provides new ideas to my own thoughts and new perspectives, which can help me move forward in a better direction with my decisions." -PU1*

PU1 showcased how they had used generative AI successfully to augment human decision-making in deciding which types of products to include in a certain campaign, which sales arguments to use, and even provide ideas which humans hadn't thought of related to the topic at hand. PU1 highlighted that generative AI tools like ChatGPT consistently offer valuable input without drastic fluctuations in performance that humans often experience, describing generative AI tools metaphorically as never having "bad days". This consistency and reliability, combined with the broad knowledge which tools like ChatGPT offer, seemed very helpful for the employees who had used ChatGPT in their work from time to time. Both PU1 and PU8 acknowledged this extensive knowledge, emphasising how it support their work in product description creation considering Lambda's vast array of different products.

It could be sensed that the use of generative AI in creative work doesn't diminish human creativity; instead, it amplifies it. PU1 noted the advantage of generative AI in brainstorming work, describing it not hesitating to contribute with ideas, regardless of their quality, which might foster a more expansive and creative brainstorming process.

Ultimately, despite a relatively low activity of generative AI use at the purchasing department, such AI technologies, mainly ChatGPT, were used to augment some work and decision-making within the department. ChatGPT was used to improve ideas and

to produce text for marketing related content. During the case study, I noted comments of employees' reporting that their capabilities to write more effectively had been elevated when using ChatGPT in their work.

4.2.2 Potentials of generative AI use in the purchasing department

In our discussions, it became clear that while generative AI was not widely used in the purchasing department, everyone showed a keen interest in its potential applications. Together with the different people I spoke to, we delved into a few potential possibilities.

Firstly, we explored how generative AI could enhance human analytical capabilities in conducting risk assessments and in creating contingency plans for unpredictable events, such as disruptions in the Suez Canal. This could potentially enhance preparedness and improve risk management in decision-making. Secondly, with a few purchasing department members we also discussed about the intriguing possibilities of generative AI use in mass modification product information data. This sparked a lot of interest among a few people, but it was recognised that such applications of generative AI require specialised knowledge beyond casual use of ChatGPT, necessitating expert guidance in deploying AI for data management tasks at scale in a live system environment. Thirdly, one Category Manager, PU9, expressed a need for clarification on organisation's guidelines on generative AI use. With uncertainties around company policies regarding tools like ChatGPT, some were a bit hesitant to explore the capabilities of such tools.

The nature of work in the purchasing department, heavily reliant on human judgement and coordination, suggests limited straightforward applications for generative AI tools such as ChatGPT. Nonetheless, adapting to utilising generative AI in work and decision-making could offer advantages such as enhancing problem solving, negotiation planning, risk analysis, and more. Ultimately, generative AI can enhance human capabilities as an assistant in less obvious contexts, too. However, in the purchasing department, no clear evidence of such use was observed.

4.2.3 Summary of case purchasing department

In summary, the engagement with generative AI at the purchasing department can be considered relatively low. For the most critical purchasing related decisions,

generative AI was not used in any way. None had considered using generative AI for more complex problem-solving tasks or assessments of any kind.

The primary use of generative AI in decision-making was in the speeding up the cognitive process of creating product related textual content or in translating documents, as well as enhancing human creativity in campaign related content creation. These findings are in line with the suggestions by experts and practitioners, that generative AI plays a role more in enhancing than replacing decision-making (Daugherty et al., 2023; Britt, 2023; Chuma & de Oliveira, 2023). However, the overall use of generative AI as, for example, a virtual advisor in various contexts remained limited. It is possible that the staff at the purchasing department perceived the utility of generative AI tools such as ChatGPT in more complex analysis and problem-solving scenarios as low. This might partially be due to a lack of widespread encouragement and awareness of the potential applications of generative AI tools.

4.3 The customer service department

The third department that was explored was the Customer Service (CS) department. At Lambda, the CS department is a centralised service centre responsible for managing email and phone contacts from customers regarding matters related to Lambda's retail operations. The CS department is responsible for addressing customer inquiries, resolving complaints and claims, and providing assistance to customers regarding products or services offered by Lambda. Key activities include handling phone calls and emails, managing customer interactions through various channels, and ensuring a positive customer experience. Currently, the CS department manages customer service inquiries for three countries in the Nordics, with an employee count of ca 30 persons, some of whom are students working part time.

CS1, the Customer Service manager, was the first person to hold such a position at the company, starting the customer service centre from scratch based on CS1's long history in the customer service operations within the retail industry. The centralised centre for customer service has been operational now for approximately 6 years, which means that the department is still relatively young compared to the other departments. The department is structured so that CS1, the Customer Service Manager, manages the operations and the development of the CS department. Supporting CS1 in the operational management of the department is CS2, the Customer Service Supervisor,

who is involved in overseeing the day-to-day operations of the CS teams. CS2 works also with operational customer service tasks. Additionally, the CS department has Shift Leaders, who are responsible for managing the individual customer service specialists during their respective shifts. Everyone but CS1 handles customer inquiries on a daily basis. Furthermore, the roles at the customer advisory work are divided into those handling email inquiries, and those handling phone calls, due to high quality standards for grammar and language correctness.

In addition to CS1 and CS2, discussions were held with three other employees of the customer service department (CS3-CS5).

Regarding decision-making in the CS department, the customer service specialists make daily decisions on behalf of Lambda based on general guidelines for customer service set forth by the management of the CS department. In complex customer service problems, the decision-making is escalated first to Shift Leaders, and then to the Customer Service Supervisor who most often can resolve the issue. In some rare cases, the Customer Service Manager has been involved in deciding on how to manage a certain case.

Other decisions regarding the function of the CS department, such as work shift scheduling, resourcing, technology and tool needs, budget management, policy and procedure decisions, as well as innovation and interdepartmental collaboration is mostly done by the Customer Service Manager, often, however, in accordance and collaboration with other managing personnel at Lambda's Retail operations.

4.3.1 Generative AI use at the customer service department

Put simply, the use of generative AI at the Customer Service department was minimal during the study period. This was rather surprising given the department's frequent engagement in writing activities and advising customers through email — tasks where LLM AI tools could significantly contribute. For instance, CS2, the Customer Service Supervisor shared an instance of using ChatGPT to rephrase a response to a demanding customer.

> *"It was in a tough situation where the customer was asking for simply too much. I used it (ChatGPT) to formulate my answer to not be so blunt. And there it then was. The message became quite good when I modified it a bit closer to our tone of voice." -CS2*

Despite recognising the utility of using ChatGPT in this context, it remained an isolated incident rather than a regular practice. The reason for this remained unclear.

CS1 had also tried writing a speech with AI, but nothing more. The three others (CS3-CS5), who worked as Shift Leaders and Customer Service Specialists, had not explored generative AI tools at all in their roles. There was, therefore, no evidence of usage of any AI tools to augment work related decision making and work tasks.

Based on the interviews, as well as office discussions and observations, several factors might explain the low adoption rate of generative AI tools like ChatGPT within the CS department. The primary focus of departmental development, under the Customer Service Manager's direction, had been on optimising operational workflows and support structures for Lambda Retail's store operations rather than on fostering a digital or AI-driven culture. Additionally, CS1's involvement in a significant Point of Sale (POS) system project as well as a customer service chat-system project had shifted attention away from exploring and implementing new digital tools, such as generative AI tools, into daily operations and decision-making processes.

Moreover, a general lack of clear encouragement to use generative AI tools like ChatGPT in the CS department might have stemmed from a certain amount of hesitancy and scepticism towards AI technologies. This hesitancy was evident in conversations particularly with the Customer Service Manager, who displayed a mix of interest and caution about the use of AI. *"It interests me that what kind of text would it provide if I gave it certain frames. /.../ But I want to know more about it, so that I'm not fooled /.../. I certainly want more facts about it."* (CS1). It is possible that this cautious stance could have influenced the department's overall engagement with generative AI technologies, which might have contributed to a situation where the team had not played around with generative AI tools. Such lack of exploration to the capabilities of different generative AI tools might have prevented the department from potentially improving aspects of their work, such as enhancing the capabilities of those individuals who may not excel in writing. Such expansion of individuals' writing capabilities could create a more flexible department, where more team members could participate in answering emails, which could enhance the performance of the department.

However, after discussing with the CS department team members about the potential applications of generative AI tools in work contexts, there was a broad interest among the team members. Conversations with CS3, CS4 and CS5 highlighted the potential for generative AI to help in their work by enhancing the quality of customer interactions in written communication. Furthermore, CS1 discussed how AI technologies overall have the potential to lower operational costs or to increase the efficiency of the current workforce. Everyone (CS1-5) noted that generative AI tools would help in making the customer service work more interesting. The possibility of generative AI automating routine inquiries was deemed particularly appealing, as it would allow specialists to work with more complex and rewarding customer advisory tasks. What is more, CS1 noted that the active use of digital technologies and AI tools could enhance the company's employer image as a forward-thinking organisation.

4.3.2 Summary and analysis of case customer service department

In summary, the Customer Service department at Lambda demonstrated a notable absence of generative AI utilisation for enhancing work and decision-making both on individual and departmental levels. As discussed by Trunk et al. (2020), the efficacy of machine learning AI supported decision-making is related to the training and AI literacy of the users. It is possible that this scenario in the case of large language models and generative AI technologies mirrors such machine learning related insights. While the sentiment towards AI among the department staff ranged from optimistic to cautious, there was a broad acknowledgement of the potential benefits of generative AI use. Yet, no real engagement with AI tools like ChatGPT seemed present. The lack of a digital culture encouraging the exploration of AI tools might play a big role in the low rate of usage of generative AI.

4.4 The logistics department

The logistics department plays an important role in supporting Lambda Group's operations, functioning as a critical link between the purchasing department and retail sales activities. This department is a sizeable organisation, operating multiple central warehouses for Lambda's retail operations, and managing retail claims. Essentially, this department acts as the bridge between the purchasing department's purchasing activities and the retail stores' demand, ensuring products purchased are efficiently received, stored, and dispatched whenever needed.

Therefore, it is of paramount importance for the logistics department that receiving, storing, and dispatching items is done as efficiently as possible to enable fast organisational responses to demand in the retail business. For the logistics department, the primary goal is to streamline these processes to enable swift organisational responses to retail demands.

From the logistics department, the study focused on the administrative part of the department. In other words, the logistical warehouse employees were not considered as units of data collection for this study. That said, interviews from the logistics department were conducted with two key figures: LOG1, the Logistics Director and LOG2, the Production Manager. LOG1 oversees department operations and leads the department's digital projects, which have had significant impacts to Lambda's business overall. LOG2, the Production Manager, is responsible for a team focused on ensuring digital automation within the logistics warehousing operations and at the logistics department overall.

4.4.1 Enterprise systems, machine learning AI, and generative AI at the logistics department

The role of the logistics department in Lambda is not understated. The department has received significant budgets to make logistical operations more efficient. In fact, the logistics department has made significant monetary investments into automating large parts of their warehouse operations, using enterprise warehouse management systems and robotics equipped with machine learning AI. This automation allows for handling large volumes of items much more efficiently than before such automations.

The high degree of automation relies on the quality of item data. If the input data for the systems is of incorrect quality, the system will be disrupted. However, if all data is correct, the automation rate that can be achieved in the warehouse operations is extremely high. Therefore, in the logistics department, the production team is needed, among other things, to ensure that all data for the systems is correct to ensure that high automation rates are achieved.

> *"It is extremely important that the item data is in order, because the automation is only as good as the data that it handles. If you don't have the data quality in check, then practically nothing works automatically at that point. That of course also puts requirements to*

> *other departments, such as for Purchasing, that the product data and dimensions are correct from the get-go." -LOG1*

This reliance of high-quality data from the purchasing department (which is responsible of creating and managing item data at Lambda) highlights a requirement of item data collaboration across departments.

Although there is an active use of machine learning AI in the logistics department to automate warehouse operations, the use of generative AI is quite different. The Logistics Director emphasized the department's priority on digitalising operations and enabling seamless electronic information flow between systems, particularly through EDI-messaging[4]. *"It's not a very timely topic for us at this point. /.../ We have focused mostly on to get everything digitalised and to get information to flow electronically from systems to systems with EDI-messaging and so forth. We have soon got everything digitalised, which helps us very much."* (LOG1). The focus on improving digital integration leads to a reduced need for manual handling of information between Lambda and its external partners, which, according to LOG1, brings performance benefits. *"All these electronical messaging and EDI messaging from suppliers and local logistics partners are such things that if we don't have those, then we need a much larger amount of people working with these things."* (LOG1)

At an operational level the logistics department deals with standardised processes of receiving, storing, and dispatching packages of different sizes. Therefore, it has been possible to create rule-based operations where digital systems and machines can replace much human manual labour. This approach has allowed the department to leverage technology to enable heightened levels of departmental performance. Exploring department-level use of generative AI solutions has therefore not been a priority for LOG1.

However, there is a role for generative AI use in the logistics department, too. The production team, which is responsible of maintaining digital workflows, has leveraged ChatGPT to enhance their efficiency in various technical tasks that.

> *"At first we used it as a more advanced information search engine, but now most use is such that we have some sort of end result we*

[4] Electronical Data Interchange messaging is a standardized format for the interchange of documents from one system to another, often used in sending and receiving documents such as invoices or shipping notices.

> *need to get to. And in order to get to this end result, it would require some learning and studying from us. Well here is where they (the team members) can take a shortcut so that they can more quickly get to the end result by using ChatGPT." -LOG2*

Not only is ChatGPT a helpful information source for the Production Team members, but it is also used as a tool for accelerated learning and solution planning and development, directly impacting the team's productivity and ability to achieve their goals. *"Especially in coding new repots it has been really helpful. When planning for how to create the report, and in developing the solution for getting the report out of the data, there they use ChatGPT quite much."* (LOG2).

The production team seemed to be a team of technical people, working with data, coding, and enterprise systems. It is, therefore, not surprising that the culture at the production team seemed very digital and technical. For this team, generative AI has become embedded in their work processes, serving as a resource for expanding their knowledge around various topics and aiding in planning and decision-making processes during problem solving scenarios and technical solution development. It seems like in technical tasks such as in development and coding, multimodal AI tools can be utilised effectively to teach individuals to solve technical tasks and to produce code, which the human can modify and decide to use in their solution. Any potential drawbacks to using generative AI in the production team's work was not noted.

The broader departmental impact of using generative AI in this manner is noteworthy. The use of ChatGPT as a resource for solution planning and development allows the production team to produce more extensive reporting to higher management, thereby informing higher order decision-making about warehouse operations, such as optimising fill rates and managing inbound and outbound logistics. This utilisation of generative AI to augment the capabilities of individual employees, enriching their decision-making processes, might have the significant extended effects to the logistics departments overall operational efficiency and performance.

4.4.2 Summary of the case logistics department

The logistics department at Lambda highlights a practical example of how AI technologies are utilised differently across various operational contexts, even within a single department. While machine learning AI is used to significantly automate rule-

based routine tasks, leading to significant clear operational efficiencies in warehouse management, generative AI is used as a powerful tool to enhance the individual human's problem solving and solution development capacity in more complex situations. There is a clear difference in accessibility, too. For automating warehouse operations, significant investments in both money and time have been placed in the development of such solutions. In contrast, generative AI tools like ChatGPT are accessible for everyone either free of charge or for relatively low cost.

Both AI technologies, when used effectively, bring significant operational benefits in different ways. The deployment of robotics and machine learning AI in warehouse operations has drastically reduced the need for manual labour, focusing the human effort on ensuring data quality for the automated systems. Meanwhile, the technical specialists in the production team, who form the backbone of the department's digital architecture, increasingly use generative AI to help in development of solutions supporting management decisions as well as maintaining the needed automation in the warehouse.

The usefulness of generative AI is not evident for everyone, however. The logistics director, an experienced logistics professional with extensive experience of digital projects, has yet to explore generative AI use in their decision-making processes. It might be that perceived utility of generative AI tools might play a big role in a person's adoption of generative AI in decision-making.

4.5 The marketing department

The final department in this study is the marketing department. The marketing department is responsible of planning, creating and publishing marketing content for Lambda's retail operations. Such content includes digital newsletters, email campaigns, social media content and advertisements, digital advertising content (images and videos for streaming services advertising), along with traditional advertising in print, radio and television. For the marketing department, collaboration with other departments is important. Campaign scheduling is planned together mainly with the purchasing department and retail sales department (which is responsible of managing the retail sales operations and reaching the sales volume targets set by together with purchasing department).

What is notable about the marketing department is the do-it-yourself nature of Lambda's marketing function. The marketing department plans 99% of the content themselves and produces almost all content themselves, using external services only for specialised radio or TV production needs. Despite managing a broad scope of marketing activities in several countries, the department functions rather effectively with a compact team of approximately 20 employees.

From the marketing department, nine members were interviewed in various depth (M1-M9) covering a range of different positions in the department, such as the Marketing Director, Marketing Content Specialists, Digital Content Specialists (see table 1).

4.5.1 *Generative AI use in the marketing department*

The scope of utilisation of generative AI tools at the marketing department was extensive, with every team member engaging with generative AI in their work in various intensity. Some reported using generative AI every now and then, whereas some had incorporated generative AI tools such as ChatGPT as a central part of how their work was conducted. The marketing director, M1, highlighted that the introduction of accessible and powerful generative AI tools has significantly changed the operations of the marketing department.

Before the introduction of generative AI, the use of AI technology had been in relation to an external service, which based on algorithms provided an estimation of return on investment per euro spent on a certain media category. However, regarding such strategic decisions M1 discussed how it was impossible to validate the algorithm-based estimations as there was no explainability of the output. It was difficult to trust the algorithm.

Generative AI tools such as ChatGPT are now, however, part of how the marketing department plans and creates their media outputs on an operational level. Yet again, such tools weren't used for work automation. Examples of generative AI's role in the department were both as an idea generator as well as technical sparring partner. M2, alongside M3 and M4, who collaborate on digital media content, sharing a working space in the office, shared how in their case ChatGPT helps combatting writer's block by initiating the creative process in content creation. The unbiased and consistent

source of assistance regardless of time of day and day of the week was much appreciated by M2. It was stated that humans aren't limitlessly fascinated of writing about certain products first thing on a Monday morning, while AI tools will consistently help in solving the challenge at hand. Furthermore, M2 appreciated how ChatGPT often can help in providing a fresh perspective to certain things – helping in problem solving and content planning.

M3 and M4 on the other hand valued the utility of using ChatGPT as a technical consultant in both simpler and more complex technical tasks. As an interesting example, M4 discussed how they together with ChatGPT had been able to code and develop more complex technical solutions (using the JavaScript coding language), which were beyond their initial skill levels. In this situation, the use of ChatGPT had broadened the team member's cognitive and technical capabilities, leading to heightened productivity. In fact, M3 expressed that although they have limited resources at the digital content team, ChatGPT helps in supporting their operations. For this team, generative AI use in augmenting work and individual decision-making seems to enable the team to operate at a higher productivity level and generate outputs which might've before been outside their capabilities.

In the marketing department's content studio, M7 and M8 discussed how ChatGPT is now a big part of the way of working. For M7, ChatGPT was a creative sparring partner, helping in not only generating ideas but discussing different ideas and processing thoughts together. M8, standing in their room with multiple screens, having ChatGPT visibly open, stated that ChatGPT is simply part of the way of working for them. From what could be synthesised from our discussion, M8 exemplified using generative AI tools with a very low threshold to spar their ideas and to constantly improve their own thinking and work outputs. M8 noted too about the limited resources of the marketing department as they felt that the studio team was a bit small, but that they were managing. To what extent the use of generative AI is enabling the studio team to operate a smaller team than what might be considered normal, falls under speculation. However, the use of such AI tools certainly was seen as a significant benefit for both M7 and M8.

When and how the use of generative AI in especially creative organisational work is not always clear. M1, the Marketing Director, offered nuanced thoughts regarding

working with generative AI. Effective use of generative AI tools, according to M1, requires tailored prompting and persistence. *"you need to be specifying your questions and teasing it a bit, and after a while you start to receive some remotely useful outputs."* (M1). Furthermore, it was highlighted that ChatGPT often creates generic ideas, which often lack the human touch necessary for impactful marketing ideas. The non-rational human way of thinking regarding concepts such as humour often can lead to unexpected results, which in marketing can be exactly what is needed. According to M1, this is a limitation for generative AI.

> *"The fundamental difference here is that in marketing, one plus one can be three, or it can be zero or it can be anything at all. That is why I think in creative marketing artificial intelligence is not even close to an optimal tool. /.../ If you give something abstract for it to think about, such as humour, well then it is simply predictable." -M1*

Despite some critiques, M1 acknowledged the value of generative AI in brainstorming when given a specific context or task to process. *"Artificial intelligence is at its best when it has a very big number of things it should analyse and consider which things would suit a certain context best and how these things are connected to one another. Then it is very good."* (M1). Although generative AI according to M1 is limited in its application for very creative work, there still seems to be utility in generative AI tools' ability to support in creative work. The utility of generative AI use might not always be clear. Although M1 spoke at times quite harshly of ChatGPT's quality of outputs, they still at the end felt that ChatGPT is immensely helpful.

> *"I'd never want to give away ChatGPT, although it has its faults at the moment. For one good idea you need 100 bad ones, and I'll gladly ask the bad ideas from ChatGPT, because often from the bad ideas, you can actually get some ideas which lead to something better and more interesting." -M1*

In creative work, the utility of generative AI use might not be in replicating human creativity, but instead in agitating human thinking through iterating ideas with the AI tool. Although ChatGPT might develop ideas which are bland, a human might still be able to iterate something creative from said bland ideas. Moreover, if given the proper context and a clear task, AI tools like large language models can ease the cognitive processing of humans and quickly provide creative ideas, which would not have been immediately apparent. Such examples provide nuanced descriptions of the human-AI collaboration in creative thinking, brainstorming and decision-making processes.

M10, who was responsible for loyalty members related communication, provided a slightly different view, seeing ChatGPT as a useful tool, but not a necessary one. *"Im not so hooked on it"* (M10). With many years of experience and a clear understanding of what was expected from them, M10 didn't feel the need to use generative AI as they reported not often suffering from challenges with creativity. M10's work process seemed clear and well developed, leaving M10 often with a good idea on what to write about when content creation tasks arrive to them. Such examples showcase how the benefits of generative AI use are nuanced. The context of individual preferences and experience level in specific tasks seem to produce variations in expected utility of generative AI tools. M10 reported to not have explored generative AI tools as much as the others but said to use it from time to time.

In the conversations with experienced generative AI users within the marketing department, it became clear that while accessible generative AI tools are not the solution for all work-related tasks, the marketing team members viewed the tools as very valuable to their current ways of working. The sentiment by many was that letting go of generative AI tools would be detrimental to their productivity. Those who had explored generative AI tools and learned to interact with tools like ChatGPT or other multimodal AI tools, often seemed to receive valuable insights enriching professional creativity or problem solving. As hinted by some respondents, the impact of broad usage of generative AI tools to augment the capabilities and work processes of the individuals in the department might have broad implications to the overall productivity of the department.

4.5.2 Generative AI and department-level work

The marketing department, where many were active users of ChatGPT, offers a clearer view into the potential departmental benefits and challenges of generative AI use. Firstly, it should be noted that M1 had commented that enabling a department-wide use of generative AI had been time consuming, as new ways of working around the use of generative AI had to be developed. The wide use of generative AI presented several possibilities, but some challenges too.

The opinions of M10 might reflect a broader departmental and organisational theme regarding how generative AI use might amend the dynamics of human resources at work. M10 stated that *"AI will enable in the coming years that those who aren't so*

highly educated or so, can be on a more similar level and that everyone can do anything" (M10), highlighting the broader impacts of individual generative AI use to augment work and decision-making. Furthermore, they stated that *"AI will not necessarily take jobs, but those people who have learned to use it will"* (M10). Such comments reflect both the potentials of generative AI use, but also the way in which such tools might now and soon change the workforce dynamics of organisations, placing a greater emphasis in AI literacy among the workforces.

Moreover, ChatGPT had in a series of conversations described and showcased early capabilities in assisting in complex qualitative data analysis. OpenAI's multimodal data analytics AI tool seemed capable of augmenting the department's analytical capabilities through guiding the staff through the process of coming to certain conclusions based on a question and a dataset. However, their example highlights a cautionary warning on reliance on accessible generative AI tools. The department encountered issues related to changing backend functionality of the AI tool leading to surprising limitations in the analytical capabilities of the AI tool, highlighting the risks of depending heavily on such generative AI for crucial decision-making. Nevertheless, this example showcased the opportunity for departments to use generative AI to expand their analytical capabilities, driving departments to increase the usage of data for generating data-driven insights, which otherwise might have been difficult or costly to acquire, to support in organisational decision-making.

From a strategic perspective, the department had tested using ChatGPT in advising in a more strategic question. Despite ChatGPT's articulate and compelling response, it was considered too volatile to use such information to make strategic decisions, as there was no way to understand whether the AI provided argumentation was reliable or not in such uncertain contexts. The risks were deemed too high. This cautious approach to generative AI use in strategic decision-making mirrors the earlier mentioned challenges faced with the use of the algorithm-based tools. It seems like the more a decision includes risk, the more the managers want to understand the base for judgement. In these high-risk contexts, ChatGPT was considered lacking explainability.

However, with a widespread use of generative AI tools in more operational tasks, it seems like the department was able to handle a lot of work with a modest team size. It

was expressed by a few department members that ChatGPT certainly contributes to their efficiency, enabling them to manage extensive work with limited resources. It is impossible from this study to causally attribute department level efficiency to the use of ChatGPT. However, it seems likely that that this department's productivity has been positively affected by the development of an active AI use culture.

4.5.3 Generative AI use culture at the marketing department

As has been described already, the Marketing department had a very active approach to integrating generative AI, particularly ChatGPT, into their daily operations, which seemed to have a positive impact on the performance of the department. Based on the case analysis, this active engagement with AI in the department most likely can be attributed to a combination of departmental leadership, training, the nature of marketing work, and the collaborative work environment.

Firstly, generative AI use had been actively encouraged from the outset of such tools. Such a departmental stance on encouraging use of digital tools to help in the department's work might have laid the foundation for a wide curiosity and exploration of the potentials of generative AI in the working contexts of the employees.

Secondly, the marketing department was the first department to receive trainings for the use of ChatGPT. These trainings, which included multiple sessions where different use cases of ChatGPT were explored, might have impacted positively to encourage use and provide concrete examples and joint learning on how to use generative AI. It seemed as if most everyone knew how to 'work with AI', i.e., providing correct context and being persistent in discussing with the AI tools, instead of expecting a one-prompt success.

Thirdly, the marketing department seemed to be a fertile ground for generative AI use, as the benefits of each employee having a creative, technical, consistent and competent sparring partner seemed to be clear. In the creative process, generative AI tools can aid in brainstorming, drafting and refining ideas, providing value as an additional knowledgeable digital colleague in the working process. Lastly, the department's hybrid work model, encouraging in-office work on designated days, might have helped in fostering an AI use culture where employees have together worked with each other and with AI to conceive ideas, produce content or work with technical challenges.

Despite the positive sentiment towards AI, it seemed as if the department remained aware of generative AI tools' limitations, particularly in their propensity to generate inaccurate or irrelevant outputs. M1's reflections highlight the need for a critical approach when working with AI, underlining the need for human oversight in assessing AI generated outputs, especially in areas where one is not an expert themselves.

> *"And you know, in best cases it can create very compelling almost scientific text /.../ and for someone like me who doesn't know about this topic anything, these things sank in me like a false coin. But how in the hell should I know if what it is telling me is correct or if it is simply making things up."*

M1 showcased the capability to understand the limitations of human knowledge and how it may be difficult to validate the AI generated outputs. Such a balanced approach to the use of generative AI exemplifies the maturity of the department's digital culture with regards to engaging with AI generated outputs. Generative AI, mostly ChatGPT, was embraced in its strong areas for low-risk iterative creative work and technical sparring, while acknowledging and mitigating its limitations in more high-risk contexts.

4.5.4 Summary of the case marketing department

The marketing department reveals a dynamic and comprehensive case of human-AI collaboration in both individual workflows and decision-making to both departmental operations and organisational decision-making. Several key points are worth highlighting.

The marketing department demonstrates how the widespread adoption of generative AI has changed the departments ways of working, possibly influencing its productivity by enhancing the creativity and the capabilities of the individuals in the department. There seems to be an active culture of AI use, where exploration of and innovating with AI tools has been encouraged early on. The department has revealed how generative AI has been used to overcome creative challenges such as writer's blocks as well as enhancing the technical capabilities of the team members. By using ChatGPT as a creative and technical sparring partner in various contexts, it seems like the department members have broadened their cognitive and creative processing. This widespread use of generative AI, mainly ChatGPT, has arguably contributed to the

department's ability to manage an extensive scope of work with a compact team, although causality to such claims cannot be proven through this study.

While the department explored the strategic and analytical capabilities of generative ChatGPT, there still were limitations and reasons for caution to relying on AI for judgement in high-risk decision-making. Recognising these limitations, the department seems to have been naturally able to position the use of generative AI to augment human creativity and technical prowess, rather than replacing it.

The marketing department's case illustrates the potentials and challenges of integrating generative AI into the department, when supported by a culture that encourages exploration, learning and innovation. This case exemplifies how generative AI tools has been widely used in a department to augment human work and decision-making, while still navigating the limitations of such systems, providing nuanced insights into the suggestions of various academics and practitioners regarding the potentially transformative effects of generative AI use in organisational contexts.

4.6 Cross-case analysis

The cross-case analysis section aims to compactly highlight both contrasts and similarities between the cases to offer an even more holistic understanding of how generative AI is being used in work and decision making in an individual and departmental level in the organisational context. Table 2 provides a general summary of the findings of each case.

Department	Individual AI Use Perspective	Department Level AI Use Perspective	AI Use Scope	AI Use Effects on Departmental Performance	Department's AI Use Culture
HR	Varies among individuals; used to augment decision-making in both simple and complex tasks.	Relatively active; used to augment various tasks. AI use supported departmental decision-making.	From non-existent to relatively active, augmentative use in work and decision-making processes.	Enhances efficiency and quality of decision outcomes in both individual and teamwork.	Highly encouraged by leadership, active culture of AI use, shared learning. Positive sentiment.
Purchasing	Limited; mainly for creating product related content, translations and campaign ideas.	Limited; no evidence of use in significant department-level decisions.	Limited scope. Only a few members used from time to time.	Contributes to efficiency in creating textual content and equalising skills of staff, contributing to task allocation flexibility.	Lack of widespread encouragement and awareness of potential applications. Overall sentiment was curious.
Customer Service	Minimal; isolated instances of generative AI use in customer communication.	Notable absence of generative AI utilisation for work and decision-making.	Minimal, with potential for broader application in customer communication.	None reported. Potential to improve operational adaptability and resource allocation.	Low adoption rate, influenced by low encouragement to use AI. Mix of hesitant and curious sentiment.
Logistics	Used to enhance efficiency in technical tasks and solution development.	Clear difference in the application of machine learning AI for automation and generative AI for individual problem-solving.	Diverse, from enhancing digital workflow efficiency to aiding in technical tasks.	Significant operational benefits in automation and individual problem solving, possible broad departmental impact.	Digital and technical, with generative AI becoming embedded in certain teams' work processes, but not all.
Marketing	Extensive; used for creative ideation, technical tasks, and overcoming work challenges.	Widespread use of generative AI, changing operational methods and possibly influencing productivity.	Extensive, incorporated in various intensities for creative and technical work.	Positively affects creativity and technical capabilities, contributing to managing work with a compact team.	Active culture of AI use, encouraged exploration, and innovation with AI tools.

Table 2 Summary of study findings for each case

After a comparative analysis of the cases, a few main differences and similarities should be highlighted.

4.6.1 Differences across cases: adoption of generative AI in work and decision-making and the AI culture

The primary difference between the cases might be aptly described as the differences in scope and depth of use of generative AI tools in work and decision-making processes both on the departmental level. When exploring each department, a large variance in adoption of generative AI tools in work and decision-making processes could be noted, as simplified in Table 3.

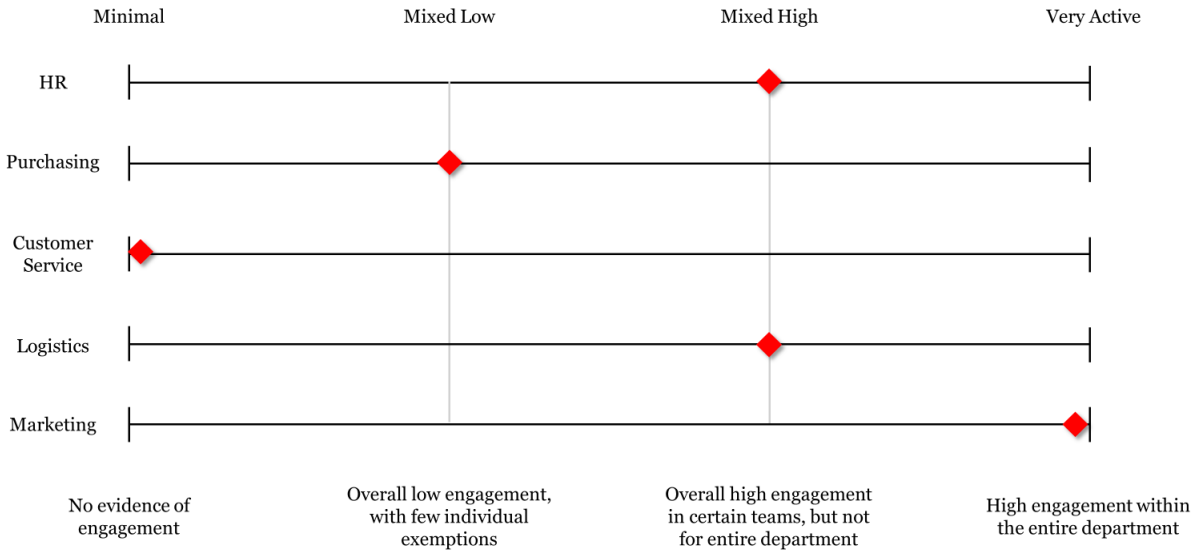


Table 3 The level of adoption of generative AI in work and decision-making at each department

From a holistic perspective, such differences might be explained by the remarkable differences in departmental encouragement to explore AI tools in work-related context to uncover potential application areas for such tools, where productivity benefits could be attained. From an outside perspective, such differentiating variable could be labelled as the activity of an AI culture within the department and its teams. The marketing department and HR department showcased clear active department-level leadership for encouraging the active use of generative AI technologies to augment own capabilities and working processes, including the decision-making processes. While the logistics department hadn't been directly encouraged by the logistics director to utilise generative AI in work, the production team, a group of highly technical and digitally savvy individuals, had formed an active AI use culture on their

own, showcasing similar AI adoption behaviours as in the marketing department. In all departments where there was an elevated use of generative AI in work, practices such as sharing practical tips for AI use was reported. Furthermore, in both the marketing department and in the HR department, AI related training activities had been organised.

To the contrary, in the customer service department and in the purchasing department there seemed to be a lack of departmental encouragement to explore generative AI tools in work to augment individual skills or to enhance both work and decision-making processes.

Neither in the purchasing department nor in the customer service department, had there been department level training organised on generative AI or any sharing of practical examples of how to use generative AI tools effectively and when they might be utilised. It seems like taking the time to explore generative AI tools and 'playing around' with it is an important part of the learning process for individuals to learn to understand and remember when and how to utilise generative AI in various contexts, in both simple and more demanding work-related tasks, and thereby in the decision-making processes of the department.

4.6.2 Similarities across cases: sentiment, augmentation, and human-AI collaboration dynamics

Across the studied cases, three main similarities emerged. Firstly, a sense of curiosity and positive sentiment was experienced in all departments, with individuals across departments recognising the potentials of generative AI technology to enhance work productivity. The general belief was that AI will have an increasing role in work, enabling augmentation or automation of monotonous tasks and supporting in creative and technical problem solving. Secondly, it was apparent that all use of generative AI tools was augmentative to the human work and decision-making processes. Thirdly, individuals' approach to collaboration with generative AI seemed to be balanced, recognising limitations of generative AI outputs. Individuals reported working with AI by validating and modifying the AI generated outputs. This scepticism seemed particularly apparent in high-risk decision-making situations, where there often was a lack of availability to validate the AI generated outputs. Although many reported

finding utility in seeking support from generative AI tools, the final judgement still remained within the human user's responsibility.

4.6.3 Summary of cross-case analysis

In summary, it seems that active and mature AI usage correlates with departmental encouragement to AI exploration, sharing of experiences, and AI related training. While the current application to generative AI tools was to augment rather than to replace human work and decision-making, future developments might. While the overall sentiment towards AI was positive, users recognise the limitations of generative AI tools, using such tools in a balanced manned, with human oversight in decision-making.

There is a notable variability in generative AI utilisation across departments, with a range of roles for generative AI, ranging from tool, to assistant, to buddy, or even a consultant. Despite the active use of generative AI by some teams and departments, quantifying the departmental productivity benefits might be challenging due to the augmentative nature of human collaboration with generative AI tools. However, not all found generative AI equally useful.

Next this thesis moves to a discussion of how generative AI is used in work and decision-making discussing earlier research and early empirical evidence of generative AI use in business contexts.

5 DISCUSSION

Although one cannot and should not make generalised conclusions from this study, the findings from this study can provide important insights for academics and practitioners alike in considering further research or the use of generative AI in business contexts. Based on the knowledge from the cases and the multi-case analysis this thesis will move to a final discussion regarding the research questions of this study, aiming to address a lack of empirical evidence on (1) how generative AI tools like ChatGPT are being used in work and decision-making processes in organisational contexts, and (2) what the individual and departmental effects of such AI use might be. Furthermore, in this section, how the findings from this study might amend or complement previous research will be considered.

5.1 How generative AI is used in work and decision-making

In this section the question of how generative AI was used for work and decision-making in the departments is discussed.

5.1.1 Scope of generative AI use in work and decision-making processes

Regarding the breadth of AI use in work and in decision-making processes, the findings from this study support some of the expectations speculations regarding the increasing extent of use of AI in work. Although there was significant variance in the scope of AI use within the departments, the overall rise in the level of AI use at Lambda generally supports claims of leaps of AI usage at scale in operational tasks (Chui et al., 2023a), and claims by experts regarding AI technology usage becoming common beyond the IT departments (Ishwarbaharath, 2023).

Furthermore, this study provides evidence for practitioners' speculations (e.g. Mollick, 2022) on the utility of generative AI tools beyond mere content creation, providing evidence of generative AI use in broader array of tasks such as in project planning and evaluating alternatives. Such tasks require assessment of options and weighing options, activities where generative AI tools like ChatGPT have been used to support human thinking.

However, especially in strategic or high-risk decision-making contexts, challenges remain particularly in validating AI generated outputs. Despite using generative AI for

strategic decision-making is not without its challenges, the findings from this study suggest that the application areas for AI use in supporting complex decision-making might be increasing. Therefore, more investigation into the capabilities of generative AI to effectively support in strategic decision-making is needed.

5.1.2 Augmentation vs automation

The utilisation of generative AI tools at Lambda presents a contrast to machine learning AI applications and systems, which often is used to automate patterned routine tasks. At Lambda, generative AI, mostly ChatGPT, had not been used for direct automation of tasks or decision-making. Instead, the role of generative AI has been to augment human efforts in a broad array tasks.

Based on the case evidence, this can be attributed to the low transaction costs (both metaphorical and literal) associated with exploring the utility of generative AI tools in various scenarios without significant expenses or risks. This ease of access allowed individuals to use generative AI tools in diverse contexts as virtual assistants rather than work automatons. Evidence of this could be seen in especially the HR department, logistics department and marketing department. While the benefits in productivity are easily quantifiable in the case of e.g. Lambda's automated warehouse, the subtler, augmentative benefits to enhancements in productivity experienced by generative AI use are indirect and difficult to measure.

Experts and practitioners have suggested that the future of AI use will be a mix of augmentation and automation, instead of entirely leaning on replacing human judgement (Daugherty et al., 2023; Britt, 2023; Chuma & de Oliveira, 2023; Smith, 2019). This study supports this view of the future, showing much empirical evidence of generative AI use to enhance human work and judgement rather than to replace. Although generative AI was not now used to automate any decision-making, some departments hinted at the potential for generative AI automated work in the future, proposing leaving interesting and complex tasks for humans and automating certain functions. Such developments would, however, require significant investments and expertise in contrast to the current use of accessible generative AI tools like ChatGPT.

5.1.3 Learning to identify appropriate situations for generative AI use

When analysing how generative AI is used in departments there seemed to be a relation with the users' familiarity and engagement with the AI tool and the effectiveness of utilisation. The findings from this study indicate that the more individuals explore generative AI tools like ChatGPT, the better they become at identifying appropriate applications for generative AI use in business contexts. Individuals experienced with generative AI tools frequently utilised such tools across various scenarios from creative to technical.

The observations from this study showcase the potential importance of hands-on exploration with generative AI tools over mere instructions. Such active exploration might be important considering the potentials of generative AI to support all individuals. Some respondents showed rather surprised, positive reactions when informed of the potentials of using generative AI tools for example in scenario planning or in analysis assistance. Informing the employees about these possibilities sparked interest in using tools such as ChatGPT more often to help navigate problem situations. Therefore, fostering an active AI culture within departments, supported by leadership encouragement, experience sharing, and training, might play an important role in broader generative AI adoption and effective and ethical use.

These insights align with previous research on AI systems and organising, suggesting that the effectiveness of AI assisted decision-making depends on user training, AI literacy (Trunk et al., 2020) and the user interactions with the system (Edwards et al., 2000). Moreover, this study reinforces Göndöcs and Dörfler's (2024) conclusions that professionals must learn new ways of working together with generative AI. The extent to which an individual is an experienced in collaborating with generative AI at work might be an increasingly relevant skill in modern work.

5.1.4 Roles for generative AI at Lambda

Generative AI tools (mostly ChatGPT) were used effectively in several different types of work contexts. ChatGPT was used in content creation and creative work as an idea generator and a creative assistant. Furthermore, in technical work such as in coding or working with Microsoft Excel, ChatGPT was used as a technical assistant, or even as a consultant. In such contexts the depth of use varied from reminding the user how to do certain things, to ChatGPT advising the user in both planning the solution and

in creating draft code for solution development. In planning and assessment work, ChatGPT was used as a colleague and an assistant.

The findings from this study support the descriptions by Göndöcs and Dörfler (2024), in that it seems like generative AI tools, like ChatGPT, have many roles in the organisation, ranging from only supporting the human in minor ways, to using it as a tool for e.g., summarising documents, and even for advising the human on how to conduct a completely novel technical task or advising how to navigate a challenging social situation. Therefore, the accessible conversational multimodal generative AI tools, such as ChatGPT, Gemini, Bing, etc., were at Lambda used and sometimes even perceived as more than mere tools, providing utility in various ways to both the individual and the department as discussed above.

In some areas AI augmented work had processed far, such as in translation, to a point where the AI tool automated much (but not all) of the human thinking, processing information and producing outputs at a much faster rate than what a human could. Although some have suggested that AI use in translation should focus on intelligence amplification rather than replacement of human ability (O'Brien, 2022), the findings from this study regarding translation provide some empirical evidence of the increasing replacing role of AI in augmenting translation work. However, the human's role remained as a supervisor and an expert, only modifying certain aspects of the text, and importantly, bearing the responsibility of the work overall.

5.1.5 Collaborative decision-making using generative AI tools

Concerns about the inconsistency of ChatGPT's advice influencing users' judgements on moral questions have been noted in early research on the effects of using ChatGPT for decision-making (Krügel et al. 2023). This study provided varied approaches to collaborative decision-making using generative AI, with many respondents exemplifying capacity for healthy scepticism towards generative AI outputs in organisational contexts. For instance, when own knowledge of a subject was low, some respondents reported understanding that whatever the AI is generating might be false information wrapped in compelling argumentation, thereby not relying on the AI generated output too much. Others validated AI generated outputs against their own expertise on the subject. Especially in decision-making contexts with higher consequences or risks, users exhibited heightened scepticism. However, it is

impossible from this study to understand whether, and how much, users are influenced by the AI generated outputs in decision-making, and whether there are significant differences in low risk and high-risk decision-making scenarios.

While there are risks associated with using AI to augment decision-making, users generally showcased the ability to balance conversational generative AI use to place a healthy reliance on human oversight and judgement. Figure 3 illustrates the general decision-making process generated based on the findings of this study, emphasizing the important role of human judgement as the final step when arriving to decision-making outcomes.

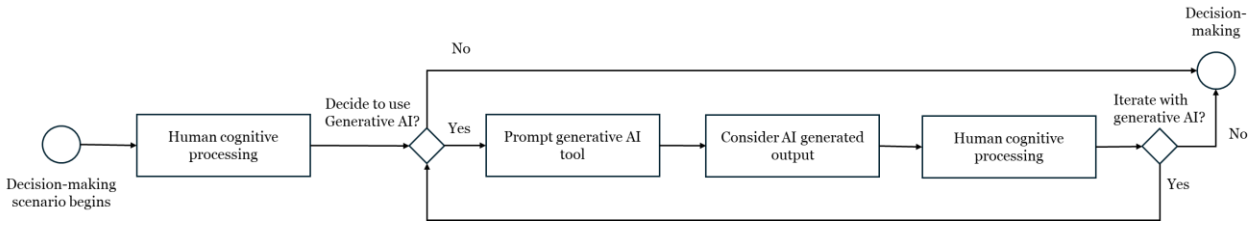


Figure 3 Human-AI collaborative decision-making process, using conversational generative AI tool

It is possible that experienced users recognise the variability of generative AI outputs but manage their application sensibly based on context – taking a more critical stance in higher stakes situations, and a more accepting one in scenarios with fewer risks. Perhaps users of generative AI tools engage in weighing the potential benefits against possible drawbacks, where benefits include enhanced productivity and the drawbacks could include the consequences of bad decisions. However, this is purely speculative.

Nevertheless, ethical and responsible use of generative AI tools should be actively encouraged at an organisational level and such responsible generative AI use should be part of organisations' AI use policies. Furthermore, as also recommended by Krügel et al. (2023), and evident from this study, too, users should receive training regarding how AI generated outputs might affect human judgement.

5.2 The potential effects of generative AI use on individual and departmental productivity

The emerging evidence regarding how generative AI tools are being used in work and in decision-making processes by individuals and departments prompt certain amendments into the ways we consider how AI use enhances operational productivity.

Although this study has a departmental perspective, as generative AI use was mostly on the individual level, so too were the effects of such use, leading on aggregate to departmental productivity effects.

5.2.1 Generative AI use effects on individuals

AI systems have long been recognised for their potential to enhance decision-making in supportive ways across various levels in the organisations (Edwards, et al. 2000), which remains relevant even now. However, this study demonstrates clearly that individuals that use generative AI to support work and decision-making, can make decision-processes more efficient and help save time in various tasks, complementing the evidence presented by Dell'Acqua et al. (2023) where benefits of generative AI use in both speed and quality of work output were reported.

What is more, Brynjolfsson et al. (2023) presented early findings of generative AI use augmenting workers capabilities, especially in helping novice and low-skilled workers to become more effective, enabling them to perform beyond their normal capabilities. The evidence from this study aligns with such findings. As evidenced in the cases of HR, logistics and marketing, ChatGPT had been used in assisting the individual in completing a task, which was over their initial skill level, or which was novel in nature.

Furthermore, considering that the individual's decision-making process consists of both the intuitive and quick type 1 processing and the deliberate and cognitively demanding type 2 processing (Kim, 2018; Evans & Stanovich, 2013), evidence from this research indicates that generative AI can aid both types of processing. Generative AI had been used to initiate brainstorming or provide a structure to build on in work contexts. More importantly, generative AI use appeared to enrich type 2 processing, providing users with information, advice, or perspectives they might miss, potentially expanding the breadth of their cognitive abilities. Yet, more research is needed on understanding the impact of generative AI use on human rationality.

5.2.2 Generative AI use effects on the department

Although it is difficult to measure the aggregate effects on departmental productivity of individual department members generative AI use in work and decision-making, evidence from this study suggest benefits on departmental productivity and only few drawbacks.

The marketing department provided an example of effective generative AI usage, operating a compact team and managing extensive workloads efficiently. Individual department members highlighted that utilising generative AI tools, mainly ChatGPT, aided in managing the workload and enhancing their overall productivity. When numerous individuals collectively use generative AI tools on a daily basis, a department can experience enhancements in productivity. Similarly, the production team at the logistics department seemed to have benefited from generative AI use to support their capabilities and problem-solving related decision-making, aiding in managing the automated operations of the department. The HR-department too seemed to only be positively affected by active generative AI use department members. The primary drawbacks noted from generative AI use at the departmental level involved the time investment required to develop and iterate practical team level workflows when using ChatGPT.

Within the theme of departmental benefits, the case of the CS department highlights a potentially missed opportunity. Based on the evidence from other departments, and on suggestions by experts (Daugherty et al. 2023), it seems completely plausible that LLM AI tools could significantly improve the CS department's operational adaptability and resource allocation. As evident by the effects of generative AI use on individual's capabilities, customer service specialists, who otherwise are knowledgeable advisors, but struggle with writing grammatically correct messages, could use LLM AI tools to augment their work and write well formulated and grammatically correct emails, enabling the department to make better use of the workforce in a broader array of tasks. Consequently, generative AI tools could augment the capabilities of both the individual and therefore elevate the customer service department's overall operational efficiency and flexibility.

Such findings provide nuance to speculations regarding the workforce effects of generative AI use (e.g. Orchard & Tasiemski, 2023), with important theoretical implications to consider. Aligning with the early findings by Brynjolfsson et al. (2023), generative AI use can be encouraged especially for those whose skill level in a particular work task is still low. In such a way, generative AI can be used on a departmental level to enhance the allocation of work tasks among the workforce to enhance the overall productivity of the department.

Overall, as evidenced by the cases with an active AI-use culture, departments can on aggregate benefit from having active use of generative AI within the department, leading to increased productivity and enhanced organisational decision-making especially in operational tasks as well as enhanced departmental flexibility in resource and task allocation. In strategic contexts, however, no significant benefits were reported or observed.

6 CONCLUSIONS

This study has explored how generative AI is being used in work and decision-making in organisational departments, and what individual and departmental effects such generative AI use might have. Generative AI use varied among individuals and departments, and such use still has limitations. However, there might be reason for optimism regarding the increased utilisation of generative AI in work and decision-making due to the broad array of benefits of generative AI use. Such generative AI use should remain responsible and balanced with human judgement.

Generative AI use was mostly on individual level in departments, supporting their work and decision-making, rather than automating it. As seen in the cases there was variety in generative AI use scope, depth and activity among departments. Generally, however, the use of generative AI is increasing, as evident from all departments except the customer service department. Adopters of generative AI into their work and decision-making supported their individual capabilities in various work domains—ranging from creative to calculative and technical—and in planning and analysis, too. Generative AI, therefore, had many roles among the departments. Spending time exploring generative AI tools and learning to use such tools seemed particularly important in finding application cases in various work tasks, increasing the perceived utility of such tools.

The effects of generative AI use were mostly on an individual level, and thereby in the aggregate on the departmental level. Generally, generative AI use was described to speed up work, elevate individuals' capabilities to complete work of higher skill demand, provide considerations which might have been forgotten or not considered, and even possibly broadening human rationality in various work and decision-making contexts. Yet, differences in expected or experienced utility were observed, suggesting that benefits of generative AI use are not straightforward for all individuals. From a departmental view, active generative AI use seems to have a beneficial effect on overall quality of operational decision-making and improved overall operational departmental productivity. Generative AI had not been used to augment strategic decision-making within the departments. Furthermore, active generative AI use might increase the departmental flexibility in task allocation, enabling a more effective use of the workforce for attaining departmental and organisational goals. However, it is

not possible from this study to assess exactly to what extent generative AI use is impacting the productivity of the department.

Based on the evidence from this study, there are benefits to using generative AI in work and decision-making. However, as the variance within departments suggests, generative AI use is not similar in every context, and many still are apprehensive to using generative AI tools in their work. Therefore, the adoption of generative AI tools in organisational contexts might be gradual and nuanced depending on the organisation. Yet, AI technologies will evolve further, and they are here to stay. As can be understood from this study, generative AI use in operational work and decision-making is at its best when (1) the user is informed of generative AI use capabilities and limitations, (2) the generative AI tools use is responsible, and (3) decision-making is balanced with human judgement.

6.1 Theoretical implications and recommendations for further research

The theoretical implications of this study are generally twofold. Firstly, this study has provided evidence to support speculations that utility of AI use in work and decision-making is increasing in both on an operational and strategic level due to the increased variety of ways generative AI can help in various organisational contexts. Furthermore, this study has revealed that although generative AI use is generally increasing, the use of such technologies is not adopted at equal pace within departments in an organisation.

Secondly, this study has through the descriptions of the cases provided reason to believe that an active AI-use culture, where individuals explore and innovate to support their work and decision-making with generative AI, should be fostered by organisational leaders to reach broad departmental productivity and decision-making quality benefits of generative AI use. Moreover, based on the evidence from this study, the experienced utility of generative AI use might positively correlate with the extent to which an individual has learned to collaborate with generative AI through individual exploration.

Although this study has contributed to addressing the knowledge problem of lack of empirical evidence of how generative AI is being used in organisations and what effects such use has on organisations, more research is clearly still needed. Obviously, similar

inductive studies, such as this one, are needed to provide a larger sample of nuanced information. More specifically, research is needed to understand the extent to which active generative AI use impacts departmental productivity. Furthermore, research is needed to understand whether the experienced utility of generative AI tool use is causal with the extent to which individuals has learned to identify the appropriate contexts for effective generative AI use, or if generative AI use simply is less applicable for certain work domains, such as in strategic decision-making contexts. Moreover, more evidence of leadership impacts on generative AI adoption are needed, to provide alternative perspectives to this study. Finally, more research should be conducted to assess whether individuals are capable of balancing AI use responsibly, not becoming over-reliant on generative AI use, and balancing AI use with healthy scepticism towards AI outputs and using own judgement for decision-making. Such studies could explore how individuals might use generative AI outputs in decision-making differently based on the risks associated with the decision-making scenario.

6.2 Practical implications

Importantly, this study provides insights for practical implications for workers and decision-makers in all echelons of an organisation. Typically, the discourse around artificial intelligence gravitates around automation and cost efficiency. However, this study highlights the nuanced potential benefits of adopting generative AI use into daily workflows and decision-making processes. This approach might not yield immediate, eye-catching savings, but has the potential elevate overall productivity on both individual and departmental level in subtle, but significant ways.

Therefore, if organisational leaders are considering how they could use generative AI to improve productivity, a clear suggestion would be to encourage generative AI exploration and use in various operational tasks to improve work efficiency and quality of operational decision-making, leading collectively to heightened productivity. It is important to foster an organisational culture where AI exploration is valued, cultivating a work environment where responsible and balanced use of AI tools is standard practice. Sharing useful examples of generative AI use within and across departments is a practice which might help in fostering such culture. Clear organisational policies around AI use should be established and communicated to encourage and ensure responsible use of AI tools. When applied thoughtfully to

support and augment own work and decision-making, generative AI can be quite helpful, often exceeding initial expectations.

Yet, although generative AI tools are impressive and trained on vast amounts of data, we should not underestimate and undervalue our capabilities for judgement in a world where the reality is not completely digital. Although the speed of AI adoption and development in organisations is exciting, we should still be mindful in determining when to delegate decision-making to AI. Primarily, our focus should be on augmenting our abilities across various work and decision-making contexts, ensuring that AI serves as an enhancer rather than a replacement of human judgement.

7 REFERENCES

Aguiar-Costa, L. M., Cunha, C. A. X. C., Silva, W. K. M., & Abreu, N. R. 2022 *Customer Satisfaction In Service Delivery With Artificial Intelligence: A Meta-Analytic Study*. Revista de Administração Mackenzie, 23(6), 1–29. https://doi.org/10.1590/1678-6971/eRAMD220003.en

Akerkar, R. 2018. *Artificial Intelligence for Business*. Cham: Springer.

Barcaui, A. & Monat, A. 2023. *Who Is Better In Project Planning? Generative Artificial Intelligence or Project Managers?* Project Leadership and Ssociety, 4, p. 100101. doi:10.1016/j.plas.2023.100101

Belton, I., & Dhami, M., 2021, Cognitive Biases and Debiasing in Intelligence Analysis. In Viale, R., (ed.), *Routledge Handbook of Bounded Rationality*, (pp. 548-560). London: Newgen Publishing

Britt, P. 2023. *GenAI to Benefit Customer Service One Day: Generative AI Is Not Yet Ready For Customer-Facing Use Cases*, Forrester asserts. Customer relationship management (Malibu, Calif.), 27(8), p. 8.

Brunsson, K. & Brunsson, N. 2017. *Decisions: The Complexities of Individual and Organizational Decision-Making*. Cheltenham, United Kingdom: Edward Elgar Publishing.

Brunsson, N. 2007. *The Consequences of Decision-Making*. Oxford; New York: Oxford University Press.

Bryman, A. & Bell, E. 2011. *Business Research Methods*. 3rd ed. Oxford: Oxford University Press.

Brynjolfsson, E., Li, D. and Raymond, L.R., 2023. *Generative AI at Work. Working Paper No. 31161*. Cambridge, MA: National Bureau of Economic Research. Available at: http://www.nber.org/papers/w31161.

Buehler, R., Griffin, D. & Ross, M. 1994. *Exploring the "Planning Fallacy": Why People Underestimate Their Task Completion Times*. Journal of Personality and Social Psychology, 67(3), pp. 366-381. doi:10.1037/0022-3514.67.3.366

Chui, M., Roberts, R., Yee, L., Hazan, E., Singla, A., Smaje, K. and Sukharevsky, A., Zemmel, R., 2023b. *The Economic Potential of Generative AI: The Next Productivity Frontier*. McKinsey & Company. Available at: https://www.mckinsey.com/capabilities/mckinsey-digital/our-insights/the-economic-potential-of-generative-ai-the-next-productivity-frontier#business-and-society. Accessed at 16.3.2024

Chui, M., Yee, L., Hall, B., Singla, A., & Sukharevsky, A. 2023a. *The state of AI in 2023: Generative AI's breakout year*. McKinsey Insights. Accessed 11.11.2023. Available at https://www.mckinsey.com/capabilities/quantumblack/our-insights/the-state-of-ai-in-2023-generative-ais-breakout-year.

Chuma, E., L., and Oliveira, G.G. de, 2023. *Generative AI for Business Decision-Making: A Case of ChatGPT*. Management Science and Business Decisions, 3(1), pp. 5-11. https://doi.org/10.52812/msdb.63

Costigan, J., 2023. *OpenAI's Sam Altman Makes Global Call For AI Regulation — And Includes China,* Forbes. Available at: https://www.forbes.com/sites/johannacostigan/2023/06/13/openais-sam-altman-makes-global-call-for-ai-regulation-and-includes-china/ (Accessed: 20.11.2023).

Dastin, J., 2018. *Insight - Amazon Scraps Secret AI Recruiting Tool That Showed Bias Against Women*, Reuters, 11 October. Available at: https://www.reuters.com/article/us-amazon-com-jobs-automation-insight/amazon-scraps-secret-ai-recruiting-tool-that-showed-bias-against-women-idUSKCN1MK08G/. Accessed: 18.12.2023

Daugherty, P., R., Wilson, H., J., and Narain, K., 2023. *Generative AI Will Enhance — Not Erase — Customer Service Jobs*. Harvard Business Review. Available at: https://web-s-ebscohost-com.proxy.shh.fi/ehost/pdfviewer/pdfviewer?vid=1&sid=7132e21d-7cd9-4990-8de6-86afa04ddefe%40redis

De Acedo Lizárraga, M., L., S., De Acedo Baquedano, M., T., S., & Cardelle-Elawar, M. 2007. *Factors That Affect Decision Making: Gender and age differences*. International Journal of Psychology and Psychological Therapy, 7(3), pp. 381-391.

Dell'Acqua, F., McFowland, E., Mollick, E. R., Lifshitz-Assaf, H., Kellogg, K., Rajendran, S., Krayer, L., Candelon, F., & Lakhani, K. R., 2023. *Navigating the Jagged Technological Frontier: Field Experimental Evidence of the Effects of AI on Knowledge Worker Productivity and Quality*. Harvard Business School Technology & Operations Mgt. Unit Working Paper No. 24-013, Available at SSRN: https://ssrn.com/abstract=4573321 or http://dx.doi.org/10.2139/ssrn.4573321

Deng, Y., Zheng, J., Huang, L. & Kannan, K. 2023. *Let Artificial Intelligence Be Your Shelf Watchdog: The Impact of Intelligent Image Processing-Powered Shelf Monitoring on Product Sales*. MIS quarterly, 47(3), pp. 1045-1072. doi:10.25300/MISQ/2022/16813

Duan, Y., Edwards, J. S., & Dwivedi, Y., K., 2019. *Artificial intelligence for decision making in the era of Big Data – evolution, challenges and research*

agenda. International journal of information management, 48, pp. 63-71. doi:10.1016/j.ijinfomgt.2019.01.021

Edwards, J., S., Duan, Y., & Robins, P., C., 2000. *An analysis of expert systems for business decision making at different levels and in different roles*. European journal of information systems, 9(1), pp. 36-46. doi:10.1057/palgrave.ejis.3000344

European Parliament. 2023. *EU AI Act: first regulation on artificial intelligence*, European Parliament News. Available at: https://www.europarl.europa.eu/news/en/headlines/society/20230601STO93804/eu-ai-act-first-regulation-on-artificial-intelligence. Accessed: 18.12.2023.

Evans, J., S., B., T., & Stanovich, K., E., 2013. *Dual-Process Theories of Higher Cognition: Advancing the Debate.* Perspectives on psychological science, 8(3), pp. 223-241. doi:10.1177/1745691612460685

Evans, J., S., B., T., 2011. *Dual-process theories of reasoning: Contemporary issues and developmental applications*. Developmental review, 31(2), pp. 86-102. doi:10.1016/j.dr.2011.07.007

Evans, J., S., B., T., 2021. *Bounded rationality, reasoning and dual processing*, in Viale, R., (Ed.) Routledge Handbook of Bounded Rationality, (pp. 185-195). London: Newgen Publishing.

Fosso Wamba, S., Queiroz, M., M., Chiappetta Jabbour, C., J., & Shi, C., 2023. *Are both generative AI and ChatGPT game changers for 21st-Century operations and supply chain excellence?* International journal of production economics, 265, p. 109015. doi:10.1016/j.ijpe.2023.109015

Fridman, L., 2023a. *Mark Zuckerberg: Future of AI at Meta, Facebook, Instagram, and WhatsApp*, Lex Fridman Podcast #383. YouTube video. Available at: https://www.youtube.com/watch?v=Ff4fRgnuFgQ. Accessed: 03.12.2023.

Fridman, L., 2023b. *Max Tegmark: The Case for Halting AI Development*, Lex Fridman Podcast #371. YouTube video. Available at: https://www.youtube.com/watch?v=VcVfceTsD0A. Accessed: 19.11.2023.

Fui-Hoon Nah, F., Zheng, R., Cai, J., Siau, K. & Chen, L., 2023. *Generative AI and ChatGPT: Applications, challenges, and AI-human collaboration*. Journal of information technology cases and applications, 25(3), pp. 277-304. doi:10.1080/15228053.2023.2233814

Future of Life Institute., 2023. *Pause Giant AI Experiments: An Open Letter*. FLI Open Letters. Available at https://futureoflife.org/open-letter/pause-giant-ai-experiments/. Accessed 17.11.2023.

Gigerenzer, G., 2021. What is bounded rationality? in Viale, R., (Ed.) *Routledge Handbook of Bounded Rationality*, (pp. 55-70). London: Newgen Publishing.

Gioia, D. A., Corley, K. G. & Hamilton, A. L., 2013. *Seeking Qualitative Rigor in Inductive Research: Notes on the Gioia Methodology*. Organizational research methods, 16(1), pp. 15-31. doi:10.1177/1094428112452151

Goldman Sachs, 2023. *Generative AI could raise global GDP by 7%.* Goldman Sachs. Available at: https://www.goldmansachs.com/intelligence/pages/generative-ai-could-raise-global-gdp-by-7-percent.html. Accessed 16.3.2024.

Göndöcs, D., & Dörfler, V., 2024. *AI in Medical Diagnosis: AI Prediction & Human Judgment*. Artificial Intelligence in Medicine, 149, 102769. doi: https://doi.org/10.1016/j.artmed.2024.102769

Ishwarbharath, S., 2023. *Generative AI Moving Tech Outside IT Departments: Google Cloud CEO Thomas Kurian*. ET Telecom. Available at: https://telecom.economictimes.indiatimes.com/news/internet/generative-ai-moving-tech-outside-it-departments-google-cloud-ceo-thomas-kurian/103262507. Accessed 11.11.2023.

Jackson, E. and Mendoza, C., 2020. *Setting the Record Straight: What the COMPAS Core Risk and Need Assessment Is and Is Not.* Harvard Data Science Review. Available at https://hdsr.mitpress.mit.edu/pub/hzwo7ax4/release/7. Accessed 18.12.2023.

Kahneman, D., & Tversky, A., 1979. *Intuitive Prediction: Biases and Corrective Procedures*. In S. Makridakis & S. C. Wheelwright (Eds.), Forecasting: TIMS Studies in the Management Sciences, vol. 12 (pp. 313–327). Amsterdam: North-Holland.

Keren, G. & Schul, Y., 2009. *Two Is Not Always Better Than One: A Critical Evaluation of Two-System Theories*. Perspectives on Psychological Science, 4(6), pp. 533-550. doi:10.1111/j.1745-6924.2009.01164.x

Kim, N. S., 2018 *Judgement and Decision-Making In The Lab of the World*. London: Palgrave Macmillan.

Krügel, S., Ostermaier, A. & Uhl, M. 2023. *ChatGPT's Inconsistent Moral Advice Influences Users' Judgment.* Scientific reports, 13(1), p. 4569. doi:10.1038/s41598-023-31341-0

Kvale, S. 2007. *Doing interviews*. Los Angeles: SAGE Publications.

Mollick, E. 2022. *ChatGPT is a tipping point for AI*. Harvard Business Review. Retrieved November 10, 2023, from https://hbr.org/2022/12/chatgpt-is-a-tipping-point-for-ai.

Moser, C., Den Hond, F. & Lindebaum, D. 2022. *Morality in the Age of Artificially Intelligent Algorithms*. Academy of Management learning & education, 21(1), pp. 139-155. doi:10.5465/amle.2020.0287

Obermeyer, Z., Powers, B., Vogeli, C. & Mullainathan, S. 2019. *Dissecting Racial Bias in an Algorithm Used to Manage the Health of Populations*. Science, 366(6464), pp. 447-453. doi:10.1126/science.aax2342

O'Brien, S. 2023. *Human-Centered Augmented Translation: Against Antagonistic Dualisms*. Perspectives, Studies in Translatology, pp. 1-16. doi:10.1080/0907676X.2023.2247423

Orchard, T., & Tasiemski, L. (2023). *The Rise of Generative AI and Possible Effects on the Economy*. Economics and Business Review, 9(2), 9–26. https://doi.org/10.18559/ ebr.2023.2.732

Osman, M. 2004. *An Evaluation of Dual-Process Theories of Reasoning*. Psychonomic bulletin & review, 11(6), pp. 988-1010. doi:10.3758/BF03196730

Perrigo, B. 2023. *DeepMind's CEO Helped Take AI Mainstream. Now He's Urging Caution*. Time. Available at: https://time.com/6246119/demis-hassabis-deepmind-interview/. Retrieved 17.11.2023.

Purdy, M., & Williams, A.M., 2023. *How AI Can Help Leaders Make Better Decisions Under Pressure*, Harvard Business Review, 26 October.

Raisch, S. & Krakowski, S. 2021. *Artificial Intelligence and Management: The Automation–Augmentation Paradox*. Academy of Management Review, 46(1), pp. 192-210. doi:10.5465/AMR.2018.0072

Sadler-Smith, E., & Sparrow, P., 2008. *Intuition in Organizational Decision Making,* in Hodgkinson G., P., & Starbuck W., H., (eds), The Oxford Handbook of Organizational Decision Making. Oxford: Oxford University Press, pp. 305-324. doi.org/10.1093/oxfordhb/9780199290468.003.0016

Smith, B. C. 2019. *The Promise of Artificial Intelligence: Reckoning and Judgment*. Cambridge, Massachusetts: The MIT Press.

Stiglic, G., Kocbek, P., Fijacko, N., Zitnik, M., Verbert, K. & Cilar, L. 2020. *Interpretability of Machine Learning-Based Prediction Models in Healthcare.* Wiley Interdisciplinary Reviews. Data Mining and Knowledge Discovery, 10(5), pp. e1379-n/a. doi:10.1002/widm.1379

Talia, D., 2023. *From Algorithms to Thinking Machines: The New Digital Power*. New York: Association for Computing Machinery. https://doi.org/10.1145/3603178

Teubner, T., Flath, C. M., Weinhardt, C., van der Aalst, W. & Hinz, O. 2023. *Welcome to the Era of ChatGPT et al: The Prospects of Large Language Models*. Business & Information Systems Engineering, 65(2), pp. 95-101. doi:10.1007/s12599-023-00795-x

Trunk, A., Birkel, H. & Hartmann, E. 2020. *On the Current State of Combining Human and Artificial Intelligence for Strategic Organizational Decision Making*. Business Research (Göttingen), 13(3), pp. 875-919. doi:10.1007/s40685-020-00133-x

Tversky, A. & Kahneman, D. 1974. *Judgment under Uncertainty: Heuristics and Biases*. Science, 185(4157), pp. 1124-1131. doi:10.1126/science.185.4157.1124

Tversky, A., & Kahneman, D. 1981. *The Framing of Decisions and the Rationality of Choice*. Science, 211(4481), 453–458. doi:10.1126/science.7455683.

von Krogh, G. 2018. *Artificial Intelligence in Organizations: New Opportunities for Phenomenon-Based Theorizing*. Academy of Management Discoveries, 4(4), pp. 404-409. doi:10.5465/amd.2018.0084

Weiser, B. 2023. *Here's What Happens When Your Lawyer Uses ChatGPT*, The New York Times, 27 May. Available at: https://www.nytimes.com/2023/05/27/nyregion/avianca-airline-lawsuit-chatgpt.html. Accessed 18.12.2023.

Wilson, H. J. & Daugherty, P. R. 2018. *Collaborative Intelligence: Humans and AI Are Joining Forces*. Harvard business review, 96(4), p. 114.

Wright, G., Goodwin, P., 2008. Structuring the Decision Process: An Evaluation of Methods, in Hodgkinson G., P., & Starbuck W., H., (eds), *The Oxford Handbook of Organizational Decision Making*, pp 534-551. Oxford: Oxford University Press.

Xiaoyang L., Haoming F., Hailong Y. & Jiyuan H. 2023. *Can ChatGPT Reduce Human Financial Analysts' Optimistic Biases?*, Economic and Political Studies, DOI: 10.1080/20954816.2023.2276965

Yin, R. K. 2018. *Case Study Research: Design and methods*. Sixth edition. Los Angeles: SAGE.

Appendix 1

Example of GPT-4 output in decision-making scenario

You
hel me make decision on when to hire new employe

ChatGPT
Making the decision to hire a new employee involves considering several key factors. Here are some aspects to evaluate:

1. **Workload Analysis**: Assess if your current team is consistently overburdened. If employees are working overtime regularly or important tasks are being delayed, it might be time to hire.
2. **Skill Gaps**: Identify any skills that your current team lacks which are critical for your business. Hiring an employee with these skills can bring new capabilities to your team.
3. **Business Growth**: If your business is growing in terms of customer base, sales, or market reach, and this growth is projected to continue, hiring additional staff may be necessary to support this expansion.
4. **Employee Turnover**: If you have high turnover, it might be a sign that your staff is overworked. Hiring new employees can alleviate this issue.
5. **Budget Considerations**: Ensure that you have the budget not just for the salary, but also for the benefits, training, and other associated costs of a new employee.
6. **Future Projects**: If you have upcoming projects that require more manpower or specialized skills, plan to hire accordingly.
7. **Efficiency and Productivity**: Sometimes hiring temporary or part-time employees can be a solution if the increased workload is seasonal or project-based.
8. **Market Trends**: Keep an eye on industry trends. If your competitors are expanding their teams, it might indicate a market shift that you need to prepare for.
9. **Legal and Compliance Needs**: In certain industries, there are legal or compliance requirements for staffing ratios, especially in healthcare or education.
10. **Employee Feedback**: Listen to your current employees. If they feel overworked or believe that additional help is needed, it's worth considering.

Remember, every business is unique, so tailor these considerations to your specific situation. It's also beneficial to consult with your HR department or a business advisor for personalized guidance.

Is this conversation helpful so far?

Appendix 2

Consent to the processing of personal data in the study

I have been requested to participate in the study identified above.

I have received sufficient information about the study and processing of my personal data, I understand the information, and have had the possibility to have my questions answered.

Yes ☐No ☐

I understand that the participation in the study is voluntary, and that I have the right to refuse to participate and the right to withdraw from the study at any time and without giving a reason. Withdrawal from the study will not result in any negative consequences to me. The anonymous information collected from or about me up to the point of my withdrawal may still be used in the study.

Yes ☐No ☐

I agree that the interview with me will be recorded for the study's purpose. The recordings will be processed in such a way that I cannot be identified in them.

Yes ☐No ☐

I agree that photographs and videos will be taken of me for the study's purpose. The photographs and videos will be processed in such a way that I cannot be identified in them.

Yes ☐No ☐

I understand that the information I have provided during the study can be used as anonymized statements in the thesis. My identity as an individual respondent will not be disclosed in the thesis or any other research results to be published

Yes ☐No ☐

I agree that I can be contacted at a later stage for a further study or follow-up study.

Yes ☐No ☐

I hereby give my consent to the participation in the study and processing of my personal data in the manner described in the Privacy notice I have received in writing (in print or electronical form).

Yes ☐No ☐

_____

The respondent's signature and name in block letters

(Consent can also be given electronically, for example, by email.)

_____

Place and date

_____

Frans Sandelin

Studying at Hanken School of Economics, major in Management and Organisation.

Appendix 3

Interview guide

Nr	Question
1	Who are you and what is your role; When did you start at Lambda; What different roles have you had in the organization
2	Describe your organization's activities; what does your organization do in the overall context of Lambda
3	Describe different decisions that you make in your job
4	Describe how you have used or are using AI technologies in your work
5	What kind of decisions do employees make on behalf of the organization in your organization?
6	How are AI tools used in your organization?
7	How familiar are you with AI technologies?
8	Would you like to use it more in your organization for decision automation or to support human decisions?
9	Provide examples when you have used generative AI to support your decision-making, not for automating?
10	How has AI been used to automate decision-making in your organization?
11	Have you noticed that you need to use less cognitive processing when working with genAI?
12	Have you noticed any effects on yourself from the use of generative AI? What have you noticed?

13	Do you think generative AI tools are objective? - In what way? Do you have examples of a situation where AI has made you think differently?
14	How have you noticed that AI speeds up decision-making in your organization?
15	How do you believe the use of genAI can lead to efficiency in decision-making?
16	How has genAI been used in processing non-operational matters such as strategic planning or risk assessment?
17	Have you used genAI to evaluate options?
18	Have you used genAI for planning things?
19	Have you noticed any risks in using AI technologies, including in decision-making?
20	What rules should there be in your organization or in general regarding the use of AI in decision-making?
21	What potential benefits do you see for AI in the future in your organization?
22	How would you like to utilize AI in the future in your organization?
23	What would be the ideal AI for your organization?