LUNDS UNIVERSITET

Ekonomihögskolan

Institutionen för informatik

Robotic Process Automation in Conglomerate Organizations:

Opportunities and Challenges from practitioners' perspectives

Kandidatuppsats 15 hp, kurs SYSK16 i Informationssystem

Författare: Maja Larsén
                Hedvig Zetterberg

Handledare: Niki Chatzipanagiotou

Rättande lärare: Benjamin Weaver
                Umberto Fiaccadori

Robotic Process Automation in Conglomerate Organizations: Opportunities and Challenges from practitioners' perspectives

SUMMARY:

The bachelor's thesis research focuses on Robotic Process Automation (RPA). The purpose was to explore the opportunities and challenges of the applications of RPA software in conglomerate organizations from the perspective of RPA practitioners. A qualitative study was conducted where the empirical data were collected through semi-structured interviews with five purposively selected RPA practitioners from different conglomerates and were

analysed thematically to conclude to five themes that represent the research findings. The findings were then discussed with the literature review and the theory of change management to conclude to the research results. The opportunities and challenges experienced affect the applications of RPA software. Key factors are the size of the organization; the optimization and standardization of processes before implementing or using RPA; the consideration of RPA limitations, and the exploration of IPA. Further, by applying change management strategies; using clear communication around RPA benefits and challenges; and starting on a small scale will ameliorate resistance to change. The bachelor's thesis research contributes to the information systems field by improving the understanding of the opportunities and challenges of RPA applications. It also contributes to RPA practitioners, conglomerate organizations, and other interested stakeholders to better understand the complexities involved in using RPA and to develop effective approaches for maximizing the respective benefits and minimizing the associated risks and challenges.

Acknowledgement

We would like to start by expressing appreciation to the five participants that voluntarily participated in our bachelor's thesis research brought knowledge and important insights to our work. We would particularly like to thank our supervisor Niki Chatzipanagiotou for the support and valuable guidance throughout the whole process.

May 2023
Hedvig and Maja

Table of Contents

Table

1. Introduction

In this chapter, the background, problem identification, previous related studies, Research Purpose and Research Questions, and delimitations are presented to provide the reader with a clear vision of the content of this study. Each subsection serves a specific purpose, contributing to the overall completion of the introduction chapter.

1.1 Background

The world is being transformed by technology, and to keep up with the rapidly changing landscape, businesses must adopt new technologies and automate their internal processes to not fall behind. An example of such a technology is Robotic Process Automation (RPA) software, which in recent years, has garnered significant attention from the corporate world with regards to automation initiatives (Hofmann, Samp & Urbach, 2020). RPA, as a service automation, refers to software that automates repetitive tasks that require little or no human intelligence with the aim to free up humans from mundane and complex tasks and allow them to focus on more creative and intriguing ones (Lacity, Willocks & Leslie, 2016). According to Willocks (Lhuer, 2016, p. 4), *"…In the longer term, RPA means people will have more interesting work"*.

The term of RPA was coined by Patric Geary, Marketing Director at the RPA vendor Blue Prism in 2012 (Hindle et al., 2017). Despite its young age, RPA is a field that is constantly increasing in demand and the respective market is growing fast. Biscotti (2020) is forecasting that organizations will triple the capacity of existing Robotic Process Automation portfolios through 2024. Additionally, by the same year, nearly half of all new buyers of RPA technology will be non-IT organizations. According to a global survey, 94 % of enterprise have already or plan to implement RPA in the coming three years (Zhu & Kanjanamekanant, 2023).

RPA software (thereafter RPA) is used in many conglomerate organizations (thereafter conglomerate), among them IKEA (Wikipedia, 2023), Xerox (Uipath, n.d), and MESP, a shared serviced company of the Portuguese Mota-Engil Group (Gomes & Seruca, 2023) to mention a few. A conglomerate consists of multiple, diverse business units that (may) operate in different industries or sectors (David & David, 2015). According to Hagel (2018), there are opportunities in these type of organizations for Robotic Process Automation and for streamlining work. However, potential challenges may arise since conglomerates tend to be large and multinational (Hagel, 2018). Hence, we have chosen to examine the opportunities and challenges of RPA that practitioners in conglomerates, which have implemented RPA, experience.

1.2 Problem Identification

Organizations are upscaling their technology and at the same time there is a growth in the field of RPA. A lot of companies want to jump on the bandwagon as the role of automation has become increasingly important in the improvement of quality in enterprise business processes. However, RPA is relatively new and unexplored in the literature (Santos, Pereira & Vasconcelos, 2020). Thus, there are slightly different opinions around RPA and there can be a mixed rapture to it (Siderska, 2021). For some it involves performing new work that is not repetitive and menial and generate that workload into more complex tasks. While for others it can be a matter of learning a completely new skill set or even losing their job. According to (Hofmann, Samp & Urbach (2020) a theoretical and synoptic analysis of RPA is lacking in academic research, although it is a widely discussed topic in the corporate world. In addition, the use of RPA is common in large organizations, but there is limited research within conglomerates (Schuler & Gehring, 2018). To our knowledge, there is a limited supply of research studies that are focusing on RPA practitioners' perspective. Previous related research (Kholiya et al., 2021; Moses, 2019; Mohamed et al., 2022; Van Hoek et al., 2022) has not concluded to concrete opportunities that RPA offers to organizations or to major challenges that are faced when using it. Therefore, there is a need for further investigation within the field of RPA.

1.3 Previous Related Studies

Previous related studies within the field of Robotic Process Automation have shown that there is a growing interest in the application of RPA in various areas within organizations, such as procurement, recruitment, and human resource management. Based on a case study of the global shipping conglomerate Maersk by Van Hoek, Gorm Larsen & Lacity (2022) at several potential benefits of Robotic Process Automation in the procurement department were explored. The study found that RPA could be used to automate routine and repetitive tasks, and the implementation of RPA should be done in a structured manner. Cost savings, improved efficiency, and reduced errors are among the identified benefits. Another previous research by Moses (2019), focused on the use of RPA in recruitment processes by discussing how RPA can automate tasks such as candidate screening, resume scanning, and interview scheduling, thereby improving recruitment efficiency and effectiveness. Moses (2019) also emphasizes the need for a roadmap to implement RPA in the recruitment process.

Mohamed et al. (2022) on the other hand discuss the application of Robotic Process Automation (RPA) in Human Resource Management (HRM) to improve efficiency and effectiveness. Mohamed et al. (2022) highlight how RPA can automate repetitive tasks such as data entry, payroll processing, and report generation, allowing HR managers to focus on more strategic tasks such as talent management and employee engagement. Mohamed et al., (2022) concluded that RPA can reduce the workload and increase productivity.

Comparing Van Hoek et al. (2022), Moses (2019) and Mohamed et al. (2022), it is evident that they all share a common focus of improving efficiency and effectiveness through the application of RPA in different areas within organizations. Van Hoek et al. (2022) found that

RPA can reduce errors and increase efficiency, Mohamed et al. (2022) found that RPA can reduce workload and increase productivity and Moses (2019) found that through automating steps with RPA, organizations can improve efficiency and effectiveness. The highlighted advantages are a common finding throughout these previous studies. Meanwhile all authors demonstrate the potential benefits with the use of RPA by emphasizing the need for careful planning to achieve return of investment.

Mohamed et al. (2022) as well as Van Hoek et al. (2022) argue for the importance of taking challenges into consideration when using or implementing RPA. These are described as the need for strong change management processes and the importance of ensuring RPA compliance with legal and ethical standards (Mohamed et al., 2022). Van Hoek et al., (2022) identify the challenges to RPA implementation such as the need for skilled staff to develop and maintain RPA systems.

It is also stated by Kholiya et al. (2021) that the workplaces are currently experiencing a digital transformation and RPA is seen as one trend that seems to be increasing. Although, in the future, it is expected that every factory and office will adopt the newest phenomenon, Intelligent Process Automation (IPA) as it will be leading the way in the general RPA revolution. IPA is a concept of Intelligent Automation (IA). IPA is explained by Kholiya et al. (2021) as a technology that takes automation to the next level and enables businesses to automate processes by utilizing different types of data such as structured, unstructured, and semi-structured data. IPA is different from RPA since it is a combination of process enhancements and advanced tools. All previous studies define RPA in the same way and support that it aims to reduce or eliminate repetitive and routine tasks (Kholiya et al. 2021; Moses, 2019; Mohamed et al. 2022; Van Hoek et al. 2022). However, Kholiya et al. (2021) also highlights the upcoming IPA and its imitation of human behaviour and learning from humans to increase even more efficiency with each iteration.

Concluding, previous related studies within the field of Robotic Process Automation have provided valuable insights focusing mainly onto the potential opportunities and challenges of RPA of limited areas and departments that have not yet implemented RPA. That is, there is previous research about the applications of RPA in different companies and departments, but not in conglomerates. Most of the studies are exploring the intention of implementing RPA and not the actual application of it, nor from a practitioner's perspective. While, our bachelor's thesis research is focused on conglomerates that have already implemented RPA, taking the practitioners' perspective.

1.4 Research Purpose and Research Questions

The purpose of this bachelor's thesis is to explore the opportunities and challenges of the applications of Robotic Process Automation software in conglomerates from the perspective of RPA practitioners. The bachelor's thesis aims at identifying key factors that affect the applications of RPA and suggests improvements. Following the research purpose, the research question reads:

"What opportunities and challenges do Robotic Process Automation (RPA) practitioners experience in the applications of RPA software in conglomerate organizations?"

By reviewing the current literature of RPA in conglomerates and by conducting interviews with RPA practitioners, we aim at identifying the key factors – both opportunities and challenges – that affect the applications of RPA in conglomerates. By interviewing RPA practitioners, we aim at creating a deeper understanding of how people in those type of positions experiences the applications of RPA in the actual workplace.

1.5 Delimitations

For the clarity and feasibility of this study, some limitations have been defined. The first delimitation refers to focusing on conglomerates. That is, the research is conducted among employees working only in large multinational organizations that involve multiple business entities operating in different industries under one corporate group (Linden & Teece, 2018). Another limitation refers to RPA practitioners. When we refer to RPA practitioners in conglomerates, we imply employees that are currently working in such organizations under various roles related to having deep and broad knowledge on RPA.

2. Literature Review

This chapter presents the literature review search strategy, which is used to build a literature foundation for this bachelor's thesis. Then, the results of the literature review are presented as key concepts to clarify related to the research topic areas, such as "Robotic Process Automation", "Intelligent Automation – RPA and working together", "Potential Benefits and Problems of RPA". These concepts along with the theory of change management constitute the theoretical framework, which will be used to explain and discuss the research findings in later chapter.

2.1 Search Strategy

The preliminary literature review was conducted to find theoretical concepts and previous related studies from the domain of RPA. For this we followed the following search strategy based on the suggestions of Bryman (2012): First, we selected scholarly databases of Information Systems, which are accessible via Lund University Library's website. In the databases, we searched by subject (Business and Economics) and continuing by subject (Information Systems). We searched is several databases, such as ACM, Emerald, IEEE etc. When in each database, we searched by using keywords and combination of keywords such as *Business Process Automation, Robotic Process Automation, Intelligent Automation, Artificial Intelligence, Human Resources, Conglomerate, Multinational Organizations, Large Organizations,* which were combined using Boolean operators AND, OR. We restricted our search to peer-reviewed research articles, published in academic journals and/or academic conferences during the years 2014-2023 that were written in the English language. Older research papers and papers written in other languages were excluded. Further, when needed we complemented our literature search by searching in the basket of eight which includes journals within IS that are highly ranked. Lastly, the literature search results were evaluated by reading the articles' abstracts and their conclusions and, when the articles were considered relevant, we read the whole article.

2.2 Robotic Process Automation

Business Process Automation (BPA) and Robotic Process Automation (RPA) are under the umbrella concept of process automation. According to Sharma et al. (2022) Business Automation refers to "…*The fusion of modern application development with business process management (BPM) and business rules management (BRM) to address the needs of a dynamically changing market."* (Sharma et al. 2022, p 1141). Lazareva, Karasevskis & Girjatovcs (2022), compare BPA to Business Process Management (BPM) as a practice that involves technology to automate business processes and improving efficiency through the analysis and optimization of business processes. The authors suggests that BPM is a prerequisite for BPA (Lazareva et al. 2022). RPA on the other hand is rather a type of software

that mimics the activity of a human being by providing and doing tasks within a process (Lhuer, 2016).

Robotic Process Automation is a software-based solution used by organizations for automating the routine tasks involved in business processes that take structured data, processes it, and based on rules, gives a deterministic output (Aguirre & Rodriguez, 2017). In simple words *"robotic process automation is a way to automate repetitive and often rules-based processes"* (Prangnell & Wright, 2015). It is important to understand that RPA is a software technology tool although the term can be associated with physical robots. In other words, RPA involves the use of software robots that are programmed to mimic actions of a human user, in other words, automating repetitive, rule-based tasks. On the other hand, BPA is a broader concept and focuses on the end-to-end processes. Additionally, BPA aims to optimize the entire business processes using a range of automation technologies. To explain process automation technology development, it can be divided into two primary branches. "Autonomous" automation solutions are operating without human involvement and "assistive" are designed to support human process execution. Further, they mean that technology solutions can be defined by their deployment models and functionality (Hindle et al., 2017). However, automation itself has been widely used for over a century and is not a new technology, although it may be considered an innovative solution (Lazareva et al. 2022).

The objective of this movement has been to enhance process efficiencies, lower costs, and deliver superior quality end products. It is important to understand that not all processes are eligible for RPA automation. However, the processes that are going to be automated must be optimized and mature (Lhuer, 2016). Accordingly, Hofmann, Samp & Urbach, (2020) claims that a standardized and rule-based structured processes, among other criteria, are suitable for RPA. Service automation can be used to generate multiple business benefits, but despite that, Lacity & Willocks (2016) have discovered that companies that solely prioritize cost savings may miss the opportunities to enhance both customer experience and employee satisfaction.

Although the goal of RPA is to enhance several benefits, Hindle et al., (2017) has identified that service automation can appear risky. Furthermore, even though many organizations are attempting to automate their processes, success is not guaranteed. To better understand successful and challenging automation deployments, the study presents eight significant areas of risks for organizations to consider. Overall, they have identified risks that are associated with automation and the management actions that can help mitigate these risks. The authors refer to the article *"Service Automation: Robots and The Future of Work'* by Lacity & Willocks from 2016 as they are explaining that shareholders, employees, and customers constitute the concept of triple-win values achieved by companies in the context of successful RPA deployments. Accordingly, Hindle et al. (2017) highlights the risk of overlooking the triple-win value by treating RPA as only a tactical tool to cut costs in specific areas, which can be seen as a strategy risk. In accordance with the growth of RPA the scope has become broader and more complex, which may have led to some vagueness in its use and interpretation today. Among the findings by Hindle et al. (2017), the authors concluded that there is hype and certain confusion on the market which may lead to wrong decision making regarding what and how many RPA tools to choose. There is a lack of understanding since the market prevails tools that are being sold as "RPA " or some form of cognitive automation. Thus, clients must be aware of the hype and be critical in the decision-making. There is always risk in the context of

achieving successful change management. Failing to effectively communicate strategic intentions, neglecting to actively seek stakeholder buy-in, and overlooking operational dynamics can result in compounded change management risks. Regarding the maturity risks, companies still tended to remain fixated solely on RPA and failed to recognize the larger picture of preparing for future automation advancements in the next five years. In general, there are risks when picking projects and launching, with choosing the wrong source model and with operational risks such as taking robotics from development into operations Hindle et al. (2017).

2.3 Intelligent Process Automation - RPA and AI working together

Robotic Process Automation (RPA) and Artificial Intelligence (AI) are two concepts that nowadays go hand in hand (Chakraborti et.al, 2022). Intelligent Process Automation (IPA) is an emerging area, and it refers to the combination of AI and RPA (Pramod, 2022). As RPA automates simple repetitive tasks, IPA on the other hand can enable more complex automation by using AI as a tool to automate more complex tasks that require decision making and to minimize human-dependent training (Chakraborti et.al, 2022).

The field of RPA is undergoing a significant transformation, thanks to recent advancements in Machine Learning (ML) and AI. As a result, businesses can now automate various steps in their processes. Industries such as transportation, manufacturing, packaging, and shipping, customer service, finance and healthcare are among the early adopters of this technology (Manyika et al., 2017). Integrating AI or ML with RPA enhances its capabilities by minimizing the possibility of human errors, accelerating decision-making processes, and managing monotonous tasks. The convergence of these technologies is referred to as Intelligent Automation (Rao & Pathak, 2020).

According to Naidu & Vedevathi (2019), the use of Robotic Process Automation (RPA) alone does not account for the cognitive nature of tasks that involve psychology, knowledge, attitude, natural behaviour, and linguistics. To address these aspects, an automation framework needs to integrate AI capabilities within its intelligence stack. However, Chakraborti et.al (2020) claim how ML is disrupting the world of business processes. Nonetheless, useful insights of how AI, ML and RPA can be linked are raised.

ML and AI technologies can be referred to as Intelligent Automation (IA) and may improve the expected outcomes of work processes and is based on the same technology as RPA (Chakraborti et al., 2020). Rao & Pathak (2020) predict that the future RPA technologies lies in the combination of RPA and AI. IA incorporates algorithms that are capable of handling various tasks, such as exception handling, coordinating decision-making processes, and even facilitating looping dialogue communication in chatbots.

Rao & Pathak (2022) also state that IA, since knowledge intensive activities, require the aid of a tandem of IA also since AI is created to advance to include law enforced operations such as judgments. RPA would thus make more intelligent choices supported by AI together with analysis of specific situations, and this is just an example of a real case. AI gives RPA great opportunities and potential in procurement requisition spend analytics, reporting, analytics, and

freight settlement. Necessarily, in the era of the AI has been a significant factor in bringing about the drugs and medicines that handled the COVID-19 virus, as well as the fact that they were able to use AI to track the virus when they first arrived in Wuhan, China (Rao & Pathak, 2022).

To summarize, in the future organizations can apply RPA combined with AI to achieve the best possible profit margin as well as maximum benefits to the organization. Rao & Pathak (2022) also states that these two components combined will improve return on investment (ROI), strategic policies, revenue generated and more. The disadvantage that may arise is the implementation costs. Analysing when to make a profit is difficult and this may be one reason why growth will be slow but steady. Lastly, Rao & Pathak (2022) also predicts saving 134 billion USD in labour value and investments in the field are accelerating growth by trying and calculating the actual value of implementation. Also, adopting IA creates opportunities for all industries worldwide by improvement in flexibility and scalability (Rao & Pathak, 2022).

2.4 Potential Benefits and Problems of RPA

As in most cases, there are pros and cons to new applications. In this case with RPA and its impact, employee fear is a fact (Fernandez & Aman, 2021). Fear in this context is described as human employees being afraid of getting replaced by robots which in turn can lead to internal tensions between managers and their employees. Fernandez & Aman (2021) highlight many important aspects of RPA including both opportunities and challenges with it in general for organizations and the research deals with how to go about planning an implementation of RPA.

However, the background is relevant to this thesis as it reviews issues such as fears of RPA, pre and post thoughts of employees undergoing this development and the impact (both positive and negative) RPA can have. In general, the main reason why organizations implement RPA is to increase the effectiveness of the work process, enhance productivity, reduce the risk of errors, and minimize the organizational costs (Willcocks, Lacity & Craig 2017).

Through automation of manual tasks, the human capacity can be relocated to more challenging and value-added tasks that have more of a long-term impact on the organizational performance (Pramod, 2022). Also, to be transparent regarding the impact of automation could enable enterprises to use its resources wisely and optimize ROI (Chao, Hurst & Shockley, 2018). Even though these benefits exist and may sound relevant, RPA can also lead to worse effects. Identifying suitable processes for automation using RPA is a crucial challenge for companies to overcome (Siderska, 2021). When implementing new technologies, organizations may need to readjust. Those adjustments may lead to negative impacts on the positions and tasks that are changing or even eliminated (Delaney & D'Agostino, 2015). When organizations, according to Willcocks, Lacity & Craig (2017), relocate their employees, there is a risk that these employees lose motivation and productivity, which in turn can lead to negative consequences for the organization.

Rao & Pathak (2022) argue that RPA and AI grew during COVID-19. Since this was so recent in time, we feel that the source supports our research as it highlights several benefits such as

economic as well as time efficiency with RPA solutions. Other benefits that the research presents can be seen as opportunities and those are factors such as decreased risks involved in operational activities, lowered costs, improved business outcomes, increased productivity, and client satisfaction and more are elements that are useful to us.

The COVID-19 pandemic has led to a global shift to remote work, making business continuity a top priority according to Siderska (2021). Innovative IT technologies such as Robotic Process Automation (RPA), have become increasingly important in maintaining operational processes. RPA is an emerging technology that automates tasks and enables organizations to cut costs, save time, maximize resources, and ensure business continuity. Siderska (2021) states that due to the pandemic, the disruptive trend of RPA has become particularly important for future unforeseen events. Due to this, the trend will continue to expand in the post-covid era since it is a part of business that is inseparable.

The RPA can provide several benefits in terms of a fast return on investment, reduce human errors and can work 24 hours 7 days a week without interruption (Santos et al. 2020). By using RPA to automate tasks, space can be released for employees to put their competence in more complex tasks. This is also supported by Turja et al., (2021) who means that RPA can support workers in their tasks and free up their time to focus on more creative and fulfilling aspects of their work However, Santos et al. (2020) list ten advantages with RPA. RPA can work 24/7 every day, it is highly scalable/extensible/reusable solutions to meet peaks in service demand, it performs tasks faster, there are less errors and consistent quality, it allows employees to focus on more important tasks, it generates full-time equivalent (FTE) savings. Continuing, RPA deploys new functionalities faster than other IT solutions, it integrates with systems through the application user interface, it has a fast Return on Investment (ROI) and more productivity.

The fact that it is only pre-defined rule-based processes that can be automated since it is executed by robotic software and therefore has no cognitive ability is a disadvantage presented by Santos et al. (2020). Also, it may require human support in dealing with exceptions which in turn can increase the complexity of the processes. Thus, to avoid as many mistakes as possible, there must be a symbiosis between the human worker and the RPA. On the contrary, (Madakam, Holmukhe & Jaiswal, 2019) mean that the main benefit of RPA is elimination of risks, reductions of costs and minimizations of errors.

As the advantages are many, Santos et al. (2020) is highlighting slightly fewer disadvantages. RPA is only suitable for processes that include rule-based tasks, it may be a temporary solution which automates manual processes based on legacy IT systems, increased process complexity when a part of the process still needs to be serviced by human workers, and creation of new tasks for the workers, as robots need to be supervised.

Literature presents both benefits and potential problems with RPA. It can be an effective solution for automating repetitive tasks and work 24/7 every day, improving productivity and allows employees to focus on more important tasks. However, it has its limitations and may require human support to handle exceptions and has a limited scope of only handling rule-based processes. Nevertheless, if RPA is used in the right way and in conjunction with human workers, it can lead to significant benefits for organizations.

2.5 Human aspect of RPA

In recent years, the convergence of the fourth industrial revolution and AI has sparked a technological explosion. In a global survey, AI and Robotics were part of the main technologies in the fourth industrial revolution that are driving changes to job, skills, and future of work (ed. Nankervis et al. 2021). A notable development is the growth of automation processes that utilize robots to replace human labour. Robots have traditionally been used to perform tasks that are deemed unpleasant, dangerous, or boring for humans (Turja et al. 2021). However, with advances in technology, even desirable and fulfilling tasks can now be done by robots. This raises concerns about the impact of delegating enjoyable work to machines *(*Turja et al. 2021). The human aspect of RPA is an important consideration, as (Seeber et al. 2020) issue, that many not yet answered questions regarding what effects the human-machine collaboration has on employees.

According to Danaher (2017), the automation of work may pose a threat to people's employment and professional paths. People evaluate the usefulness of robot technology based on both their experiences, but also based on their imagination of what could happen (Turja et al, 2021). According to (Brougham & Haar, 2018), previous studies have found that employees with higher awareness of the impacts of STARA (Smart Technology, Artificial Intelligence, Robotics and Algorithms) tend to be less committed to their organizations, have a lower career satisfaction and thus more likely to consider leaving their jobs.

Turja et al. (2021) means that in terms of expectations, robotization can elicit both positive and negative stress responses simultaneously in individuals. For employees that expects that their tasks will be robotized, may experience positive stress which can be explained as the perceived meaningfulness of work, while the negative stress is related to exhaustions and cynicism. As Zhu & Kanjanamekanant (2023) highlights that a primary stressor for an employee can be the application of for example RPA. Thus, a technological change (Turja et al., 2021). Furthermore, Turja et al. (2021) suggest that robotization can support autonomy and job crafting and lead to higher job satisfaction and general well-being if introduced with proper planning and consideration for the employees' needs.

However, introducing robots "top-down" can reduce autonomy and job crafting and cause cynicism among employees. Besides, Zhu & Kanjanamekanant (2023) discuss that RPA requires employees to work together with robots to achieve their goals. However, the implications of human-robot co-working have been limited, and there is need for further investigation due to the increasing adoption of RPA. While some conceptual works have explored the possible impact of automation on the quality of work, there is still a need to address questions regarding job intensification, skills needed, learning and job security. The benefits and drawbacks of having machines as teammates need to be more thoroughly (Zhu & Kanjanamekanant, 2023).

While employees may initially fear losing their jobs, implementing RPA solutions in place of humans can lead to an increased job satisfaction (Turja et al., 2021). However, this adoption of automation may lead to increased competition between companies (Cooper at al., 2019; Fernandez & Aman, 2018). To prepare fellow employees for the technological changes, organizations should provide training on using RPA, and educate them on the benefits and

limitations of the technology (Fernandez & Aman, 2018). Turja et al. (2021) also highlights that it is important to have a genuine and transparent dialogue with the employees. It is also stated by Fernandez and Aman (2018) that fellow employees concern also stem from the fact that the use of RPA solution requires changes to their work processes, which in turn requires them to acquire new skills and knowledge. This due to that some employees are comfortable with their job positions and may experience fear and difficulty in learning about the use of new technologies. Hence, if employees need to perform more challenging tasks, it may lead to the need of acquiring new skills (Zhu & Kanjanamekanant, 2023).

2.6 Change Management

RPA involve the implementation of new technology, but it is not solely about technology, it also involves change of the organization. Change refers to modifications that occur in various structures of an organization, such as its structure, management, employees, processes, and other activities (Armstrong, 2010). More specifically, RPA is about automating tasks that are usually performed by humans and thereby involves a significant change in the way work is done. It can lead to changes in job roles and responsibilities. Hence, this can be challenging transition for employees and effective change management is needed for support and adaption. In contrast to the outward-facing nature of strategic corporate management, which prioritizes the achievement of optimal adaption to the external environment, change management is an internal process that centres on the need and concerns of the members of the organization undergoing the change (Lauer, 2021). According to (Damarwan & Azizah, 2020) organizational change is focused on handling aspects of employee behaviour. Hence, employee resistance may be one the factors causing failure of organizational change. Therefore, it is important to note that not all planned changes can achieve success and gain acceptance from all employees. The failure rate of organizational change has been reported to be as high as 70 % (Damarwan & Azizah, 2020). This highlights the significance of employee response to change.

Following, Kurt Lewin's change model and Kotter's eight steps model, which both are under the wider theory of change management, are presented as they provide a structured approach to understanding organizational change in relation to RPA.

2.6.1 Lewin's Change Model

In 1951 Kurt Lewin proposed the Change Management model to explain how organizations both adapt and deal with change. Further, the model indicates the stages of organizational change, where the current state is described as the status quo and outlines a necessary sequence of steps towards a future state that represents the desired change (Hussain et al. 2016). Lewin's change model is a classic framework for understanding organizational change that emphasizes the importance of unfreezing the status quo, moving towards a new state, and unfreezing the new state to make it permanent (Hussain et al. 2016). More specifically, organizational change includes the following stages:

1. *Unfreezing* is the first step where the organization prepares for change by identifying the need for change, establishing a sense of urgency, and creating willingness to change.
2. *Changing* involves implementation of the change. It requires that the organization identifies and implements the specific changes that are necessary to achieve the desired outcomes. It might be to develop new processes, reorganize employees or departments or implement a new technology.
3. *Refreezing* is the third and last step which means that the new change should be established. It reinforces new behaviours, processes, and procedures that were introduced in the second stage. Here, training, communication and ongoing monitoring can be crucial for the change to sustain over time.

Galli (2018) states that Lewin made several assumptions for effective change. First, there must be a change motivator for the change to occur. The employees are the heart of the organization and are also the ones that are being impacted by the change. At the same time, the employee's must be willing to adjust and integrate new procedures into their daily work routines. The author also supports that resistance to change will always be a common occurrence. Thus, the old organizational behaviours must be replaced with new attitudes and behaviours with an emphasis on reinforcement (Galli, 2018).

2.6.2 Kotter's Eight step Change Model

John Kotter developed an eight-step model that is designed to help leaders successfully implement organizational change. The eight steps in the model include (Galli, 2018): 1. Create a sense of urgency; 2. Create a core coalition; 3. Develop and form a strategic vision; 4. Communicate and share vision plans; 5. Empowering employees to act on the vision; 6. Generate short-term wins; 7. Consolidate gains and produce more change; 8. Initiate and set new changes. Similarly, Kotter's eight steps provide a detailed framework for managing change in organizations and can be used to analyse the effectiveness of change management strategies, and to identify areas for improvement.

2.7 Theoretical Framework

The literature review, which includes key concepts of the information systems research field such as "Robotic Process Automation", "Intelligent Process Automation - RPA and AI working together", "Potential Benefits and Problems of RPA", and "Human aspect of RPA". created the theoretical basis for the bachelor's thesis study. The aforementioned literature along with the theory of change management form the theoretical framework of the bachelor's thesis, which is used to interpret and discuss our research findings. That is, the research findings are discussed in the coming discussion chapter in relation to the research aim, and research question, and are discussed and explained with the help of the theoretical framework.

3. Method

This chapter presents the methodological approach for this study. Firstly, the research approach is presented followed by a description of what method of data collection was used. Secondly, the process of sampling techniques, criteria, sample size, participants, and research procedure are presented together with a brief description of the participants of this study. Thirdly, the method of data analysis is described followed by presentation of the research's reliability and validity provided and the ethical considerations made for the study. Lastly, the chapter ends with a reflection of the methodological choices.

3.1 Research Approach

There are three approaches to research: the quantitative, the qualitative, and the mixed methods approach. Qualitative research aims to understand how people perceive and interpret their world, including their language, values, and perspectives, to capture the nuanced and intricate nature of their individual experiences (Patton, 2015). Quantitative research includes theory testing and can be repeated by other researchers in order to confirm or approve previously measured results. Measurable variables are taken into consideration, which are analysed in order to generalize the results (Oates, 2006). The mixed approach combines the practices of quantitative and qualitative approaches to enrich the numerical results with the information consisting of interpretation (Walsham, 2006).

To fulfil the purpose of our bachelor's thesis research, neither the quantitative, nor the mixed methods approach can be used. Data about the phenomenon are required, which cannot be measured numerically. Our research question is based on the experiences of RPA practitioners. That is, there is a need for first-hand knowledge of a number of experiences that the participants have (Leavy, 2014). The data that are collected are qualitative, in the form of experiences, opinions, meanings, challenges and needs of the research participants. Thus, the qualitative is the most suitable approach for this bachelor's thesis research.

3.2 Method of Data Collection

We decided to collect our data through semi-structured interviews. Interviewing is a method of collecting data in qualitative research, which is explained as *"the collection of stories, statements, and reminiscences of a person or persons who have first-hand knowledge in any number of experiences"* (Leavy, 2014). Therefore, based on our research purpose and research question, our decision to use this method was reinforced. Leavy (2014) means that oral history *"offers qualitative researchers a way to capture the lived experiences of participants"* which is something that will be a benefit for us while interviewing and lifting the perspective of RPA practitioners.

There are different types of interviews such as structured, semi-structured and unstructured (Oates, 2006). To collect valuable data, semi-structured interviews were conducted. This means that the interviews follow a structure with predefined questions and have lists of themes to be covered but are open to change order or ask additional questions, if the conversation takes that direction (Oates, 2006). An interview guide provides a framework for the interview, ensuring that all necessary topics are addressed, but also allows for flexibility in the way questions are asked and answered (Bryman, 2021). Hence, we created an interview guide that included several questions and depending on the answers, we can get clarification, go even deeper and ask new questions to reach more information (for the Interview Guide see Appendix A). The questions of the interview guide were based on the findings of our literature review in combination with personal experiences and ideas that were considered relevant for the study. We discerned four categories base out questions on. We wanted to ask questions that were both operational and managerial and embrace it with opening questions and closing questions. The operational questions (2.1-2.3) are focused on specific tasks and responsibilities related to the application of RPA and the managerial questions (3.1-3.7) are designed to assess the candidate's ability to lead and manage the use of RPA within an organization, including change management, human factors, and information security. Furthermore, we used both open questions and closed questions. Closed questions in the introduction to get information about what role they have, their relation to RPA and their work experience. Open questions were asked throughout the whole interview which led to an open discussion where the participant got the opportunity to guide the conversation. Also, to ensure full consent of the participants, an informed consent form was sent to them before conducting the interviews to be read, agreed, and signed (for the Informed Consent form see Appendix G).

3.2.1 Research Setting

This research was conducted among RPA practitioners that are currently working in conglomerates, which have implemented RPA and, although multinational, they are located in the Swedish and Danish context. In a conglomerate, that is often large and complex, each business unit operates as a separate entity with its own management team, brand, and financial statements. While conglomerates can provide benefits such as increased diversification and access to new markets, they can also face challenges related to managing multiple business units with different needs and priorities. However, the diverse range of business processes can benefit from the applications of RPA (Moreira, Mamede & Santos, 2023). In other words, RPA is used in a wide range in conglomerates and there is a high level of automation potential. Therefore, we found this research setting appropriate to explore.

3.2.2 Sampling Technique, Criteria, Sample Size, Participants and Research Procedure

The sampling technique in this bachelor's thesis is purposive, which means that the selection of the participants is not random, but rather intentional and purposeful and it is emphasized purposely on the richness of the information source (Patton, 2015). That is, we have chosen participants that meet the following criteria: they are employees with deep and broad knowledge on RPA; they have minimum work experience within RPA of 2 years; and they are currently working as RPA practitioners in conglomerates under various roles. Hence, from the RPA practitioners that we contacted, we invited those who fulfilled the aforementioned criteria.

Gender and age variables were not expected to influence the research outcome and, therefore, were not considered. However, we did try to maintain a gender balance among the participants. So, from the invited participants we concluded to five that met those criteria.

More specifically, firstly, to recruit our participants, we reached out to our contact person at the company we were having our project work on January 24, 2023, and asked permission to conduct the research and to suggest us potential employees who could possibly meet the sampling criteria, which we have set. Secondly, we contacted the potential participants via email explaining them our research focus and explored their intention to participate in the research. Thirdly, those who replied positively, were double checked that they fulfilled the sampling criteria. Therefore, we concluded to five purposely selected participants, who agreed to participate in our research. For confidentiality reasons, the real names of the participants were changed to numbers. That is, Participant 1, Participant 2 etc (see following Table 1).

Table 1: Participants Overview

Interview	Participants	Role	Years of experience	Date, Interview Duration	Appendix
1	Participant 1	Digital Customer Experience Leader	2 years	2023-03-29 35:57 minutes	B
2	Participant 2	CCC Digitization and Process Automation Leader	3 years	2023-04-05 32:40 minutes	C
3	Participant 3	RPA Engineering Manager	4 years	2023-04-06 27:50 minutes	D
4	Participant 4	Project Manager, Commercial Operation Excellence	2,5 years	2023-04-12 24:29 minutes	E
5	Participant 5	Business Developer and Team Manager	3-4 years	2023-04-12 31:02 minutes	F

We then contacted the 5 participants to set convenient dates and times for their interview. We also contacted our participants before the actual interviews took place for the purpose of obtaining consent regarding supplementation. If we, during the thematic analysis, discovered that there was a need for completion, we wanted to contact the participant concerned and ask for more information or clarification. All interviews were conducted during late March to late April 2023 via Microsoft Teams to accommodate the participants and were recorded with the participants' consent (for the Informed Consent form see Appendix G).

3.3 Method for Data Analysis

For analysing our collected data, we decided to follow the thematic analysis by Braun & Clarke (2006). Thematic analysis is a method of data analysis, which is based on coding, and it is used in qualitative research to identify, analyse, and report themes within data (Braun & Clarke, 2006). The method involves six phases of analysis; however, the process, although presented as linear for the reader, it is not and back and forth movement is needed. The steps entail becoming familiar with the data, generating initial codes, identifying themes, reviewing, and refining themes, defining, and naming themes, and lastly producing the final report based on themes. Overall, the final step of thematic analysis is critical to producing a rigorous and informative analysis of the collected qualitative data.

So, what we have practically done to analyse our collected data is: First, the collected data through the interviews were transcribed. In order to transcribe the collected data, we listened to the recordings repeatedly and transcribed carefully. Since we took notes during the interviews, we compared the transcriptions with our notes. We also used the notes for additional understanding of the material. We read and re-read the transcribed data to get familiar with them and get a deep understanding. Second, to extract data of interesting characteristics, we identified codes related to our research purpose and research question. The initial codes were either words, sentences, or small chunks of text. For example, challenges, opportunities, resistance, human factor, managing change etc. We collected relevant information for each code. In this phase our mission was to form the basis for the themes, which started to develop in the next phase. All the meaningful data that we extracted were organized into groups. Thirdly, in accordance with Braun & Clarke's (2006) recommendation, we conducted the actual coding by commenting directly on the text in the document and marked potential patterns with colours. Additionally, we coded for as many themes as possible. Which resulted in 5 themes including Robotic Process Automation, RPA practitioner's perception, Opportunities, Human Aspect and Challenges. Moving on to the reviewing part where we clarified what the themes represented and how they relate to one another. Here we also looked for inconsistencies in the themes and excluded data that we did not find relevant to the themes and/or our research question. Once we had finalized the themes, we defined, named, and described the content of each theme to prepare for the last step, where we used what we had produced in the previous steps to develop the final report.

3.4 Reliability and Validity

How can we make sure that the data we collect is reliable and valid? Qualitative research has been criticized over the years, due to the lack of agreements and quality. Leung (2015) thus claims that reliability and validity are the main factors that define the quality of research. Since we are conducting qualitative research, this is difficult as our research focuses on individual organizational units affected by situational variables. This goes against Leung's words as he claims that reliability refers to replicability. Nevertheless, we believe that it is difficult to conduct this kind of research as the interviews are different from person to person and many factors can affect the data we get from the participants. Leung (2015) guided us with the suggestion that in a qualitative study we should focus on the concept of consistency but also consider the reliability of the study by improving comprehensive data use with analysis referring to the empirical data. The setting in which the interview takes place may have an impact on the validity of the collected data. Therefore, we had a transparent and clear communication with the participants.

As previously mentioned, Bryman (2012) believe that qualitative research gives free rein to the researcher and that the researcher can conduct interviews and choose what to investigate, hence there are no standard procedures to follow when conducting qualitative research. This is explained by Leung (2015) as there is a certain degree of variability in the results produced by such research, but they can be supported by analysis referring to empirical data and comprehensive data use. However, the author describes that the reliability of the study can be improved for example with comprehensive data use and with careful analysis of the empirical data (Leung, 2015).

Leung (2015) views the validity tool in a qualitative study as the appropriateness of the data and process. The author that the research question must be well suited to the expected outcome and requirements. Leung (2015) also wants to point out how important it is for validity that the sampling and data analysis is carried out in the right way and that the method chosen for research should work with the research question. Throughout this project we have followed Bryman (2012) and Leung's (2015) guidance to improve the quality of our qualitative research, such as by using comprehensive data analysis and selecting appropriate research methods.

3.5 Ethical Considerations

Regarding the ethical aspects of this research, it is critical for protecting the rights and dignity of participants and ensuring that the research is conducted in a responsible and respectful manner. Before conducting our interviews, we clearly informed our participants about practical and ethical elements. First, we will introduce ourselves and who we are, followed by an introduction of our research, what it will be used for and its purpose. To be able to represent the participant in a timely manner we will ask for permission to record and transcript the interview. Since we do not find it important or valuable to use the real names of the participants, we will let them remain anonymous. Oates (2006) determines the importance of every participant's right to confidentiality. Finally, when introducing the interview, we informed our participants about their rights to ask questions and or withdraw at any time (Oates, 2006). To

make sure that the participants feel accurately represented in the interview we offer to have the transcript and recording sent to them.

Bryman (2012) on the other hand describe the ethical aspects of the research we are conducting on how the interviewees and those involved are treated. They divide the ethical part into four categories: Harm to participants, lack of informed consent, invasion of privacy, and deception. Since we conducted interviews to collect empirical data, we have a responsibility towards the participants. Participants may feel uncomfortable disclosing certain data and information that may harm their organization and therefore all interviews have been conducted anonymously. Detailing the answers has therefore been eliminated so that the risk of them being traced back to the participant does not exist. Furthermore, to ensure consent from the participants, an agreement was signed by both parties. To get away from errors and bias, the agreement also involved consent to audio tape record and transcript the interviews. The transcription will be made to code and analyse through the data. Since we will conduct all the interviews remotely and video is on, we made sure that they consent in that case as well.

3.7 Reflection of Method

As new and young researchers, we recognize that there may have been aspects of our research methodology that could have been made differently. Throughout the data collection process, we encountered a few challenges with our interview guide that prompted us to make changes. Therefore, we decided to conduct a first interview as a pilot interview. After that, we adjusted some of the questions. In response, we revised the wording of certain questions to make them more specific and targeted.

Further, during the data collection process, we encountered some difficulties in recruiting participants. We had originally planned to recruit all our participants through social media, but during our first interview we found that it was more effective to first get some suggestions from a participant since that person is active in the industry and has worked in several companies that operates within RPA. This led us to use purposive sampling technique. Also, we had one person that chose to withdraw. By reflecting on these experiences, we hope to improve the quality and validity of our future research.

4. Analysis and Empirical Findings

In this chapter, the themes that emerged from the analysis of the collected empirical data are presented. The themes represent our research findings. Their explanation is supported with the participants' quotations. Their explanation is supported with the participants' <u>most representative</u> quotations.

4.1 Theme 1: Robotic Process Automation

4.1.1 Definition

The participants define the term Robotic Process Automation in different ways. All the participants are explaining that a prerequisite of RPA is repetitive and pre-defined tasks. Participant 1 defines it as: *"[...] You can take repetitive, pre-defined tasks and use the RPA solution to be done instead by being done by a human being."* Further, the software does not possess any AI capabilities and does not have a brain and is only capable of following strict instructions. Participant 2 explains RPA in a non-technical way as simplifying a process into manageable steps that can be programmed and automated with minimal or no human interaction. For Participant 3, RPA is: *"[...] By the book a technology that automates the hands of people"* and bridges the gap between business and technical processes. Participant 4 gives a broader explanation of how RPA is discussed in the organization. There was a discussion about RPA's ability to:*"[...] Mimic a person. A person doing some jobs and automating that."* For those who work frequently with RPA, APIs are often used as a means of transferring data or creating a process, rather than relying on manual labor. Participant 5 brings a technical perspective to the term. As P5 is a former system developer, RPA is nothing new. Participant 5 quotes a friend who once said:*"[...] RPA are robots that retire administrators."* The most common aspect of RPA is the use of low-code tools to integrate with the system interface. Henceforth, RPA is a solution used when there is a lack of capability, resources, or technical know-how to make changes within the system or create a way to integrate with the system.

4.1.2 RPA used in the organizations

The participants belong to different types of organizations, despite this, we can see a clear common thread throughout the whole interview process. This is that RPA is accurate in the customer service departments. Participant 2 claims that RPA is located: *"[...] Everywhere in the organization"*. For example, they are using it for Customer Service Centres (CCC) teams to automate internal processes. Also, the data teams are using it for updating product information and the logistic department are using RPA to structure the monitoring of the not completed deliveries. Participant 2 explains that these are just some examples of where RPA is used in the organization but there are more procurement teams that are using it for purchase order generations etc. One of the most frequently utilized areas for RPA solutions regarding P3 is in CCC and customer-facing domains. Given that customer behaviour changes rapidly and frequently, it is difficult for technology to keep up, leading to a reliance on legacy systems with limited functionalities and poor user-friendliness. This misalignment can result in a gap

between employees and customers' expectations, which the solution aims to bridge by providing faster, better, and more relevant service to end-consumers and customers. Additionally, Participant 3 also states that the RPA solution is seeing increased usage in HR, finance, and procurement departments.

Participant 4 explains that RPA is used in many different areas within the organization. For example, there is also a lot in their customer service or support where they have similar kinds of repeating questions such as: *"[...] Can I have a copy of my invoice?"*. Participant 4 also says that RPA is used in their: *"[...]Service business, a few in our finance areas but we have a potential for much more."* Participant 5 explains that the organization is implementing RPA in some of their larger clients who utilize case management systems that handle millions of cases, especially those that have clear rules for handling typical cases. When dealing with large business or case systems, the customer often uses x or y. The organization's trend is to move away from large platforms and towards building automation with real code, and they are using more open-source platforms, although the organization still integrates directly against the user interface. Even though Participant 5 states that the RPA use is relevant for its organization and customers: *"[...] It serves a quick fix if the issue cannot be resolved in a real way"* is further described.

4.2 Theme 2: RPA practitioners' perceptions

Since this study is focusing on what experiences RPA practitioners' face in the applications of RPA, it may vary depending on what organization they are working in, how many years of experience they have and what their job role and relation to RPA is.

4.2.1 Size of the organization

There are varying opinions regarding whether the size of the organization may influence the use of RPA or not. For Participant 3: *"[...] it is a lot more different, not only about the size, but the digital maturity."* In digital-native companies it may be easier to adopt RPA than in traditional enterprises due to differences in digital maturity and organizational size. The reason is that Participant 3 believes that: *"[...] there you have a different mindset, different mentality, the scale and the magnitude of deliveries and impacts are a lot more different than enterprises."*

However, challenges may arise in the latter, where multiple layers and hidden complexities require alignment and compliance with regulation across countries, as well as strong focus on security and data privacy. Participant 4 agrees in the context of maturity and explains that when the market is mature, more businesses or business sizes can use RPA. However, using external suppliers for the actual development. Moreover, Participant 4 adds: *"[...] I don't think a company has to be very big to benefit from RPA."* but emphasizes that there must be a clear understanding of what and where the RPA is possible to use.

Participant 1 on the other hand means that it depends on the organization by quoting: *"[...] What is your service and so I would say that the kind of process that we are robotizing"*. Even

though a particular service lends itself to RPA depends on the organization and Participant 1 states that the process of being automated may be more complex than the organization itself. However, standardized processes with high volume tend to be more prevalent in larger organizations, but smaller organizations that provide services may also benefit from RPA solutions depending on the organization, their nature and what they offer. According to Participant 1, large organizations may quite often have high volumes of work which impacts the number of RPA solutions. Participant 5 goes back and draws a parallel with history. When RPA became a phenomenon: *"[...] Banks and insurance companies were the early adopters in these techniques"*, meaning the larger organizations. At the same time, Participant 5 agrees with the other participants that large organizations often have more resources and capability to hire the right person for the use of RPA solutions.

4.2.2 Improvements when using RPA

When we asked the participants regarding improvements of the use of RPA in the work processes compared to previous ways of working it generated scattered responses. For Participant 3, it has improved a lot in the organization. RPA was initially adopted about six years ago in different countries. Four years ago, the team led by Participant 3 was formed particularly to work with the customer support centres where most automations had been completed. Through examining different business cases, they identified a common issue: numerous individuals were attempting to address the same problem. By standardizing processes between countries, it enabled global standardization, which could then be automated. This entailed the organization to be more aware of the responsibilities of processes and compliance.

Participant 3 resembled the previous situation which led to their conclusion through a metaphor: *"[...] it was a spaghetti environment, so it was very mixture of everything you know but then in the end you see it is just spaghetti right it is processes and problems that people are trying to solve."* Furthermore, the participant explains that the environment was chaotic and hard to understand where things start and end. Participant 5 at the same time believes that RPA has been a great help both internally and externally for the customers. Especially by transforming the time consuming in business systems to focus more on the business and thus prioritize other necessary tasks.

Ultimately, Participant 1 claims that in most cases: *"[...] There is someone in the end to make a decision and especially when it comes to technical solutions it is usually the business owner ... and they need to make the final decision"*. However, if the business owner lacks a good understanding of the technology involved, they might be reluctant to invest in RPA. The success of customer support is often measured by the number of cases handled, while in finance, speed in invoicing is a key metric. Overall, as a business owner, one is constantly balancing multiple priorities to drive the business forward, in that organization, they used an RPA solution for that.

4.3 Theme 3: Opportunities experienced by RPA practitioners

All participants had different experiences of opportunities in the applications of RPA in their organizations. The participants said that RPA presents an opportunity for organizations to streamline their processes and reduce workload by automating repetitive, manual tasks. Participant 2 sees several opportunities with RPA but mainly that it reduces workload for the teams and allows them to focus on more complex tasks:

"[...] Especially when the workload is growing, causing a backlog and late replies to the customers – in that situation, the stress for the team members is also growing, negatively impacting their wellbeing and when we implement RPAs to handle some parts of the job, it reduces the stress and helps to keep workload manageable for the team."

Participant 1 highlights simplicity: *"[...] I think it was simplicity, because one of the main reasons and goals was to minimize the simple cases and to digitize them. As few simple cases as possible should go through the hands of a coworker."*

Another aspect is that it can minimize the need for additional hires to support customer queries. This is supported by Participant 2 who said:

"[...] The biggest opportunity is to save the time of the team or keep the number of people that we have to hire to support the customers in daily topics that they have when interacting with the company."

Furthermore, Participant 2 means that RPA enables a structured approach to various processes, allowing for process review, simplification, and issue identification. Explained from a customer's perspective, they are more satisfied as RPA provides consistent, comprehensive responses, eliminating the need for human intervention. As a result of this, Participant 2 explains that customers are more satisfied because they know what to expect from the organization. For instance, if a process is automated with RPA solution, such as answering order status questions, all necessary information is provided consistently in the response, eliminating the need for human intervention to provide additional information. Participant 2 emphasizes that the automation of repetitive manual tasks and the resulting FTE savings are key benefits of RPA. Indeed, they suggest that the organization would not consider reverting to previous non-RPA practices given the crucial role that RPA plays in their work:

"[...] I would not go back haha, I mean we have so many benefits with the RPA:s and we have been able to automate so many repetitive, manual tasks that the people are doing that I cannot imagine our lives without RPA today."

The benefits with RPA are so essential that Participant 2 cannot imagine working without it. Participant 3 added that there were a lot of benefits that RPA brought up such as standardization, optimization, faster time to market, less repetitive and low value adding tasks for their employees and much happier fellow employees from their personal experience at the organization. Participant 3 explains that due to COVID-19, RPA got the wind in its back, meaning that everybody needed to accelerate their work with fewer people and do it more efficiently. Also, in line with this big change, the behaviors of the customers changed quickly.

Participant 3 continues to explain the scenario where the organization had to act fast but did not have enough human power, that is where Participant 3 and her team had to act:

"[...] RPA is freeing time for all of this copy-paste boring work that takes a lot of time from co-workers, let's say 1-3 hours, and those resources will then be able to do something more creative and more value adding instead."

Additionally, Participant 3 states that RPA serves as a crucial bridge for non-digital native companies that seek to transform themselves into modern, digital organizations. In the non-digital native companies that are heavily monopolized and lack robustness, there is a desire to digitize their operations. Moreover, these organizations may be dependent on monolithic legacy systems. By implementing RPA, it can help these organizations achieve goals by bridging the gap between their current state and their desired state and to merge the gap between legacy systems and customers' expectations, buying them time to make core changes while maintaining balance. Similarly, this is stated by Participant 5 when talking about RPA platforms especially:

"[...] If you have an old system with a big backload of cases that you know you can handle with a robot, and might not have coders to help you, then you can use RPA platforms."

In such cases, where there may not be skilled coders or developers available, RPA platforms such as UiPath can be used as they are low code platforms. RPA platforms are becoming increasingly robust and provide a secure environment to handle repetitive tasks. As Participant 5 speaks out of a customer perspective, RPA can help customers to spend less time in business systems and more time on the business itself. Participant 5 also brought up a future opportunity such as the combination of AI and chatbots and claims that this phenomenon will become bigger this year.

It is important to consider that RPA alone does not improve the processes itself. The improvement comes when an evolved process is defined and implemented. Significantly, it is about being aware of the current processes in order to simplify them and adapt them to the RPA. Hence, in order to generate efficiency, the prerequisites of RPA were clearly agreed.

Participant 4 indicates that:
"[...] Before we do the RPA, please be sure what is the actual process, and would that process be better to be done in a different way? - to make sure we make an RPA or robot that is solid and will be able to work for a longer time."

Participant 2 also agrees on this:
"[...] When we are designing the RPA, we would like to deploy we have to review processes and take a look at each and every step of the processes so of course it challenges how process works and because RPA can follow simple rules, you have to make the process simple as possible to make efficient so for us it is improving the processes."

Therefore, it is not the RPA technology that inherently improves processes, but rather the clarity of the process improvement goals that drive the use of RPA. Furthermore, Participant 2 believes that utilizing RPAs can prompt a company to review its current processes and identify

any potential gaps, risks, or areas for improvement. This can ultimately result in increased efficiency, improved customer satisfaction, and a reduction in errors.

Participant 3 also highlights:
"[...] There is no one best solution that fits everybody like how the organizations are set up. It very much depends on how you run your organization and what works the best. Standardization is key to automation. I think some companies might not be getting it yet but always standardize before you start to automate."

Participant 3 expresses once again that to get successful RPA the processes must be standardized.

4.4 Theme 4: RPA related to Human Aspect

Working in, or close with, the Customer Service department can imply competing a bit with humans. Some participants lift the human aspect in relation to customers, and some in relation to their fellow employees. Participant 1 is discussing the actual implementation of RPA. What Participant 1 means is that it becomes very visible that a technology is taking over one's job. A comparison is made with e.g., implementation of a CRM system, that it can be tough to learn a new system and a lot of co-worker support is needed. However, RPA is clearly taking over a task and that distinguish it from other solutions.

Participant 1 expected that using RPA should be very easy and expected that fellow employees would be happy to avoid the simple tasks. A realization was made that: *"[...] We assumed that people enjoy working with more complex questions, we expected that the number of simple cases and the cases that could be robotized to be much higher than reality really showed."*

For Participant 2, that is working in CCC and has many different topics interacting with the department, the human aspect is there. But in terms of interaction, Participant 2 thinks that it would have a negative impact on the customers to robotize all the interactions. Furthermore, the importance of human interaction is highlighted, and the human aspect is being considered important.

Participant 3 thinks that the use of RPA is creating more time for creative thinking and nurturing innovation. Participant 5 goes in line with this and means that the customers of the organization can: *"[...] Spend more time in the business than in the business system.".* Additionally, the cases of the customers can be handled faster than before. Also, Participant 5 is using ChatGPT when describing the impacts of digitalization as: *"[...] I have never seen any digitalization actually decreasing the demand of adding people working, people just work with other stuff."* However, RPA is only seen as a benefit.

Furthermore, Participant 1 experiences that the impact of fellow employees incorporating RPA into their daily work and their level of support towards it is also underestimated. The focus is often on the technology itself, rather than the workplace and how it functions. From a project manager's perspective, as Participant 4 describes, the challenge is in understanding the

business and determining RPA that is safe for the future. Accordingly, it can take time for the employees to understand that the RPA only can manage repetitiveness.

In Participant 4's organization, there has been resistance in order to understand the software. Participant 2 is bringing up a new perspective on the co-worker resistance. From Participant 2's perspective and with a forgiving tone, the resistance is coming from the older generation that has been working in the organization for about 10-30 years. Thus, who have experienced the transition from fax machines to new tools and processes. Therefore, the conviction may be difficult. Correspondingly, with the younger generation (50-60 years) the response is rather positive: *"[...] When we are starting to discuss possibilities we have making their lives easier."* Although RPA may make lives easier, there are tangible stressors.

According to Participant 1: *"[...] Workload is recurring, and it can be that an organization has digitized and streamlined so much that the simple and more relaxing tasks have been removed for the co-workers, which can create some sort of stress, I mean to just perform the complex and more demanding tasks."*

Accordingly, Participant 3 states that the negotiation of proving people needs to be done in small scales, and then get into the next iteration. Likewise, when people are being asked to change their usual way of working, there will be resistance. However, change management has not been very present in the organization and there has been resilience from (mostly) the technical side. For Participant 3: *"[...] It is just a digital co-worker."* The difficulties with penetrating people's minds that whatever the humans tell it to, it will do it.

In accordance with Participant 1's statement on stress, Participant 3 is contemplating the issue of people experiencing stress due to heavy cognitive workloads. The participant recognizes that there is a need for a change in the way work has been done for the past century, especially with the current technological advancements. The fact that people are working eight hours a day may lead to a cognitive overload and is asking if there is something that should be changed in the working environment.

4.5 Theme 5: Challenges experienced by RPA practitioners

Despite the opportunities of RPA, the applications of it can pose several challenges that must be carefully considered to ensure successful deployment. Below are the key challenges that were brought up by our participants in each organization, including issues related to process complexity, data quality and employee resistance. Participant 1 is talking about the adoption of RPA and means that people tend to fall in love with the solution since it may create the impression that it can do anything. Participant 1 says that this may lead to an overestimation of what RPA can achieve. Additionally, there can be an overestimation of what is predefined and repetitive, which a human being can easily identify. This may not necessarily be the case with RPA, as even small changes may require new protocols to be established. Participant 1 emphasizes: *"[...] So the devil is really in the details".* Thus, if the input provided to the RPA, e.g., what we expect it to perform, is done by humans, it may create problems. Participant 1 refers to us humans in the sense that we can be inconsistent in following strict protocols.

Furthermore, Participant 1 says that it also may be difficult to measure the impact of RPA, why it is being measured and that there are different ways of both defining and measuring success. In relation to this, Participant 4 problematizes the value measurement of RPA and how the activity of the software is being followed up. In that organization, it is still in process. Participant 4 asks a question, *"[...] If you have a full-time employee, how much of an "employee-time" do we save?"*. Hence, it is the actual measurement of the value. There are a few discussions ongoing in the organization regarding some unanswered questions related to the value of RPA. Among other things, if the resources should be in-house or external, for how long the robots can work or run and what support models the robots need. Participant 4 continues: *"[...] Because in big organizations a lot of processes change and new people attend, so what is the lifetime of a robot?"* These topics are still under discussion and are something that P4 think will be more established in line with the maturity of RPA in the future.

The challenge of change was brought up by Participant 3 in a sense that they are automating tasks of people, and at the same time there are myths which generate fear for the fellow employees. Fear in this context is described by losing their jobs and fear of a total automation. The main difficulty in implementing or working with RPA is therefore the lack of change management that helps people understand how it works and the benefits it brings. Furthermore, Participant 3 also claims that the lack of accountability for process ownership from the business also poses a challenge. Although technology solves the problem, the core meaning that needs to be addressed lies in the hands of the business and the process owners.

According to Participant 1, there is a challenge pertaining to the robots' inability to effectively address and resolve issues that may arise during periods of low or no human activity, specifically during night-time. Although it is a benefit that the RPA can operate 24/7. However, when the employees entered the morning after, there could be a heavy backlog of cases to be solved which was time inefficient, created extra work and did not make the life easier for the employees which is the main reason why RPA was implemented in the beginning. Participant 1 states that what seems to be simple in theory might not be simple in practice and that goes as well for the use of RPA solutions. The main problem area in the organization that is observed regarding Participant 5, is the difficulty in convincing talented developers to work with low-code RPA platforms, such as Nice and UiPath. The developers tend to perceive such platforms as lacking in challenge and excitement, with too many restrictions. This creates a challenge as even though the platform is low code, a consultant with a developer's mindset is still required to build automations that are dependable and robust.

Also, another challenge with RPA was stated by Participant 5, and that is that most of these previously mentioned platforms have an expensive license form and some of them only have the capability to be installed on a user desktop. *"[...]So every time you use an RPA you should try to optimize your process"*.

Meanwhile, Participant 4 argues that the main challenge is in the development phase. Participant 4 and other fellow employees note that the process definition needs to be very clear, which is not always the case. If the processes are not completely clear, it will develop and change things in the business. Defining the tasks for RPA takes more time and requires a re-evaluation of the current methods. Participant 4 adds that it is of importance to follow up on

user-fit to ensure that the RPA system is creating the desired benefits and creates value to the organization, as it incurs costs. The value derived from RPA justifies the investment made. Additionally, Participant 4 claims that the RPA itself does not improve the process so the real improvement comes from defining a better process, which is not performed by the RPA but rather by humans in the business. Without a well-defined process, the RPA system cannot perform its tasks effectively. Participant 2 is stating that there is an awareness of the potential risks of using RPA: *"[...] That there is a risk that use of RPAs can lead to reduction in headcounts, which would have a negative impact on the rest of the team, in brackets, they would be worried that each new automation means a potential lay off."*

But it becomes clear that this is not the case. As the business is growing, the workload is growing, but the team is the same size. When RPA is implemented, there is often still plenty of work for human agents to do, and they generally appreciate the support provided by the RPAs. However, it is important to note that this may not be the case in all companies. It is possible that RPAs could lead to a reduced need for hiring or retaining human employees.

Furthermore, Participant 4 highlights the maturity with RPA and the importance of what language that is used around the subject since we are not yet so mature with the solution and as the technology is still in its early stages of development. Participant 4 also highlights that RPA should be seen as a tool among many, and its implementation should be carefully evaluated to determine its value for specific processes, meaning it should be seen from a broader perspective: "[…] *This is a process optimization and automation, so every time you use an RPA you should try to optimize your process."* Developing and deploying RPA takes time and requires a dedicated team to evaluate processes and determine their suitability for automation.

5. Discussion

In this chapter, the research findings are explained and discussed with help of our theoretical framework. The theoretical framework includes the main concepts that were presented in the literature review chapter and the theory of change management. The chapter is structured to reply to our posed research question and understand RPA adoption in conglomerates by providing a rich and nuanced perspective on the opportunities and challenges of the technology from the practitioners' viewpoint. The chapter continues by discussing the findings with the help of change management theory and finishes with the identified key factors that affect the applications of RPA and constitute improvements for the conglomerates, to fulfill the aim of the bachelor's thesis.

5.1 Opportunities

The findings showed that the use of RPA is considered an important and positive factor in the work environment by the participants. As Willocks, Lacity & Craig (2017) claim, the main reason why organizations implement RPA is to increase the effectiveness of work processes, enhance productivity, reduce the risk of errors and to minimize the organizational costs. As shown in the findings all participants agree with this statement either fully or partially. It was suggested that the greatest of these benefits was to increase efficiency and productivity, which is also supported by Santos et al. (2020). It was also found that RPA has helped organizations to accelerate and explains the software as automating hands of people. Furthermore, it is experienced that RPA also has enabled time savings, process standardization and optimization, cost savings and freeing up human resources for more creative and value adding work. Turja et al. (2021) and Santos et al. (2020) support that RPA can help workers in their tasks and free up time to focus on more creative and fulfilling aspects of their work. Santos et al. (2020) explains that RPA generates FTE savings in terms of saving time. Regarding cost savings, Madakam, Holmukhe & Jaiswal (2019) also support that this as one of the main benefits of the use of RPA. On the other hand, it was also noted that the main benefit of using RPA is the time savings since it generates cost savings and improvement of quality at work. Siderska (2021) agrees with the aspect of time savings.

In another finding, it was revealed that RPA can bring both opportunities and potential problems in a certain aspect. Since the RPA can be active and perform tasks 24/7, it generates a higher efficiency than a human being that has limited working hours and requires breaks. But reality showed that the RPA may encounter insoluble problems during night-time, when no human workers are around. These pros and cons are agreed in the scholars which showed that RPA can, despite the opportunity of being active 24/7, increase process complexity and may require that some processes need to be handled by human workers.

Our findings showed that the RPA technology is relatively new and immature. This is supported by the literature that suggests standardized and mature processes are necessary to maximize the potential of RPA and generate efficiency. Before implementing RPA, these processes must be optimized and standardized correctly by humans (Lhuer, 2016). The

suitability of RPA for a process is also highlighted by Hofmann, Samp & Urbach, (2020), who also state that it must be rule-based and standardized. Regarding the maturity of RPA, it was stated that the market will have more companies applying RPA as the field matures. Also, that it is important to consider the use of language around RPA, given the immaturity of the field. Despite RPA being relatively new, automation has been used for more than a hundred years (Lazareva et al. (2022). Also, despite some participants considered RPA as part of history and not a new technology, it was suggested that it does not necessarily need to be considered immature. Furthermore, early adopters of RPA are banks and insurance companies, which can be seen as role models in the field, which Manyika et al. (2017) confirms.

Findings showed that COVID-19 has played a significant role in the growth of RPA on the market. It was highlighted that RPA may got the wind in its back since the pandemic has accelerated the adoption of RPA as organizations needed to work more efficiently with fewer people. This is supported by Rao & Pathak (2022) and Siderska (2021), who suggest that the pandemic and the shift to remote work has prompted organizations to seek out for automation opportunities. According to Siderska (2021), the COVID-19 pandemic has led to a global shift to remote work where RPA has become increasingly important. Thus, both findings and the literature agree that COVID-19 has facilitated the growth of RPA and created new automation opportunities.

Seeber et al., (2020) expresses the human aspect of RPA as an important consideration. Contrary to the conclusions of the study conducted by Danaher (2017), our findings did not show a perceived threat of the participants losing their job. Instead, automation was rather considered to have improved their work situation. However, Darmawan & Azizah (2020) state that one of the foremost concerns of organizational change is employee resistance. We found that our participants experienced resistance due to employees' fear of losing their jobs. Based on our findings, the resistance can be explained as RPA is replacing humans and is taking over one's job. One participant anticipated that their colleagues would be happier as they could shift their focus from simple tasks to more complex ones. However, our findings showed that reality was different. If an organization has streamlined a lot of tasks and the simple and more relaxing tasks have been removed, this can create some sort of stress to the employees. Zhu & Kanjanamekanant (2023) support that in those cases, where most of the routine tasks are being automated, it may entail that the employees have to focus on more challenging work and therefore acquire new skills. Consequently, this may result in an increased feeling of work intensification. Despite the initial fellow employees fear of losing job, the adoption of RPA can ultimately increase job satisfaction among those who are still part of the workforce (Turja et al., 2021).

When discussing various benefits of RPA, these can be seen as opportunities for future development. Chakraborti et al. (2022) discuss IPA, i.e the combination of AI and RPA, which is considered the future of automation. In the fourth industrial revolution, AI and Robotics were part of the main technologies (Nankervis et al., 2021). By using AI as a tool to automate complex tasks, this technology reduces the likelihood of human errors, speeds up decision-making processes, and handles repetitive tasks. In the discussions about the future of RPA, an increasing trend towards the integration of chatbots (an RPA solution) and AI was highlighted. This trend, which is in its growth phase, is expected to become even more significant this year according to one participant. Chakraborti et al. (2022) and Rao & Pathak (2020) supports this

by predicting that the future of RPA solutions lies in the combination of RPA and AI. However, Rao & Pathak (2022) argue that by combining AI and RPA, organizations can improve their ROI. In general, Santos et al. (2020) supports the use of RPA for its fast ROI. Lastly, the scholars support the statement regarding the difficulty to determine when the organization will achieve a profit, meaning the capability of measuring the impact or success. This may be a reason for the slow but steady growth of RPA.

As illustrated in our findings, the opinions and experiences of the RPA practitioners suggest that the size of the organization can influence the adoption and use of RPA. Some participants believed that digital-native companies may have an easier time adopting RPA due to their digital maturity, while others believed that larger organizations often have more resources and capabilities to hire the right person for RPA solutions. Meanwhile, smaller organizations that provide services may also benefit from RPA solutions depending on their nature and what they offer. These varying opinions suggest that the size of the organization is a relevant factor when considering implementing RPA.

5.2 Challenges

When discussing the impact, the findings illustrated that there are different opinions regarding RPA and regarding existing myths in the field. There is a common misconception that automation will replace human jobs entirely, which has led to fears among fellow employees about losing their jobs as we automate tasks that were previously done by humans. One participant agreed with this and stated that fellow employees lose their control of what is going on since it is not done manually. Fernandez & Aman (2021) support the reality of these fears. Fear in this context refers to employees' concerns about being replaced by robots, which, consequently, can cause internal tensions between managers and their employees. Organizations may need to adjust when implementing new technologies, which can result in negative impacts on certain positions or tasks that are changes or eliminated as also found by Delaney & D'Agostino (2015). This also confirms Willcocks, Lacity and Craig (2017) findings that fear is a risk of employees losing their motivation and productivity when they are relocated by their organizations. This can potentially lead to negative consequences for the organization.

Additionally, our findings showed that some participants experience resistance to using new technologies and resistance to change mainly from the older generation. We found that resistance comes mainly from individuals that are in their fifties and older, and the younger generation tends to be more open and positive when discussing possibilities for improving their lives. Furthermore, adapting to new processes can be challenging initially, but with time, it was experienced that people tend to recognize the benefits. Likewise, Zhu & Kanjanamekanant (2023) claim that some employees may be resistant to learn new technologies due to that they are comfortable in their current position and experience fear and difficulty in adapting. As a result, if employees are required to perform more complex tasks, they may need to acquire new skills. New skills in turn need practice, and according to Fernandez & Aman (2018) preparation is therefore needed in terms of technological changes. Preparation can be seen as training and education on the benefits and limitations of the technology. Our findings showed that it is the responsibility of the managers to talk about change in early stages in order for people to have

time to adjust to new ideas. This comes in line with Turja et al. (2021) findings that it is important to have a genuine and transparent dialogue with fellow workers.

Our findings showed that in some organizations, the workload can become repetitive and streamlined to the extent that simple and relaxing tasks are eliminated, leading to increased stress for employees who are expected to perform only complex and demanding tasks. Turja et al. (2021) support that robotization can elicit both positive and negative stress responses in individuals. Employees who anticipate that their tasks will be robotized, may experience positive stress due to the perceived meaningfulness of their work, while negative stress can be related to exhaustion and cynicism. Furthermore, Zhu & Kanjanamekanant (2023) argue that applying information technology in a job could be a primary stress factor for employees. Therefore, the authors highlight the significance of managers helping and granting greater autonomy to impacted employees, as it may contribute to the occurrence of employee burnout.

Despite a lot of benefits with RPA, another potential negative effect that our findings showed is the identification of appropriate processes for automation using RPA. This is a critical challenge that companies must address as also noted by Siderska (2021). According to Ivančić, Vugec, & Vukšić (2019) another challenge is the lack of understanding where RPA can be applied. This is worth noting as our findings showed that it is a crucial aspect to comprehend. In our findings, it was emphasized that the main hurdle exists during the development stage.

Our findings illustrated that in order to generate successful use of RPA, the processes have to be standardized and optimized. However, it was not always the case. If the processes are not well-defined, it can disrupt business operations. This is also supported by Aguirre and Rodriguez (2017), who claim that RPA is best suited for tasks that involve high volumes of standardized processes that are rule-based, and do not require subjective assessment or interpretation. Defining RPA tasks takes considerable time and current processes need to be evaluated. When discussing clear processes, Santos et al. (2020) support this by stating that RPA is only suitable for processes that include rule-based tasks within a limited scope.

Connected to the preceding findings, Santos et al. (2020) highlighted that the opportunity of RPA working 24/7 can also be seen as a challenge as it can increase process complexity when a part of the process still requires human involvement. Furthermore, Naidu & Vedevathi (2019) argue that RPA alone may not fully capture the complexity of certain cognitive tasks. One of the participants had experienced this problem with RPA creating a huge backlog during nighttime which did necessitate human assistance in managing the exceptions. This is comparable to the overestimation of RPA, as organizations and employees tend to become infatuated with the solution and believes that it is capable of anything. Hence, since there is a lack of change management in some organizations, employees may not fully comprehend the advantages of RPA and its potential to enhance their job performance.

Hindle et al. (2017) stress that implementing or using RPA comes with risks and no guarantee of success. The difficulty of measuring impact of RPA and the need for defining and measuring success in different ways was found in our research. Some concerns regarding the measurement of RPA and how the activity of the software should be monitored were found. Our findings highlighted that there is a risk in implementing RPA since it is difficult to calculate when an organization will achieve the desired profit or competitive advantage.

Furthermore, our findings showed that RPA should be viewed as a tool rather than a comprehensive solution to problems. More specifically, our findings showed that RPA is considered as a software technology tool that uses robots to automate repetitive, rule-based tasks by imitating human actions. According to Chao, Hurst & Shockley (2018) it is important to be transparentizing about the impact of automation that helps enterprises use their resources effectively and maximize their return on investment (ROI), which was also confirmed by our findings. Pramod (2022) states that the automating of manual tasks generates a greater long-term impact on the organizational performance, something that our findings cannot confirm. While Hindle et al. (2017) also pointed out that the hype and confusion in the market can make it difficult for organizations to decide which RPA to use. Concluding our findings showed that organizations should be critical in their decision-making and carefully select the appropriate RPA to achieve the full potential of the software.

5.3 Change Management

Our findings align with Ivančić, Vugec & Vukšić (2019) findings that some of the most common pitfalls in automating processes with robotics is the lack of technological understanding and how it should be applied, the support from management is missing, and that the employees might experience a fear of losing their job. Therefore, management's support to employees is crucial to be able to reassure them and their concerns and facilitate their adaption to change. This is also supported by Fernandez & Aman (2018) who claim that to ensure the benefits of RPA, it is essential to employ change management and communicative strategies. Accordingly, Ivančić, Vugec & Vukšić (2019) suggest that it may be necessary to implement a change management strategy that includes cultural shift and a change in mindset. Our findings confirmed that and found that this can help to bridge the gap between RPA's perception as an IT tool and its potential benefits for the business side. However, the findings showed that the lack of technological understanding and support from management, as well as employees' resistance and fear of job loss, can hinder the successful use of RPA. Therefore, our findings support that it is important to develop a comprehensive change management strategy that addresses these challenges and takes advantage of the opportunities presented by RPA. This comes in line with Lauer (2021) and Galli (2018) who supports that change management is an internal process that centers on the need and concerns of the members of the organization undergoing change.

Our findings can be further explained with theories of change management, such as Kotter eight step model and Lewin change model, with the aim of helping the conglomerates to analyze the effectiveness of change management strategies and at the same time help them to identify areas where potential improvements are needed. Based on Kotter's eight step model, the first step is to communicate the need for change by creating a sense of urgency. This can be achieved by identifying the key drivers of change and clearly inform the reasons for the change. In the case of implementing RPA, this involves highlighting the benefits of automation such as increased efficiency, reduced errors, and cost savings. Our findings showed that communication around RPA is essential, and how things are being communicated is what creates the biggest change. In one of the conglomerates, early communication of plans through

the demonstration of prototypes is providing employees the opportunity to adjust to the new idea. We found that it is important to provide the employees with training as also suggested by (Fernandez & Aman, 2018). Based on Lewin's change model (Hussain et al., 2018), the need of change from the current state into the desired state needs to be communicated. Here, as we found, training and communication is also key for a sustainable change. Although there was found lack of change management in some of the conglomerates, it was also found that awareness regarding the importance of making people understand the benefits of change. According to Armstrong, (2010), the first step to overcome resistance to change is to analyse the potential impact of the change by considering how it will affect people in their jobs.

Kotter's steps of creating core coalition, develop, and form a strategic vision, and communicate and share vision plans all involve elements of Lewin's unfreezing stage. Thus, the unfreezing stage aims to create awareness of the need for change, break down resistance to change, and prepare people for the upcoming change. In terms of awareness of RPA impacts scholars disconfirm with Lewin's step of unfreezing. Higher awareness of the impacts of robotics may lead to negative consequences rather than positive. According to Brougham & Haar, (2018), employees with higher awareness of the impacts of STARA (Smart Technology, Artificial Intelligence, Robotics and Algorithms) tend to be less committed to their organizations, have a lower career satisfaction and thus more likely to consider leaving their jobs.

Following, communicating the need for change, the next step is to empower employees to act on the vision. This can be done by taking it step by step and start small. Our findings highlighted the need of people understanding that the change is essential. The negotiation of proving people about a change, needs to be done in small scales. By doing this, the resistance from the employees that may arise, can be mitigated. Resistance to change may occur. However, by highlighting the benefits of using RPA can create excitement. Accordingly, Lewin's changing step, involves providing training and support to ensure that people have the right preconditions.

The seventh step of Kotter's model is about consolidating gains and produce more changes. This can be done by identifying areas for further improvement and implementing new changes that align with the strategic vision. Based on our findings, the use of RPA can lead to the identification of potential gaps, risks, or areas for improvement in current processes, which in turn can be addressed through further changes or improvements. In addition, this can be connected to Lewin's refreezing stage, where the focus is to stabilize the changes that have been made and ensure sustainable change. Kotter's last step includes initiating and setting new changes into the organization and its culture. Managing change effectively, enables the conglomerates to save costs and increase return on investment, thereby reducing waste of resources, time, and efforts as also supported by Chao, Hurst & Shockley (2018). By applying Kotter's and Lewin's suggestions, the conglomerates can develop a more comprehensive approach to change management that takes into account both psychological and social aspects of the change process.

Concluding, based on the aforementioned discussion of our findings we identified the following key factors that affect the applications of RPA and constitute improvements for the conglomerates, to fulfill the aim of the bachelor's thesis:

- Consider the size of the organization
- Optimize and standardize processes before implementing or using RPA
- Consider the limitations and potential problems of RPA
- Apply change management strategies
- Use clear communication around RPA benefits and challenges
- Start on a small scale for people to mitigate resistance
- Explore IPA for future development

6. Conclusion

In this chapter the conclusions of the bachelor's thesis research are presented, followed by its contributions, and finally some limitations and suggestions for further research are discussed.

6.1 Conclusions

This bachelor's thesis research focused on Robotic Process Automation. Nowadays, businesses must adopt new technologies and automate their internal processes to follow the changes of the rapidly evolving technology. An example of such a technology is Robotic Process Automation (RPA), which refers to software that automates repetitive tasks that require little or no human intelligence with the aim to free up humans from mundane and complex tasks and allow them to focus on more creative and intriguing ones. The research purpose was to explore the opportunities and challenges of the applications of Robotic Process Automation software in conglomerates from the perspective of RPA practitioners. To achieve the aim of the research, we posed the following research question: *What opportunities and challenges do RPA practitioners experience in the application of RPA software in conglomerate organizations?* For this, a qualitative study was conducted where the empirical data were collected through semi-structured interviews with five purposively selected RPA practitioners from different conglomerates. The collected empirical data were analysed thematically to conclude to five themes that represent the research findings. The findings were then discussed with help of the literature review and the theory of change management to conclude to the research results.

The findings showed that there is an overall positive attitude towards RPA, although, it was acknowledged that RPA could potentially pose a threat to certain professions. The application of RPA has brought improvements in the work of RPA practitioners mainly in customer service. The findings also illustrated that the size of the organization may impact the adoption and use of RPA. Larger organizations and digital-native organizations may have an advantage due to their digital maturity and ample resources, while smaller organizations may benefit depending on their services and nature. Further, the findings showed that RPA technology is new and relatively immature, yet its demand is increasing. To fully leverage RPA's potential, organizations need to adopt standardized and mature processes. However, while RPA can handle rule-based and repetitive tasks, humans need to optimize and standardize processes for RPA to work effectively. The findings also suggest that IPA is the future of RPA, and its implementation can lead to benefits such as increased effectiveness, productivity, cost reduction, time-savings, standardization, optimization, and freeing up human resources for more creative and value-adding work.

The findings also showed that the human aspect of RPA adoption is crucial, and resistance to RPA adoption is real and can stem from individuals' fear and difficulty in adapting. Thus, applying change management strategies can ameliorate employees' resistance to change. In addition, managers should lead discussions about the changes and address any potential concerns. Preparation is necessary in terms of technological changes, including training and education on the benefits and limitations of the software. RPA can elicit both positive and

negative stress responses in employees, and managers should help impact fellow employees and grant greater autonomy to prevent employee burnout. However, it is important to note that every organization is unique and using RPA (or IPA in the future) will require a tailored approach to meet the needs and challenges of that specific organization.

Thus, the bachelor's thesis research contributes to the information systems field by providing a comprehensive understanding of the opportunities and challenges that RPA practitioners experience when applying RPA in conglomerates. It also contributes to RPA practitioners, conglomerates, and other interested stakeholders to better understand the complexities involved in using RPA and to develop effective approaches for maximizing the benefits of RPA while minimizing the associated risks and challenges.

6.2 Suggestions for Future Research

Due to the lack of studies focusing on RPA practitioners' perspectives, we encourage other researchers to replicate this study to further fill the research gap within the field of RPA. Within the given timeframe, it was not possible to conduct a broader study, thus we suggest replicating this study with a bigger number of RPA practitioners to strengthen the research outcome. A second suggestion for future research is to include practitioners from more conglomerates of the same or different countries and conduct a comparative study to see if that will affect the research results. Another suggestion is to repeat a similar study complemented with quantitative data. Finally, we suggest that future researchers investigate the impact of RPA on job satisfaction and employee engagement. This was not in the scope of our bachelor's thesis research, however it was found that I may lead to job displacement and changes in job roles.

Appendices

Appendix A: Interview Outline

Category	Concept	Interview Questions (Appendix B)
1. Opening Questions	Background about the participant	1.2 For the sake of the interview, could you please state your name and title of your role in your company? 1.3. Could you give us some more information on your role, what do you do and how? 1.4. During the interview, we will discuss Robotic Process Automation (RPA). Could you describe to us what you understand or mean with RPA? 1.5 How long work experience do you have within RPA?
2. Operational Questions	Own experience of using RPA	2.1 Based on your experience, what are the opportunities that you face or have faced when using RPA software? 2.2 Based on your experience, what are the challenges that you face or have faced when using RPA software? 2.3 How do you think the size of an organization may influence the use of RPA software?
3. Managerial Questions	How the applications of RPA software are being managed	3.1 Could you describe where and how RPA is used in your organization?

		3.2 What is your role in relation to RPA software in your organization? 3.3 How have you found the use of RPA software to improve your work processes compared to your previous way of working? 3.4 How have you found the use of RPA software to challenge your work processes compared to your previous way of working? 3.5 Have you encountered any resistance from workers in your organization while using RPA software? Can you please elaborate? 3.6 In what ways do you think the use of RPA software is related to managing change in your organization? 3.7 How do you think the use of RPA software affects the human aspect of work?
4. Closing questions	Additional inputs	4.1 Do you have any additional information or input that you would like to highlight?

Appendix B. Interview Transcript 1

Participant: P1
Maja Larsén: ML
Hedvig Zetterberg: HZ
Company 1: C1
Company 2: C2

Opening Questions

Person	Questions & Answers
HZ	For the sake of the interview, could you please state your name (only to separate participants) and title of your role in your company?
P1	My name is P1 and I am Head of UX design for coworkers at C2. But for this role at C1 I was working as the digital customer experience Northern European role. A global position supporting different countries on digital initiatives, so leading a big transformation program. In the Nordic and Baltic countries.
HZ	During the interview, we will discuss Robotic Process Automation (RPA). Could you describe to us what you understand or mean with RPA?
P1	In the way I have been working with it is, that you can take repetitive, pre-defined tasks and use the RPA solution to be done instead by being done by a human being. The requirement is that it is predictable and structured in a predictive way. It is not AI, it does not have any brain. It can only follow very strict instructions.
HZ	Then we have the same definition
HZ	How long work experience do you have within RPA?
P1	2 years working in that initiative. It is a long process going from an idea, to really making a business case, decision, start selecting suppliers, start implementing it
HZ	Now I will hand it over to Maja to continue.
ML	Thank you, Hedvig. So, P1, let's continue with operational questions.

Operational Questions

Person	Questions & Answers

ML	Based on your experience, what are the challenges that you face or have faced when using RPA software?
P1	The first one is - people fell in love with the solution - because it feels like "wow" this is great, and then it can do this. Maybe overestimating what RPA can do. So that is one thing. And it is also an overestimating those - what is predefined, what is repetitive that what a human being can see well this looks more or less the same but in an RPA, solution just using different letters and you know that is not then repetitive because then you need to do a new protocol for that. So, the devil is really in the details. So, if the entering of what we expect the RPA to do is done by humans, then that could create problems. So even if there is a very strict formula that humans follow you know how we are as human beings like "lalala" then we really break the contract to say like that. So that is one thing. The other part is the impact that coworkers include them into their daily work their supportiveness or not supporting this is also a matter that I think we underestimate so it becomes very much about technology but not that much of the workplace as such. That is really underestimated.
ML	Based on your experience, how much time does it usually take for an organization to benefit from RPA?
P1	(*pondering*) Usually it take longer time than you think cause there is a lot of when the RPA solution in place it needs a lot of fine tuning to really make it works smoothly I would say most often the business case and the motivation of the return on investment that we are aiming for in RPA solution is about saving labor hours but in the beginning you need to add labor hours to make it work. So if we say benefit in terms of saving labor hours I could easilily it could take at least a year if we have the situation that what I work with that the input is coming from a human. If it is a machine to machine so the input comes from another machine then I think we can have the input faster. It really depends on the input so what we ask the robot tto process, how strict is that one. And then of course it also comes to the share amount. I think you need to have a big amount in order to make it successful or you can see the benefit of it.
ML	What do you mean by the need of big amount?
P1	I mean in pure volume
ML	Do you believe that the size of the organization has an impact on the application of RPA software? Can you give an example?
P1	Quiet often big organizations do have big volumes, but it depends on your organization depends on what is your service and so I would say that the kind of process that we are robotizing is is taking maybe more than the organization as such but of course the big volumes and standardize processes so appear more often in big organizations because the share number is there but of course there can be smaller organization but they are doing some kind of service and that is

	the product that they are selling but that is more part of your nature what you are selling and providing to the world. But in general, I would say that you can see this in bigger organizations, absolutely. I would also like to add that in big organizations there is a lot of shuffling information from different units, you need to build that up and that happens in a certain predicted rhythm. In some companies it is quarter wise, monthly wise and so on, so this kind of machinery is constantly going and that is typically for big organizations you do not need that in small organizations because you have control and overview. Reporting, big finance, invoices there you can see quick benefits.
ML	To talk about conglomerate organizations, do you think there are any specific characteristics for that type of organization?
P1	I think in these kinds of organizations it is that in each country it is almost like a big company in that company and then you combine like you just adding on like a pyramid so i would say yes even more because you probably have the same repetitive tasks in all of them. I think it comes back to that repetitiveness and volume, that is the key. And the bigger the organization the more common they appear in the organization.
ML	What challenges do RPA professionals face in measuring the impact of RPA software on the overall performance of large organizations, and how do they overcome these challenges?
P1	in big organizations the ones who are experiencing the impact the value of something are not the team or organization that is creating it so you use the value creation as an argument to get a budget to do something. Then you get that budget, you do it, then you leave because you as a product team you then work with something else and the ones that are there experience the value of it we quite often do not follow up on that so we use it as an argument to get a budget, to get your go, you launch, you tweak it, not it is working then you leave. Because there is another part of the organization that then owns the solution and that usually is being measured in a different manner so if you take customer support that i was working in it was much about how many cases per day/per week that you could handle and of course an RPA solution could increase that and that is a big measurement and value that i can handle more cases and faster. So if you look at the RPa professional as long as they do not appear in the organization that is owning the solution in the end, only defines the RPA professional as the one that are developing it, they use you have these task, every task takes these minutes to do, then time that out, those calculations looks really good you could say that within a year you could actually save two head counts. Reality seldom looks like that because head counts is doing other stuff as well, it is usually easy tasks that are being replaced by a robot or RPA solution is not that is one person only doing that and so on. So, Iithink maybe that is the challenge as such that it is difficult to measure the impact it, why do you measure it, you measure it to show success and there is different ways of measuring success and different definitions of success.

ML	Thank u
P1	And I would like to add that what I think RPA solutions do have a benefit of is that it makes sense it is very easy to understand easy for every organization to understand oh why should we have any human being doing this when we can robotize it. So, Iithink that is easy to understand, with your gut feeling it makes sense. That is a big benefit It is not all new digital solutions that have that you know it is very easy to understand and it makes sense why we should do it. There is someone in the end to make a decision and especially when it comes to technical solutions it is usually the business owner that will own it in the end, and they need to make the decision and if they do not understand the technology then they are not willing to invest in it. But in this one, it leans in on how a business owner running and driving their business so on CS area anything you always chasing these number of cases. That is the key metrics on a successful customer support, if you look at finance how fast can we send out invoices. In x they used an RPA solution for that. Speeding that up, leads into what is the definition of a successful unit and of course the manager are willing to invest in that compared to the technology that I really do not understand and cannot really see how that will benefit because it is a different way of doing things. So, it does not mean that the technology is bad as such, it could be really good, but if it is messing with your business logic and is not really matching that, again it is a human being making a decision with its budget. But I think the RPA solution does benefit from it.
ML	Okey, moving on to some managerial questions.

Managerial Questions

Person	Question & Answer
ML	Could you describe where and how RPA is used in your organization?
P1	So, in the work that I was involved in it was in the customer support as I mentioned. So, it was really about taking those they called simple cases so those cases that are repetitive to replace them with RPA solution and take the more complex tasks for humans to handle.
ML	Do you have any example for what kind of tasks?
P1	Yes, so C1 is working with a lot of different suppliers within the X and so on so they can call in to place an order, or email, to place an order then using a human being to take that and place that in a self-service portal which they had and they felt it was quicker to email.

ML	What distinguishes the application from other IT solutions? Some examples?
P1	It is that more in this case in CS that it is competing a bit with humans, very visible that you are taking over my job so implementing a new CRM system people can complain that is tough to learn a new system and so on, a lot of solutions are about supporting a coworker, but RPA is so clearly taking your job and I think that one is distinguish from other. It can also be when we started online sales imagine that was a similar friction or change when before you always called and now you do self-service. Taking C1 as a company, we will not be needed anymore if they use self-service, but here it is really in my living room. It is more visibly present for the coworkers that here we have a digital solution that is actually taking my job.
ML	Prior to implementation, what did you expect of using RPA for automation?
P1	We expected it to be super easy we expected also that coworkers would be happy to not need to do those simple cases. We assumed that people enjoy working with more complex questions, we expected that the number of simple cases and the cases that could be robotized to be much higher than reality really showed. So even if we could convince the business logic behind it with co-worker but what ended up is that so describing is like, here we have someone working 24/7 while you were away it still serve our customers. What happened was really during the night that a lot of cases that the robot couldn't solve so that means that co-workers came in and there was a backlog of things. That it also then really pushing that you know work haha and it just creates extra work and not was the main selling argument that it should make your life easier and more excited
ML	Did you perceive any other opportunities for applications of RPA software in comparison with your previous way of working?
P1	I think it was simplicity, because one of the main reasons and goals was to minimize the simple cases and to digitize them. As few simple cases as possible should go through the hands of a coworker. So, before the number was around, half of them and in some countries, it was even higher. And the expectation was that we should be below 20. We really wanted to digitize and that could be done by the customer using our self-service portals, but it was difficult to change that behaviour. So, we could really see that the RPA solution would solve that in a nice and smooth way. If we can't change our customer behaviour maybe, we can change how we handle that. It was the simplicity that fitted in nicely in the business logic and also to the goals that we were chasing in our digital transformation.
ML	Did you perceive any other challenges of RPA in comparison with your previous way of working?

P1	In previous work and when you do it is coming back to that simplicity that its maybe tricked you a bit. So, in other solutions, it is complex so therefore you treat it as complex. What looked simple in theory was not that simple in practice. Because a lot of things are hidden by human beings that are simple for them but not for this kind of solution. And that is the main difference. It's more in the perception of it and therefore you also expect difference.
ML	Did you perceive any internal resistance during the application of RPA software? If yes, how did it play out? How did you handle it?
P1	So, on the decision side, and getting the budget for it considering a lot of other investments this one is very very low cost. And as mentioned before it is very easy to understand the logic and it is not a high investment, that part was easy. The resistance was more in the coworkers that would be a part of (have this RPA solution as a college), this was much more resistant than we expected. One of the main arguments that they felt was pushing for a lot of self-service solutions, digital solutions, that are not a part of the premium brand. If somebody is reaching out to us, to customer support they do expect a human contact or a personal contact and they associate that with the premium brand. So, they associated self-suffice and digital solutions for more low-cost brands and they refer to a lot of what happened in the airline industry. So premium brands get a lot of personal service and more low-cost brands like Ryan air or Norwegian than there is more self-service to it. So, no resistance on a decision level but high resistance on the phase after building it to owning it.
ML	What are the three most important aspects of RPA?
P1	In my experience, control of the end-to-end journey. The steps before and the steps after a RPA solution. Also, in the daily operation, how will this one appears? - and how is this impacting people's work. If I look at the finance department with cherating incives no human being will be sitting down creating this, it is done through a different system and probably replace it with a RPA solution, then it is not a big deal since it is already digitized with a different kind of solution. But if you are replacing human work with this, I think it is important to see how people react to that. It could be a work task that people absolutely hate and just be happy with the RPA, but there is always this resistance with taking it into account. People will always be afraid that they will lose their jobs. 3rd - looks simple on the paper but the success is really in the details. And this is really difficult to predict, so i think it is about to be prepared. What looks nice in the beginning in the project plan might end up as a thing you could not perceive because it is so much about the details. It is about taking time for those fine tuning afterwards.
ML	Based on your experience, what are the main opportunities that you face or have faced when using RPA software?

| P1 | It is resistance and it takes time for an organization to adopt RPA, but when you have done that, I think within the organization we can really empower the team to start experimenting with it themselves. Big opportunity when you pass that difficulty to implement a new technology. This is one of the biggest opportunities that is difficult for the product team or engineering team to foresee. Therefore it is important to have a person there with RPA knowledge so they can start working with those protocols and finetune them. In the combination when this matures, that could open up opportunities that we don't see today and don't understand today. I also think that, since RPA is a simple solution with quite low cost, it also lowers the barrier to start using it, it makes it easy to implement and introduce it to different organizations. We don't know what it will open up if we don't start using it. Again, we are human beings, and we see new opportunities and we get used to it, and we can start combining. I think that it is these two that is. Quite low-cost investment if you compare it with a lot of other technical solutions, and it is also something that could be developed in the hands of an organization |

Closing Questions

Person	Question & Answer
HZ	Do you have any additional information or input that you would like to add?
	Hmmm I do not know. Based on my experience it is a nice technology that is easy to implement compared with other solutions, and easy to start using. Therefore also empowering the units instead of always being dependent on a heavy engineering team that goes in and does something and then leaves. There is something interesting about that which I see will probably increase. Quite often you see technical solutions that you know it sounds really good but the cost of doing it, handling it, maintaining it, simply not worth it. So it's easier to just continue with humans (*laughs*). But there is something interesting about the RPA solution, and compared with other things, quite simple Also, regarding change management. Since the RPA software can work for 24/7 and was running during the night, when the workers came in the morning, there were a lot of exceptions that needed to be handled by the human workers. This was an argument to show that this solution is not as good as you have said. This is resistance to change. Where you really use this as an argument, and if you on top of that interfere with trade union negotiations, workers say that "this is not included in my work tasks". It is important. The rhythm of it all is about when you are going to invest in something, it is about convincing someone to give you money. It is the goal of the development team. "I got my money, I delivered what I said. Change Management is not my responsibility". So change management when it is about development in general especially on the co-worker side things can be taken for granted. It can be an attitude from decision

	makers and developers "this is your work". When it is towards customers you have the attitude that it is my responsibility to make the customer want to change their behaviour. That attitude is not towards the co-workers in the same way. There is a certain awareness but in practice, it is forgotten. There is a tendency that money is put more on the technology than the change management. Workload is recurring and it can be that an organization has digitised and streamlined so much that the simple and more relaxing tasks have been removed for the co-workers which can create some sort of stress, I mean to just perform the complex and more demanding tasks
ML	Thank you so much for your participation. Let us know if you want us to send the transcription to you.
HZ	Yes, thank you so much P1!
P1	Thank you Hedvig and Maja, good luck!

Appendix C. Interview Transcript 2

Participant: P2
Maja Larsén: ML
Hedvig Zetterberg: HZ
Company 1: C1

Opening Questions

Person	Questions & Answers
HZ	So, we can start with the opening questions so the first: For the sake of the interview could you please state your name (only to separate participants) and title of your role in your company?
P2	My name is P2 and I work at C1 in Sweden and the title of my role is CCC digitization and process automation leader for Nordics
HZ	Okey, perfect
HZ	Could you give us some more information on your role, what do you do and how?
P2	What I am doing actually is supporting the CCC teams in C1 in the nordic zones so Denmark, Sweden, Finland and Norway. In finding ways to either automate or… omg this word is…digitizing the processes they working on a daily basis because of course amount of customers and amount of interactions that they are handling is growing and the company does not necessary want to expand the number of people in the teams all the time so we are finding ways on how to either automate or digitize the processes to minimize workload for the CCC teams that is basically what i am doing i am reviewing what they are doing and finding possibilities discussing with different teams and people inside C1 or outside C1 it happens as well and yeah finding the best possibility to somehow either get rid of this … activity or minimize the workload for the CCC that is left to do manually
HZ	Ok, thank you
HZ	During the interview, we will discuss Robotic Process Automation (RPA). Could you describe to us what you understand or mean with RPA?
P2	Mmm sure in my understanding meaning not of course the technical description of RPA but in a simple way how i understand it that we take a process, convert to simple steps that can be programmed and done automatically without human or with minimal human interaction.
HZ	How long work experience do you have within RPA?

P2	3 years of experience Started working more or less 2020 maybe end of 2019 so more than 3 years already haha

Operational Questions

Person	Questions & Answers
ML	So, super. Moving on to some operational questions. Based on your experience, what are the opportunities that you face or have faced when using RPA software?
P2	ahh opportunities? Like omg there is so many But for us is the biggest - the biggest opportunity is save the time of team or keep the number of people that we have to hire to support the customers in daily topics that they have when interacting with C1 so ofc it is saving time, minimizing the workload it is giving a structure to different processes it allows us to review the processes we have, and either simplify processes or discover issues that we can fix, it makes our customer happy, because they know what they can expect from us and e.g if we automate a process where we are answering order status question, we are ensure that all information that is required is always there in the answer so we are not depending on the people to provide all this information. People are different, someone may forget, and with RPA it is not possible so customers are happy. Just to name few, haha
ML	Thank you
ML	Based on your experience, what are the challenges that you face or have faced when using RPA software?
P2	Ahhh… (*thinking*). I don't know if it is a generic thing with RPA:s or just the program that they are using but the biggest is that there are times that it stops working suddenly and usually some issue behind it but of course it is unpredictable when it stops and not easy to get some kind of like estimated time when it can be fixed and when the bot can be up and running again. And also it is not intelligent Iithink this is.. I can call it a challenge with RPA ofc when we are only thinking about RPA because i do not know how it is in other companies we are also using parts of ML and AI so we can like combine different processes together but for strictly RPA i think the challenge is that it is not intelligent haha so you have to be specific and simple with the designing the process yeah it cannot mimic the human being only take simple processes and automate them but whenever there is some little bit more decision making for example needed it is of course not possible yeah so for us it is only the processes that are following steps A,B,C,D,E,F,G that we can automate with RPA when we are thinking about CCC teams interacting with customers and customers sending emails for example each customer can write email in a different way so it is very hard or impossible based on what we have tried so far to automate those interactions the bot cannot

	read and understand what the customer is saying and what is valid information and what is unnecessary text let's say it like this
ML	How do you think the size of an organization may influence the use of RPA software?
P2	I think it doesn't matter like in a way everyone could be possible to use RPA in daily life of daily operations no matter where they are working and what they are doing, generically speaking. But ofc the bigger the company the easier it gets implement it in the company bc in order to get RPA you have to invest money and you want to see the payback and if you have a small company with very limited amount of tasks that the bot can process then this payback will take longer to get and the company may not be so willing to invest in that and when we think about big company and number of interactions the bot can automate is counted in 1000/10000 and of course making the decision to invest is easier to do.
ML	Okey, thanks

Managerial Questions

Person	Question & Answer
ML	Super, moving on to managerial questions. Could you describe where and how RPA is used in your organization?
P2	Ahh…omg i think is everywhere now haha bc of my personal experience is we are using it for CCC so different interactions we can automate with the customers or internal processes but i know master data teams are using it for updating product information and i know that logistics teams are using it to structure the monitoring of the not completed deliveries so those are just some examples that i know of but i think we have way more procurement teams are using it for purchase order generation ahh so when we have to .. components for something idk lets say i dont know how much you know about C1. *deleted* we have different products that we have to build from different components bc we are a global company ofc not all the components we are storing locally in our warehouse so some of the components has to be purchased from another warehouse in X for example or from ouyr supplier. When we are receiving an order from our customer CCC processing the order and procurement team get information about what the customer wants and then purchase from another warehouse or supplier. Procurement team wants to do it manually as far as i am aware they are using RPA to find out those orders which require those purchase orders and the bots generating this purchase order in a system. So yeah I think right now RPA is used in every possible department we have in C1 which is

	working with systems and a laptop. People in the warehouse picking products do not use it
ML	So more specifically, what is your role in relation to RPA software in your organization?
P2	So as I stated shortly in the beginning I am responsible for finding out the purchases (process) that can be automated and finding ways to automate them a lot of processes we have automated with RPA:s so my role is find the process, decide if it can be automated or not, if yes, which way to automate it if it is RPA then i am making the whole preparation, so calculation of benefits, how quickly the investment can be paid back, how many FTE going to save or other benefits. Then idiscuss with my manager and then we discuss business depending on country and then when we get the approval i am cooperation with RPA developer we are defining all the steps that bot has to cover in order to do automate the process from A to C at least the majority of the processes then together with RPA developer we are testing how the the process works,if we have issues, unexpected scenarios approving the process then discuss deployment with team and business and then making the follow up hypercare period and of course whenever something goes wrong later on i am supporting teams in finding out the issue, how quickly we can solve it etc so i am babysitting the bot
ML	Sorry, what was after the follow up?
P2	Hypercare
ML	Ah okey thank you
ML	How have you found the use of RPA software to improve your work processes compared to your previous way of working?
ML	Ahh… I Would not go back haha I mean we have so many benefits with the RPA:s and we have been able to automate so many repetitive, manual tasks that the people are doing that i cannot imagine our lives without RPA today
ML	How have you found the use of RPA software to challenge your work processes compared to your previous way of working?
P2	Ahh… I am not sure I understand the question can you repeat
ML	yes of course. How have you found the use of RPA software to challenge your work processes compared to your previous way of working?
P2	Okey so like I have said before when we are designing the RPA we would like to deploy we have to review processes and take a look at each and every step of the processes so of course it challenges how process works and because RPA can

	follow simple rules, you have to make the process simple as possible to make efficient so for us it is improving the processes actually so whenever we are thinking about RPA we are challenging the whole processes we have today in place just done manually, depending on people basically
ML	Have you encountered any resistance from workers in your organization while using RPA software? Can you please elaborate?
P2	Yes I have encountered resistance from the teams and that is i am sorry to say that but it is coming from the older generation which has been working in the company for 10-30 years so those are the people that have been there when receiving orders from a Fax machine, so they are not keen on any kind of new tools, new processes and it is hard to convince them. Usually with time the see the benefits and adopt to the new process but the beginning is often difficult, no we do not want that, we want things to be as they always have been. So in this matter yes whenever i am coorporationg with younger, people up til 50-60 years old maybe, they are rather open and positive when we are starting discussing possibilities we have making their lives easier but whenever we are talking with people that are 50+ with some exceptions of course, because not everyone is like that, we have people who are older and very on time and with technology and everything, but there is a group of people that are not very happy with new technologies so of course the resistance is here and now we are approaching that it is basically taken individually usually by the manager because of course those kind of discussions are taken in the team so it is the anager discuss new processes, things will change etc whenever they are receiving comments or resistance it is… Sorry (*coughs*) I need to drink water I am talking to much. So yes, it is usually manager addressing those comments or resistance from the team here it depends on the manager but usually we are trying to communicate about our plans very, very early, so people have time to adjust to this idea of something new coming, and we are sharing how new process look like, what they can expect and showing them demo version so they can get to know how the bot will be working etc and then of course manager discussions take it separately bc that is not my scope, i am not sure how they are discussing these topics with their teams but from my side usually even if there has been resistance in the beginning when we are deploying new process and people see that i dont have to spend so much time on that task that i was doing daily basis and it is boring, repetitive and does not bring any joy haha and it can be done by RPA haha then they start to be happy about it. But only for this one - because next time it will be "not again" , "i like the way that things are working" haha it is a never ending story haha
ML	So next one, ehh, in what ways do you think the use of RPA software is related to managing organizational change?
P2	(*thinking…*). The use of RPA…I am not sure about this one when we are talking about change management it is very how to call it, it depends on the human interactions in my head so when are talking about change

	management you have to approach different people with a different set of skills or information so for me RPA would not be the best solution for a change management but that might be just me
ML	Ehhmmm… How do you think that if you use RPA in your organization, how that is related to managing change? Is that understandable?
P2	Ehmmmm… So wait I have to think about that one.
ML	Yeah no worries. We can take the next one

Closing Questions

Person	Question & Answer
HZ	How do you think the use of RPA software affects the human aspect of work?
P2	(*Silence…*). I think it does not, I mean maybe because we have so many different topics that we are interacting with in the CCC that the human aspect is still there but if we would have all the interactions automated with RPA then i think it would have a negative impact on the customers and the reason i am saying that is because what our customers value the most is the personalized approach, with different needs, like to cooperate with same people and have their facorites, discuss where they were on holidays, and with a person they can do that and formt this relationship feel seen, valued and listened. With RPA it is impossible so ofc you have the interactions automated you are providing the answer to the customers answers so receiving the info they reached out for. That is all, no relationship then for the customers it would not matter if it interacts with us or our competition, bc you dont have anh relationship so i think the human aspect is important. In our case, the use of RPAs helps us reduce manual workload for the teams and allows them to focus on more complicated parts of the job (that cannot be automated with RPA). That way, the team doesn't have to handle repetitive and easy tasks. Especially when the workload is growing, causing a backlog and late replies to the customers – in that situation, the stress for the team members is also growing, negatively impacting their wellbeing à and when we implement RPAs to handle some parts of the job, it reduces the stress and helps to keep workload manageable for the team. I know, on the other hand, that there is a risk that use of RPAs can lead to reduction in headcounts, which would have a negative impact on the rest of the team (they would be worried that each new automation means a potential lay off). For us that was not a case, as the business is growing, the workload is growing but the team was the same size = when we implement RPAs, there is

	still more than enough to do for our "human agents" and they are more than happy with the RPAs support. But I understand that it may not be the same in every company, so I would say that RPAs can lead to reducing a need of hiring/keeping people.
HZ	So, the last one, do you have any additional information or input that you would like to highlight?
P2	No i do not think so. I talked a lot. But we can come back to the question that I said that I would think about this.
ML	yeah, if you want.
ML	In what ways do you think the use of RPA software is related to managing organizational change?
P2	I am thinking, i am still here
ML	Yeah, it is fine.
P2	I believe the use of RPAs makes the company review the current processes and identify any possible gaps, risks or improvement possibilities in them. It can help to increase efficiency, customers' satisfaction and reduce errors
ML	Thank you very much P2
P2	Yeah, it was a pleasure to meet with you
HZ	Thank you so much!
P2	Happy easter!
HZ	Happy easter!
ML	Happy easter!

Appendix D. Interview Transcript 3

Participant: P3
Maja Larsén: ML
Hedvig Zetterberg: HZ
Company 2: C2

Opening Questions

Person	Questions & Answers
HZ	Hi, Thank you for giving consent to participate anonymously in this bachelor's thesis study. For the sake of this interview, we want to have a common understanding of the purpose of this study. We aim to examine the opportunities and challenges of the applications of Robotic Process Automation software in conglomerate organizations from RPA professionals' perspective. First, as stated in the informed consent form, we will record this interview and later on transcribe it. On request, we will send you the recording and transcription in order to ensure that you have been represented in a way that you think is fair. Additionally, if there are some parts that you want to exclude. Feel free to ask questions at any time. If you would feel uncomfortable during the meeting, remember that you have the right to withdraw at any time.
HZ	So, the first question 1.2 For the sake of the interview, could you please state your name and title of your role in your company?
P3	Engineer Manager for Robotic and Process Automation at C2
HZ	1.3. Could you give us some more information on your role, what do you do and how?
P3	ehmm working as engineering manager within C2 is pretty broad role it is, i do have the area of RPA and i am not only working with engineering part of it but as well with more strategic planning looking into the future as well as people responsibility so it is very big mixture and very wide role what my manager likes to say is you are the CEO of RPA within C2 so meaning everything in sales, marketing, customer, internal customers for our case, ahhh in different business functions because we do automate for all the C2 business functions so and it goes global so that communication falls under my responsibility the you have all the contracts with suppliers, budgeting, again looking into the future, and all the other things that fall under engineering and best practices

HZ	1.4. During the interview, we will discuss Robotic Process Automation (RPA). Could you describe to us what you understand or mean with RPA?
P3	RPA by the book is a technology that automate hands of people and merges business and technical gap ahh its a technology helps business accelerate abnd grow much faster to improve efficiency. That is the direct impact the indicirect impact that not everybody seeing is very much around process standardixzation, optimization and how do we work more efficient with the things we have
HZ	1.5 How long work experience do you have within RPA?
P3	4 years. Time flies when you have fun

Operational Questions

Person	Questions & Answers
HZ	2.1 Based on your experience, what are the opportunities that you face or have faced when using RPA software?
P3	Standardization, optimization, faster time to market, ahh less repetitive, low value adding tasks for our co-workers, much happier co-workers from the personal experience we have. As an example COVID-19 has been really wind in our back ahhmm and when it hit everybody needed to accelerate the work that they are doing with less people and doing it more efficient. Customer behvior changed quick, we had to act very fast, and we did not have enough human power to do that, so what happened that business looked into and "can you from RPA help us somehow?" ehmm yes that is one of the key things i think
HZ	2.2 Based on your experience, what are the challenges that you face or have faced when using RPA software?
P3	ehm change management in a sense of i mean the fact that we are automating tasks of people and a lot of myths exist out there in a sense that people are afraid of loosing their job and thinking that they will be fully automated and then change management to make people actually understand how we are doing it and what benefits this will bring, is what i feel is lacking and most difficult when implementing or working with RPA as well as accountability for process ownership from the business because the technology is just the tale of solving the problem but the actual core meaning that needs to be solve is within the hands of the business and the process owners
HZ	Okey.

	2.3 How do you think the size of an organization may influence the use of RPA software?
P3	Ahhm it is a lot more different, not only the size, but the digital maturity if you are to implement RPA and process automation within companies that are digital native it might be a lot more easier there you have a different mindset, different mentality the scale and the magnitude of deliveries and impacts are a lot more different than enterprises In enterprises you have many slices hidden things that you dont see people you need to align with especially challenging when working with different countries because we need to comply with different regulations with countries as well security data privacy is a big thing for us and we do not compromise on it, but that adds on additional man power and cognitive load Did that answer your question?
HZ	Yes!

Managerial Questions

Person	Question & Answer
HZ	3.1 Could you describe where and how RPA is used in your organization?
P3	one of the most used areas is customer support centres and actually co-workers and customers facing domains because the customer behavior changes quiet fast and rapid and technology wise we cannot keep up with all of that so we are still relatively dependent on the legacy systems which have very limited functionalities and not very user friendly ahh and then that does not really match with the expectations with co-workers adn the customers so what we do there is to merge that gap there in order to provide to be faster, better and more relevant for the end-consumers and customers HR, we are getting a lot into finance, procurements as well
HZ	3.2 What is your role in relation to RPA software in your organization?
P3	I mean i am the responsible, accountable you name it for the softwares that we are using, i am the contracts, both for the software for RPA and as well other contracts that are connected to it so it is under my responsibility
HZ	3.3 How have you found the use of RPA software to improve your work processes compared to your previous way of working?
P3	Yes very much, also this goes maybe in parts out to operate RPA in different organizations RPA has started at C2, maybe 6-7 years and it was starting a very distributed manner in different countries and it poped up as initiatives and 4

	years ago when we formed this team and started working together we got closer to the business where we had the most automations done that was customer support centres where we looked into different business cases so what we identified was that all of these people are trying to solve the same problem ehm and where we saw is that spaghetti of same robots, very spagetthi environment then with good read with customer support centres back then was that then that global will start standardize processes in between countries then we automate it then we decided to centralize what happened with that centralization was that we became a company more aware of processes of the responsibility, compliance as well, identified on that standardization journey that sometimes we hve not done things the wright way no bad or good instructions you write to co-workers we are all human and we can all divert a little bit and get creative with standardization and with RPA we can solve compliance. That answer your question?
HZ + ML	**YES!**
ML	3.3.1 I have a follow up question on that, what is spaghetti environment?
P3	Spagetthi environment is when you have, it is complete chaos of solutions just imagine a plate of spaghetti it is very mixed right? you dont want that spaghetti in any area of your life unless it is a plate and you need to eat it right? then it is much more difficult to understand where does it start where does it end, who does it kind of like stick to, what kind of sauces fall on different parts of the spaghetti environment so it was very mixture of everything you know but then in the end you see it is just spaghetti right it is processes and problems that people are trying to solve i am just trying to kind of give you a little more of a vision presentation of the things we are dealing with
ML	Yes, thank you
ML	Okey, so I can continue with the next one then. 3.4 How have you found the use of RPA software to challenge your work processes compared to your previous way of working?
P3	What I feel happened in the parts which adopted RPA, is that people got more aware of the importance of standardization and working routines. It's like a blessing and a curse that people got in such situation, but on a long run benefited everyone and curse given the fact it takes a lot of time for the business to align on correct working routines
ML	3.5 Have you encountered any resistance from workers in your organization while using RPA software? Can you please elaborate?
P3	Yes i mean there is always resistance especially when you ask people to change their usual way of working ehh as i said Change management is something that we as an organization has not worked with quite much and that has been the resilience of a little bit more on the technical side when we are in need of getting accesses

	for our robots the owners of those digital products are very resiliant or used to be very resilient "oh but why would that robot do you know" well it is going to do the same thing as the human will do it is just a digital co-worker, it is not Maja Larsen its going to be robotXYZ so it just then also it is a little bit difficult to penetrate peoples minds that we are not going to mess anything the robot is going to do whatever we tell it to do it's not a high tech artificial intelligence that will go in and then its instructed what to do you get me, so we are fighting here with a lot of things but we live and we learn that is where we need to have little more and be better at negotiating, proving people this is the right things on small scale first do things, prove show and then get into the next iteration
ML	Thank you! 3.6 In what ways do you think the use of RPA software is related to managing change in your organization?
P3	non digital native companies that are very monopoly, very heavy not very robust and they want to move into this digital journey and digitalize themselves so what RPA does is that it bridges the gap between that "oh we wanna be the next and the best" in experience for our consumers to sell more, get more views, or what not, but then we are still dependent on these monolithic old solutions legacy systems so we need something to bridge that gap and that is where RPA comes into place that helps us support organizations in doing changes but as well people because whatever we do it impacts people at the end right but what RPA does for people is that freeing time for all of these copy-pase boring work that takes a lot of time from cp-workers, so taking away that boring time, lets say 1-3 hours, those resources will be able to do something more creative and more value adding, meaningful for us to on a long-term change and be modern digital organizations because you as an end-user that wants top noch experience if C2 does not respond if you can not find something or not order or return online you would be "i dont wanna deal with this, i will go somewhere else", I as end-consumer does not have a lot of time to waste so what we do is that we merge that gap between the legacy and what are the expectations to be able to provide to the customers what they expect and you know then buying ourselves time to really do that core change in moving from more old-fashioned to more fancy and cool company but it is a big ship to move and to balance what I am challenging now internally is people coming out from your studies, change management, people are getting stressed when they have heavy cognitive work load 8 hours a day, is there something we should change in our working environment? do we embed maybe 2 hours out of 8 hours to be extra size? you know we need to change something in the way we work what we have worked like this for 100 years? and with these technologies we have tight now we need ti change something. Cognitively we are not able to process heavy things 8 hours a day
ML	3.7 How do you think the use of RPA software affects the human aspect of work?

P3	More efficiency, more time for fika, more time for creative thinking, more time for value adding, more time to speaking to customers, more time reading and getting inspired and you know nurturing innovation as well you know freedom of the brain

Closing Questions

Person	Question & Answer
HZ	4.1 Do you have any additional information or input that you would like to highlight?
P3	I dont think you missed anything i would like to highlight that there is no one best solution that fits everybody like how the organizations are set up it very much depends on how you run your organization and what works the best standardization is key to automation I think some companies might not getting it yet but always standardiuze before you actually start to automate and the core and key to everything is people and it is very important that you have really good engineering team who does not only RPA for development but is tech-heavy and that you have really good connection and communication with your stakeholders in this case when you manage essential delivery for everybody it can get a little more tricky because you have a lot more one-to-one connection ahh people always want to get the good experience you know and get the try-out first before they are fully convinced on it they always come with being a bit sceptical and then once you provide with good experience they are always coming back and are willing to continue with RPA and automation and everything change is painful for many so that is something we all should be aware of when doing these things

Appendix E. Interview Transcript 4

Participant: P4
Maja Larsén: ML
Hedvig Zetterberg: HZ
Company 1: C1

Opening Questions

Person	Questions & Answers
ML	Hi, Thank you for giving consent to participate anonymously in this bachelor's thesis study. For the sake of this interview, we want to have a common understanding of the purpose of this study. We aim to examine the opportunities and challenges of the applications of Robotic Process Automation software in conglomerate organizations from RPA professionals' perspective. First, as stated in the informed consent form, we will record this interview and later on transcribe it. On request, we will send you the recording and transcription in order to ensure that you have been represented in a way that you think is fair. Additionally, if there are some parts that you want to exclude. Feel free to ask questions at any time. If you would feel uncomfortable during the meeting, remember that you have the right to withdraw at any time.
ML	So, the first question 1.2 For the sake of the interview, could you please state your name and title of your role in your company?
P4	I am P4. I am an internal project manager and I have worked on a business part within one specific RPA development and right now I am also coordinating other RPA efforts. But I am more from the business side than from the technical side of the business.
ML	1.3. Could you give us some more information on your role, what do you do and how?
P4	For the RPA my main knowledge or inside is I have been from a business side defining for the development of an large RPA that is used in one of our big service businesses, that has been going on in development for more than a year, because of a lot of different topics. So I have been kind of defining the rules that are going into the RPA and I have been the main contact for the developer.

ML	1.4. During the interview, we will discuss Robotic Process Automation (RPA). Could you describe to us what you understand or mean with RPA?
P4	We talk a lot about RPA mimicing a person. A person doing some jobs and automating that. For the ones i work a lot why we use a lot of API:s, it is more kind of using technology to kind of transfer data from, or creating a process from or instead of doing manual work.
ML	1.5 How long work experience do you have within RPA?
P4	I have worked for 2,5 years

Operational Questions

Person	Questions & Answers
HZ	2.1 Based on your experience, what are the opportunities that you face or have faced when using RPA software?
P4	The opportunities, a lot of talk about saving time, so that is the main thing. And then creating better services or solutions with a higher quality, which is a different way to see it but sometimes create better value for customers to be more precise, less failure because it is not human. So we can save time and in that way make more money, improve quality in the work we are doing. Or we can do it faster - also. That is the main benefit.
HZ	2.2 Based on your experience, what are the challenges that you face or have faced when using RPA software?
P4	I think the main challenge is in development because it requires that the process we have defined needs to be very clear and it is not always very clear. So that is kind of defining what the RPA should do, is the main issue, it takes much more time and challenges the way we do it. Also, follow up on the user-fit. We need to make sure that it is actually creating the benefit that we want, because it is also costing money to have RPA and develop it. So we have to make sure that we get money for value or value for money.
HZ	2.3 How do you think the size of an organization may influence the use of RPA software?
P4	For some kinds of software I think you need to be a bigger size because it requires knowledge of software to use the standard software. I don't know how much software that exists but you need to understand what is possible to use. But I think when the market is more mature, I think more businesses or business sizes can use it if the business uses external suppliers to help on the actual

	development. It is very important to understand the value of this. I dont think a company has to be very big to benefit from RPA. But you need to have the knowledge of it or the understanding of it.

Managerial Questions

Person	Question & Answer
ML	3.1 Could you describe where and how RPA is used in your organization?
P4	It is used in many different areas, a lot in our customer support or service where we have a kind of repairing question such as "can i have a copy of my invoice". It is more simple but very repetitive. For the bot I have been developing we have been using it for transferring data between two systems that do not talk with each other for all service offers. It is used in our service business, in our customer service - that is our main part. And a few in our finance area. But we have a potential for much more.
ML	3.2 What is your role in relation to RPA software in your organization?
P4	That is being a project manager for developing. And right now I have a few months where I have been the lead of our "what are we going to do for our next development, which robots are we going to develop. I have been the contact and business advisor for that.
HZ	3.3 How have you found the use of RPA software to improve your work processes compared to your previous way of working?
P4	It makes some of it much more effective. The RPA itself does not improve the process, it is only when we define a better process, so that was one of the challenges. If we do not have a good process the RPA or robot can not do it. So I don't think that it is the RPA that is doing it better, it is just defining that we want to have an RPA that improves. But the RPA has a value because it is faster and more reliable most of the time.
HZ	3.4 How have you found the use of RPA software to challenge your work processes compared to your previous way of working?
P4	I think it depends on your perspective because for me the RPA does not improve anything by itself. It is because we are starting to ask ourselves questions in order to make the RPA. SO the RPA just kind of does it for us when we have defined the process. So it depends on what your perspective on that question is. I think the RPA just does the simple stuff mostly, it does not define the process, we humans do it in the business. WHen the process is defined and clear the RPA will help us a lot.

HZ	3.5 Have you encountered any resistance from workers in your organization while using RPA software? Can you please elaborate?
P4	In some areas everyone is very happy for it, and the biggest spot where I have worked, there has been some resistance in order to understand it. That requires some inside in there. And also that some employees feel that they lose a bit of control of what is going on, because if they do it manually they can kind of fix things themselves and now it is something else doing it. But in general most people are happy about it.
ML	3.6 In what ways do you think the use of RPA software is related to managing change in your organization?
P4	I think deciding that we want to use RPA will change the way we look at processes so I think it has a positive impact that we decide to use RPA:s. Again i think maybe your approach is about the RPA by itself, for me it is all the things that surround it, the changing and that is very important. The RPA is just programming, it is just something that it is doing. But it is all the things we do around it, and all the things we communicate around it that is creating the biggest change. So it depends on how broad you define the RPA areas, since the RPA by itself is just a tool to do something.
ML	3.6.1 And how is it for you as a project manager to manage that change?
P4	It takes a lot of work, because we want to be able to do the RPA and again we want to have a very clear process and understanding of the systems that the RPA works with. And if these processes are not completely clear, it will develop and change things in the business. Before we do the RPA, please be sure what is the actual process, and would that process be better to be done in a different way? - to make sure we make an RPA or robot that is solid and will be able to work for a longer time. For me as a project manager it is very much about helping the business and defining what the RPA should do in a "future-safe" way, and my job has also been trying to translate the business way of working to RPA logic. It is not always in the business. I am making sure the business understands you can only make the robot do this if it is logical and done in the same way every time. For some people it takes time to understand that.
ML	3.7 How do you think the use of RPA software affects the human aspect of work?
P4	I think everyone just sees it as a normal tool, or kind of like other systems. When we get used to having RPA it will just be seen as the use of excel for example. I think it is not a big thing when it is working, and when we get used to it just something easy. But I think the understanding of which kind of RPA tools we should use for example Blue Prism or Microsoft Power automate.

Closing Questions

Person	Question & Answer
HZ	4.1 Do you have any additional information or input that you would like to highlight?
P4	No, but I still think it is important to talk about RPA as a tool, and more see it from a broader perspective. Say, this is a process optimization and automation, so everytime you use an RPA you should try to optimize your process. I also think that we have to get used to what language we use around RPA, we are not so mature yet but it should just be a single extra tool that we have. Someone has to develop it so it takes time and someone has to evaluate what processes are worth the value. Another good question that I can not really answer is: What value has it actually created money-wise? I can not yet answer that since we are trying to find out how to measure it, and how we follow up on the activity value of these robots. So for example, if you have a full-time employee, how much of an "employee-time" do we save? That is the main way to measure the value. Another discussion was having the development inhouse or from external, and that also a relevant discussion. Do we need resources? I think the last point as a bigger issue is What kind of support models do we have for robots? How long do they work or run? Because in big organizations a lot of processes change and new people attend, so what is the lifetime of a robot? We still do not have an answer for that either but I think this topic will come up in the future when things mature more. A lot of thing changes sinc we get new systems all the time, and RPA always take things from one system and works with that. And if one system goes out of it we have to change it or remove it and that is a lot of maintenance. This topic will grow, but not a lot of people are talking about it yet.
ML	Any additional opportunities or challenges you would like to add?
P4	No, we covered it all. I think it is a very interesting topic you chose to write about. I think in my company we are getting relatively mature but there is still a long way to go. We had one discussion when working with RPA and that is to always try to have a lean office person - which is someone that can challenge a process before making it an RPA - professionals at optimizing processes. But it also makes the development time longer.

Appendix F. Interview Transcript 5

Participant: P5
Maja Larsén: ML
Hedvig Zetterberg: HZ
Company 1: C1

Opening Questions

Person	Questions & Answers
ML	Hi, Thank you for giving consent to participate anonymously in this bachelor's thesis study. For the sake of this interview, we want to have a common understanding of the purpose of this study. We aim to examine the opportunities and challenges of the applications of Robotic Process Automation software in conglomerate organizations from RPA professionals' perspective. First, as stated in the informed consent form, we will record this interview and later on transcribe it. On request, we will send you the recording and transcription in order to ensure that you have been represented in a way that you think is fair. Additionally, if there are some parts that you want to exclude. Feel free to ask questions at any time. If you would feel uncomfortable during the meeting, remember that you have the right to withdraw at any time.
ML	So, the first question 1.2 For the sake of the interview, could you please state your name and title of your role in your company?
P5	My name is X. And I am a team manager and a business manager at a software company in Stockholm, Sweden.
ML	1.3. Could you give us some more information on your role, what do you do and how?
P5	As a team manager I am responsible for a team with about 23 consultants, and my responsibility for them is on the team manager side and that is facilitating them so they have projects to work with. And then I am also responsible to recruit new members to my team when that is needed. Besides that, my more or like business manager role is more being involved in the kind of business that we have and the business areas, and my team is working pretty much with AI. To be specific we are working with chatbots and conversation AI, and that is our biggest case. We are working a lot with what we call automation, we dont use the word RPA that much because of several reasons. But then we also do traditional consulting and traditional system development projects.

ML	1.4. During the interview, we will discuss Robotic Process Automation (RPA). Could you describe to us what you understand or mean with RPA?
P5	I am an old person. I have been working in this business since the 90s, I would say for me as a former system developer, RPA is nothing new. Technically it is digitalization of repetitive processes. But the most common aspect, if you talk about RPA, is the capability to use tools that are low code tools to integrate against the system interface. So, why do you do that? I would say that it is a solution you use when you don't have the capability, resources or technical capability to do those changes inside the system or make the system have a way to integrate to the system. For example, you have a really old case management system but as a case manager are handling cases in a repetitive same type of way and that could typically be done by a robot. As my friend once said "RPA is robotar pensionerar administartörer".
ML	1.5 How long work experience do you have within RPA?
P5	As the the term is defined I would say 3-4 years.

Operational Questions

Person	Questions & Answers
HZ	2.1 Based on your experience, what are the opportunities that you face or have faced when using RPA software?
P5	There are several I would say. One opportunity is that you have one old system, typically case management system that has a big backload of cases that you know you can handle with a robot, and maybe you don't have coders to help you, then you can use an RPA platform to for example UIpath, where you don't need a technically skilled programmer because they are low code platforms. You can use persons that have more knowledge of the business or the area. You can use this platform for clicking in the userinterface to do these tasks. You can use loe-code experienced persons. You can use lower-salay consultants to do these tasks. All these platforms are at the moment being robust and good platforms that can do these repetitive tasks in a secure environment.
HZ	2.2 Based on your experience, what are the challenges that you face or have faced when using RPA software?
P5	For me, the absolute biggest challenge is to get skilled professional developers to use these platforms. Because skilled developers are not used to these kinds of platforms. And on the other hand, a developer does not want to code against the user interface. They want to do intergartongs against an API or directly to a database. Developers do not want to work with RPA. And another challenge is

	that most of these good platforms have a really expensive license form. SOme of them only have the capability to be installed on a user desktop.
HZ	2.3 How do you think the size of an organization may influence the use of RPA software?
P5	Historically the big companies, banks and insurance companies were early adopters in these techniques. If you have a big organization with more resources you probably have capability to hire people from india exemple, which makes it easier to go all in on these closed platformas with RPA.

Managerial Questions

Person	Question & Answer
ML	3.1 Could you describe where and how RPA is used in your organization?
P5	We are using RPA in some of our bigger customers that have large case management systems that handle millions of cases where there are clear rules of how you handle some typical cases where it is pretty easy to use automation to help the case managers to not have to handle specific cases that have a specific pattern. So where we have big business systems or case systems where you have a lot of cases. x is a system that is used by our customer and another one is y, if you use standard systems they are not custom made for the customer needs which means you have some drawback in the user interface, which means doing manual stuff takes more time. Using RPA is a quick fix if you can't solve it in a real way. The trend in us using it, we are leaving the big platforms and are going more towards building the automation ourselves with real code and we still do integration directly against the user interface, but now we are using more open source platforms.
ML	3.2 What is your role in relation to RPA software in your organization?
P5	skip
HZ	3.3 How have you found the use of RPA software to improve your work processes compared to your previous way of working?
P5	We have helped customers and also we are using RPA internally to help customers and ourselves to spend less time in business systems and the time to do other stuff.
HZ	3.4 How have you found the use of RPA software to challenge your work processes compared to your previous way of working?
P5	I would say the biggest challenge is to get skilled developers to work with these tools. RPA platforms are a quick start but building something really advanced is

	hard to do in a good design and architectural manner. And another challenge is that a lot of persons that are educated to work with RPA don't come from a background of a developer, which means that they don't understand the environment, why they are working or why they are implementing their RPA solutions. This is important to understand basic system design and interactions with the interface. Or some easy things such as the internet can be down.
ML	3.5 Have you encountered any resistance from workers in your organization while using RPA software? Can you please elaborate?
P5	Yes, very much. I would say that it's really hard to get skilled UIPath programmers and the consultants' fee is high because there is a big demand on them. Skilled RPA developers have moved on to be developers instead.
ML	3.6 In what ways do you think the use of RPA software is related to managing change in your organization?
P5	Change in system and in organization, we have experienced also, because we develop systems as well, and we know that some of our systems are used by our clients with their RPA software. Using RPA is because you don't have the capability to change the system that you are integrating with which means that you often do not have any dialogue with the system developer. That means that you build something RPA, but you are not able to handle changes in this whole system. It is hard to build fail safe automation compared to code. Changes in the system is a big pain and also changes in staff turnover.
HZ	3.7 How do you think the use of RPA software affects the human aspect of work?
P5	In a good implementation, it means great benefits for our customers. That means that our customer can spend more time in the business than in the business system. For our customers customer it also mean that the cases that hey have is handled faster than before.

Closing Questions

Person	Question & Answer
HZ	4.1 Do you have any additional information or input that you would like to highlight?
P5	A trend that we see, we work a lot with chatbots and the combination with AI. The combination with chatbots and automation will become bigger this year.
ML	I have one more question related to the previous one, how do you think that the use of RPA software affects the human aspect of work for your co-workers?

P5	In my organization it is only seen as a benefit. As I said, we also have a lot of business systems that have a bad interface, so all automation that we can do for economic staff and administration are just good. For our customer, in public service, there is a lot of case management, case handling and there are a lot of people working in that type of organization that may be afraid and are seeing RPA as a threat against their work. But when discussing ChatGPT for example, I have never seen any digitalization actually decreasing the demand of adding people working, people just work with other stuff.

Appendix G. Informed Consent

Date: March-April 2023

Title of the Research: Robotic Process Automation in conglomerate organizations: Opportunities and Challenges from RPA practitioners perspectives.

Researchers: Maja Larsén, Bachelor in Information Systems, Lund University School of Economics and Management

Hedvig Zetterberg, Bachelor in Information Systems, Lund University School of Economics and Management

Purpose of the Research:

To explore the opportunities and challenges of the applications of Robotic Process Automation software in conglomerate organizations from RPA practitioners' perspectives.

What you will be asked to do in the Research: You will be asked to participate in an interview not more than 45 minutes.

Risks and Discomforts: I do not foresee any risks or discomforts from your participation in the research.

Confidentiality: Your identity and full names will not be revealed to others outside of this bachelor's thesis study at Lund University. The results of our interview will be used solely for the purpose of the research. Confidentiality will be provided to the fullest extent possible.

Benefits of the research and benefits to you: As practitioners, you could be benefited by discussing opportunities and challenges with RPA that you experience and in that way be provided with new insights for improvement. As researchers, we will acquire knowledge and understanding through your experience regarding the current opportunities and challenges in the application of RPA software in conglomerate organizations.

Voluntary Participation and Withdrawal: Your participation in the research study is voluntary. You may refuse to answer any question that makes you feel uncomfortable, or you may choose to withdraw your participation at any time or any reason. Your decision not to volunteer or stop participating will not influence the nature of your relationship with the researchers or Lund University either now, or in the future. In the event you withdraw from the

research study, all associated data collected will be consequently destroyed.

Questions about the research: If you have questions about the research or about your role in the research study, please do not hesitate to contact Maja Larsén and/or Hedvig Zetterberg, either by email or telephone.

Legal Rights and Signatures: I consent to participate in this bachelor's thesis research. I have understood the nature of this research study and I wish to participate and allow the recording of the discussion. I am not resigning any of my legal rights by signing this form. My signature below indicates my consent.

Signature:

Participant:

Date:

Signature:

Researchers: Maja Larsén and Hedvig Zetterberg

Date:

References

Aguirre, S., Rodriguez, A. (2017). Automation of a Business Process Using Robotic Process Automation (RPA): A Case Study. In: Figueroa-García, J. Et al.(eds). *Applied Computer Sciences in Engineering. WEA 2017. Communications in Computer and Information Science*, vol 742. Available at: https://doi.org/10.1007/978-3-319-66963-2_7. [Accessed 7/3 2023].

Armstrong, M. (2010). Armstrong's Handbook of Human Resource Management Practice. 11th Ed. *Human Resource Management International Digest*, 18(4). Available at: doi:10.1108/hrmid.2010.04418dae.001. [Accessed 29/4 2023].

Biscotti, F (2020). Gartner Says Worldwide Robotic Process Automation Software Revenue to Reach Nearly $2 Billion in 2021. *Stamford Connecticut. Press Release.* Available at: https://www.gartner.com/en/newsroom/press-releases/2020-09-21-gartner-says-worldwide-robotic-process-automation-software-revenue-to-reach-nearly-2-billion-in-202. [Accessed 6/3 2023].

Braun, V. & Clarke, V. (2006). Using thematic analysis in psychology, *Qualitative Research in Psychology*, 3(2), pp. 77–101. Available at: https://doi:10.1191/1478088706qp063oa. [Accessed 15/3].

Brougham, D. & Haar, J. (2018). Smart Technology, Artificial Intelligence, Robotics, and Algorithms (STARA): Employees' perceptions of our future workplace, *Journal of Management & Organization,* 24(2), pp. 239–257. Available at: doi:10.1017/jmo.2016.55. [Accessed 5/4 2023].

Bryman, A. (2012). *Social research methods*. 4. Ed. Oxford: Oxford University Press. Available at: https://search.ebscohost.com/login.aspx?direct=true&AuthType=ip,uid&db=cat07147a&AN=lub.2209187&site=eds-live&scope=site. [Accessed Available at: https://search.ebscohost.com/login.aspx?direct=true&AuthType=ip,uid&db=cat07147a&AN=lub.2209187&site=eds-live&scope=site. [Accessed 15/3 2023].

Chakraborti, T. et al., (2020). From Robotic Process Automation to Intelligent Process Automation: Emerging Trends, working paper, *Internation Conference on Business Process Management 2020 RPA Forum*. Available at: http://arxiv.org/abs/2007.13257. [Accessed 7/3 2023].

Chao, G. Hurst, E. Shockley R. (2018). The evolution of process automation: Moving beyond basic robotics to intelligent interactions [pdf], *Executive Report IBM Automation*. Available at: https://www.ibm.com/downloads/cas/QAQMRGVN [Accessed 7/3 2023].

Cooper, L.A. *et al.* (2019). Robotic Process Automation in Public Accounting, *Accounting Horizons*, 33(4), pp. 15–35. Available at: doi:10.2308/acch-52466. [Accessed 5/4 2023].

Danaher, J. (2017). Will Life Be Worth Living in a World Without Work? Technological Unemployment and the Meaning of Life, *Science and Engineering Ethics*, 23(1), pp. 41–64. Available at: doi:10.1007/s11948-016-9770-5. [Accessed 5/4 2023].

David, F. R., & David, F. R. (2015). Strategic Management Concepts and Cases [e-book] 15 ed, Available at: https://gibsoncollege.edu.et/wp-content/uploads/2022/01/Strategic-Management-Concepts-and-Cases-15th-Ed.-by-Fred-R.-David-and-Forest-R.-David.pdf [Accessed 31/3 2023].

Darmawan, A. H, & Azizah, S. (2020). Resistant to Change: Causes and Strategies as an Organizational Challenge. In *Proceedings of the 5th ASEAN Conference on Psychology, Counselling, and Humanities (ACPCH 2019), Advances in Social Science, Education and Humanities Research.* Available at: 10.2991/assehr.k.200120.010 [Accessed 28/4 2023].

Delaney, R. and D'Agostino, R. (2015). The Challenges of Integrating New Technology into an Organization, *Mathematics and Computer Science Capstones,* 25. Available at: https://digitalcommons.lasalle.edu/cgi/viewcontent.cgi?article=1024&context=mathcompcapstones. [Accessed 13/4 2023].

Fernandez, D. Aman, A. (2018). Impacts of Robotic Process Automation on Global Accounting Services, *Asian Journal of Accounting and Governance,* 9, pp. 123–131. Available at: http://dx.doi.org/10.17576/AJAG-2018-09-11. [Accessed 5/4 2023].

Fernandez, D. Aman, A. (2021). Planning for a Successful Robotic Process Automation (RPA) Project: A Case Study. *Journal of Information and Knowledge Management (JIKM),* 11(1), pp. 103-117. Available at: https://www.researchgate.net/publication/351685846_Planning_for_a_Successful_Robotic_Process_Automation_RPA_Project_A_Case_Study. [Accessed 5/4 2023].

Galli, B.J (2018). Change Management Models: A Comparative Analysis and Concerns, *IEEE Engineering Management Review*, 46(3), pp. 124–132. Available at: doi:10.1109/EMR.2018.2866860. [Accessed 10/4 2023].

Gomes, M. & Seruca, I. (2023). The perception of the management and lower-level employees of the impacts of using Robotic Process Automation: the case of a shared services company, *Procedia Computer Science*, 219, pp. 129–138. Available at: doi:10.1016/j.procs.2023.01.273. [Accessed 3/3 2023].

Hagel, Jack (2018), Making RPA a unifying force for a vast, diversified conglomerate. [Online]. Available at: https://www.fm-magazine.com/issues/2018/jun/robotic-process-automation.html?fbclid=IwAR0rHyeIIpq2VkitGCdOoKudgQpTJoap1F4ydFxxBVh9nmvVh5efqLmXvp0 [Accessed 3/3 2023].

Hindle, J. Dr Lacity, M. Dr Willcocks, L & Dr Khan, S. (2017). Robotic Process Automation: Benchmarking the Client Experience [pdf], *Robotic Process Automation Interim Executive Research Report.* Available at: https://www.blueprism.com/uploads/resources/white-papers/BLUEPRISM_InterimReport.pdf [Accessed 6/3 2023].

Hussain, S.T, Lei, S. Akram, T. Haider, M.J, Hussain, S.H, Ali, M. (2018). Kurt Lewin's change model: a critical review of the role of leadership and employee involvement in organizational change, *Journal of Innovation & Knowledge*, 3(3), pp. 123–127. Available at: doi:10.1016/j.jik.2016.07.002. [Accessed 7/3 2023].

Hofmann, P., Samp, C. & Urbach, N. (2020). Robotic process automation. *Electronic Markets* 30, 99-106 (2020). Available at: https://doi.org/10.1007/s12525-019-00365-8 [Accessed 26/4 2023].

Ivančić, L., Vugec, D. S., & Vuksic, V. B. (2019). Robotic Process Automation: Systematic Literature Review. *Business Process Management: Blockchain and Central and Eastern Europe Forum,* Springer, 280-295. Available at: https://doi.org/10.1007/978-3-030-30429-4_19 [Accessed 25/4 2023].

Kholiya, P.S. Kapoor, A. Rana, M. Bhushan, M. (2021). Intelligent Process Automation: The Future of Digital Transformation. In *10th International Conference on System*

Modeling & Advancement in Research Trends (SMART), System Modeling & Advancement in Research Trends (SMART), pp. 185–190. Available at: doi:10.1109/SMART52563.2021.9676222. [Accessed 26/4 2023].

Lacity, M.C. & Willcocks, L.P. (2016). A new approach to automating services. *MIT Sloan Management Review*, 58(1), pp. 40–49. Available at: https://search.ebscohost.com/login.aspx?direct=true&AuthType=ip,uid&db=bth&AN=118652573&site=eds-live&scope=site. [Accessed 7/3 2023].

Lauer, T. (2021*) Change Management. Fundamentals and Success Factors*. Berlin: Springer. Available at: https://doi.org/10.1007/978-3-662-62187-5. [Accessed 29/4 2023].

Lazareva, N. Karasevskis, K. Girjatovcs, A. Kuznecova, O. (2022). Business Process Automation in Retail. In *63rd International Scientific Conference on Information Technology and Management Science of Riga Technical University (ITMS),* pp. 1–5. Available at: https://search-ebscohost-com.ludwig.lub.lu.se/login.aspx?direct=true&AuthType=ip,uid&db=edseee&AN=edseee.9937096&site=eds-live&scope=site. [Accessed 4/3 2023].

Leavy, P. (2014). *The Oxford Handbook of Qualitative Research*. Oxford: Oxford University Press. Available at: https://search.ebscohost.com/login.aspx?direct=true&AuthType=ip,uid&db=cat07147a&AN=lub.4850812&site=eds-live&scope=site. [Accessed 15/3 2023].

Leung, L. (2015). Validity, reliability, and generalizability in qualitative research, *Journal of Family Medicine and Primary Care*, 4(3) pp. 324-327. Available at: https://doi.org/10.4103%2F2249-4863.161306. [Accessed 15/3 2023].

Lhuer, X. (2016). The next acronym you need to know about: RPA (robotic process automation) [pdf], *Digital McKinsey*. Available at: https://www.blueprism.com/uploads/resources/white-papers/WillcocksMcKinseyNov2016The-next-acronym-you-need-to-know-about-RPA-robotic-process-automation.pdf [Accessed 4/3 2023].

Linden, G., Teece, D.J. (2018). Conglomerates. In: Augier, M., Teece, D.J. (eds). *The Palgrave Encyclopaedia of Strategic Management*. London: Palgrave Macmillan. Available at: https://doi.org/10.1057/978-1-137-00772-8_405. [Accessed 31/3 2023].

Madakam S, Holmukhe R, and Jaiswal, D. (2019). The Future Digital Work Force: Robotic Process Automation (RPA). *JISTEM - Journal of Information Systems and Technology Management.* 16, pp. 1-17. Available at: doi: 10.4301/S1807-1775201916001 [Accessed 26/4 2023].

Manyika, J. Chui, M. Miremadi, M. Bughin, J. George, K. Willmott, P. Dewhurst, M. (2017). A Future That Works: Automation, Employment, and Productivity. *McKinsey Global Institute.* Available at: https://www.mckinsey.com/~/media/mckinsey/featured%20insights/Digital%20Disruption/Harnessing%20automation%20for%20a%20future%20that%20works/MGI-A-future-that-works-Executive-summary.ashx. [Accessed 3/3 2023].

Mohamed, S.A, Mahmoud, M.A, Mahdi, M.N, Mostafa, S.A. (2022). Improving Efficincey and Effectiveness of Robotic Process Automation in Human Resource Management, *Sustainability*, 14, p. 3920. Available at: https://doi.org/10.3390/su14073920 [Accessed 7/3 2023].

Moreira, S., Mamede, H.S. & Santos, A. (2023). Process automation using RPA – a literature review, *Procedia Computer Science*, 219, pp. 244–254. Available at: doi:10.1016/j.procs.2023.01.287. [Accessed 15/3 2023].

Moses, S. (2019). Robotic Process Automation for Recruitment Process - A roadmap Towards Human Resource Management, *Journal of Emerging Technologies and Innovative Research (JETIR).* Available at: https://www.jetir.org/papers/JETIR1905789.pdf. [Accessed 7/3 2023].

Naidu, Ch.V & Vedavathi, K. (2019). Cognitive Modeling: Role of Artificial Intelligence, *International Journal of Innovative Technology and Exploring Engineering (IJITEE).* 8(6). Available at: https://www.ijitee.org/wp-content/uploads/papers/v8i6/F3967048619.pdf. [Accessed 11/4 2023].

Nankervis, A. et al.(eds.), (2021). *The Fourth Industrial Revolution. What does it mean for Australian Industry?* [e-book], Singapore: Springer. Available at: https://search-ebscohost-com.ludwig.lub.lu.se/login.aspx?direct=true&AuthType=ip,uid&db=cat02271a&AN=atoz.ebs29633128e&site=eds-live&scope=site. [Accessed 27/4 2023].

Oates, B. J. (2006*). Researching information systems and computing* [e-book]. London: Sage. Available at: LUSEM University Library website http://www.lusem. lu.se/library. [Accessed 15/3 2023].

Patton, M.Q. (2015). *Qualitative research & evaluation methods: integrating theory and practice.* 4. ed. London: SAGE . Available at: https://search-ebscohost-com.ludwig.lub.lu.se/login.aspx?direct=true&AuthType=ip,uid&db=cat07147a&AN=lub.4568688&site=eds-live&scope=site [Accessed 15/3 2023].

Pramod, D. (2022). Robotic process automation for industry: adoption status, benefits, challenges and research agenda'*, Benchmarking: An International Journal*, 29(5), pp. 1562–1586. Available at: doi:10.1108/BIJ-01-2021-0033. [Accessed 7/3 2023].

Prangnell, N. & Wright, D. (2015). The robots are coming: A Deloitte Insight report, Available at: https://www2.deloitte.com/content/dam/Deloitte/uk/Documents/finance/deloitte-uk-finance-robots-are-coming.pdf [Accessed 7/3 2023].

Rao, D. and Pathak, P. (2022). Evolving Robotic Process Automation (RPA) & Artificial Intelligence (AI) In Response to Covid-19 and Its Future. *AIP Conference Proceedings*, 2519(1), pp. 1-9. Available at: https://doi.org/10.1063/5.0109615. [Accessed 3/3 2023].

Santos, F., Pereira, R. & Vasconcelos, J. B. (2020). Towards robotic process automation implementation: an end-to-end perspective. *Business Process Management Journal*. 26(2), pp. 405-420. Available at: https://doi:10.1108/BPMJ-12-2018-0380. [Accessed 29/3 2023].

Schuler, J. and Gehring, F. (2018). Implementing Robust and Low-Maintainance Robotic Process Automation (RPA) Solutions in Large Organisations [pdf], *PwC Switzerland Data Analytics*. Available at: https://deliverypdf.ssrn.com/delivery.php?ID=751119001100096003085086070010066006034048031046008017077070073006068112100127068022058117006035000809900111610002611008411809110607803904204212711409212300400702808603303004600510907212511800608608212108502700007510002708806606810403001410 3031070102028&EXT=pdf&INDEX=TRUE. [Accessed 28/4 2023].

Seeber, I. et al. (2020). Machines as teammates: a research agenda on AI in team collaboration, *Information & Management,* 57(2), pp. 103-174. Available at: https://doi.org/10.1016/j.im.2019.103174. [Accessed 13/4 2023].

Sharma, R. et al. (2022). Robotic Advancements in Business Process Automation using Artificial Intelligence: An Investigative Study, 2022. *11th International Conference on System Modeling & Advancement in Research Trends* (SMART), *System Modeling & Advancement in Research Trends (SMART), 2022 11th International Conference on*, doi:10.1109/SMART55829.2022.10046772. [Accessed 4/3 2023].

Siderska, J. (2021). The Adoption of Robotic Process Automation Technology to Ensure Business Processes during the COVID-19 Pandemic, *Sustainability (Switzerland), 2021. 13(14).* Available at: http://dx.doi.org/10.3390/su13148020 [Accessed 25/4 2023].

Turja, T., Minkkinen, J. & Mauno, S. (2022). Robotizing meaningful work, *Journal of Information, Communication and Ethics in Society*, 20(2), pp. 177–192. Available at: https://doi-org.ludwig.lub.lu.se/10.1108/JICES-06-2021-0063. [Accessed 5/4 2023].

Uipath, (n.d). Xerox Created a New Business Model with Automation. Available at: https://www.uipath.com/resources/automation-case-studies/xerox-created-new-business-model-with-automation. [Accessed 31/3 2023].

Van Hoek, R., Gorm Larsen, J. and Lacity, M. (2022). Robotic process automation in Maersk procurement–applicability of action principles and research opportunities, *International Journal of Physical Distribution & Logistics Management*, 52(3), pp. 285–298. Available at: https://doi:10.1108/IJPDLM-09-2021-0399. [Accessed 7/3 2023].

Walsham, G. (2006). Doing interpretive research, *European Journal of Information Systems*, 15(3), pp. 320–330. Available at: https://doi:10.1057/palgrave.ejis.3000589. [Accessed 15/3].
Wikipedia. (2023). IKEA. Available at: https://en.wikipedia.org/wiki/IKEA#cite_note-6. [Accessed 31/3 2023].

Willcocks, L. P., Lacity, M., & Craig, A. (2017). Robotic process automation: strategic transformation lever for global business services?, *Journal of Information Technology Teaching Cases,* 7(1), pp.17-28. Available at: https://journals-sagepub-com.ludwig.lub.lu.se/doi/pdf/10.1057/s41266-016-0016-9. [Accessed 10/3 2023].

Zhu, Y.-Q. and Kanjanamekanant, K. (2023). Human–bot co-working: job outcomes and employee responses, *Industrial Management & Data Systems*, 123(2), pp. 515–533. Available at: https://www-emerald-com.ludwig.lub.lu.se/insight/content/doi/10.1108/IMDS-02-2022-0114/full/html. [Accessed 5/4 2023].