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# **Adopting robots in an IT service desk**

**A qualitative study on critical success factors for adoption of RPA within IT service desks**

Kandidatuppsats 15 hp, kurs SYSK16 i Informatik

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# Adopting robots in an IT service desk: A qualitative study on critical success factors for adoption of RPA within IT service desks

ENGELSK TITEL: Adopting robots in an IT service desk: A qualitative study on critical success factors for adoption of RPA within IT service desks

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Since Robotic Process Automation (RPA) is expected to have the potential of bringing substantial benefits to many of today's businesses, RPA initiatives are taking an increasingly bigger role in various organizations. Previous research has identified a lack of guidelines in successfully adopting RPA. This deficit includes, but is not limited to a knowledge gap in the adoption of RPA by IT service desks - constituting the particular focus of this study. Specifically, this study aims to investigate the critical success factors (CSFs) for adopting RPA within IT service desks. To do so, *the Integrated T-O-E Framework for Technology Adoption* is applied. CSFs proposed by prior literature on RPA adoption are reviewed, and the study collects data via qualitative semi-structured interviews with RPA and IT service desk experts, to establish a set of CSFs validated by both literature and results. The research is limited to the combination of RPA and IT service desks and is conducted in an organization and its franchisee to capture their employees' experience with RPA within IT service desks. The study concludes on a recommendation of 14 CSFs for the investigated RPA application.

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# 1 Introduction

## 1.1 Background

Robotics Process Automation (RPA) is becoming increasingly popular when looking at solutions for automating highly repetitive business processes (Casadei, Schlogl & Bergmann, 2022). RPA refers to a specific kind of software agent that emulates the sequential steps carried out by a human operator across various computer applications to execute specific tasks within a business process. These tasks are usually characterized as rule-based, well-defined, and repetitive, making them suitable for automation by robots (Syed, Suriadi, Adams, Bandara, Leemans, Ouyang, ter Hofstede, van de Weerd, Wynn & Reijers, 2020).

Previous research has shown that RPA brings great value to an organization. Syed et al. (2020) highlight benefits in terms of cost savings, reduced errors, and enhanced efficiency. The authors also mention the possibility of freeing up employees from repetitive tasks, to be able to concentrate on tasks that require human skills and bring higher value. Hofmann, Samp & Urbach (2020) describe how the ease-of-use and adaptability of RPA allow companies to implement what they call “software robots”. Further, the authors argue that the software robots can execute tasks flawlessly and uninterrupted while still being traceable and easy to implement. They also mention that RPA is relatively low cost compared to traditional process automation. Additionally, a study shows that organizations that have had a successful implementation of RPA and therefore efficient business processes, have experienced positive effects on both productivity and customer service (Lacity & Willcocks, 2016).

The role of Information Technology (IT) has become a crucial part of every organization's business strategy. In order to secure qualitative IT services, companies tend to use and work with Information Technology Service Management (ITSM) (MacLean & Titah, 2023). Companies that adopt ITSM within their business operations, will enhance their alignment of the IT resources and meet the needs of the customers (MacLean & Titah, 2023). One of the core components of ITSM is the IT service desk which has the focal point in organizational support of different kinds (Firmansyah & Subriadi, 2022). Al-Hawari & Barham (2021) explains that the service desk acts as a single point of contact for the employees requesting help.

Moreira, Mamede & Santos (2023) discuss how RPA implementation is suitable for various areas within the structure of an organization. They mention information technology as an example and list “security administration, monitoring, and management of infrastructures, managing users and accesses, integration of platforms, management of services IT” as some of the processes possible for adopting RPA (Moreira, Mamede & Santos, 2023, p.2). Divanshu, Gupta, Gupta & Gupta (2021) present an example of RPA implementation within a service request desk in the hotel industry. The implementation was done with the goal of streamlining processes, as well as handling the increasing numbers of errands within the service desk. The authors discuss the benefits of the automated tool and claim that it can be profitable for the hotel industry, as it improves both guest satisfaction and operational efficiency. Moreira, Mamede & Santos (2023) state that the main factors to make processes eligible for RPA are well-defined rules, repetitive tasks, a high level of standardization as well as a process with many occurrences. Further, the authors highlight that “it immediately leads

us to think about administrative processes, helpdesk, form processing, and call center operations” (Moreira, Mamede & Santos, 2023, p.9-10).

Moreira, Mamede & Santos (2023) highlight the lack of research in the RPA field. Furthermore, the authors emphasize the literature gap and the need for future studies to investigate in guidelines for RPA adoption. Syed et al. (2020) agree and explain that there is a lack of framework on the CSFs of RPA adoption.

## 1.2 Problem area

Syed et al. (2020) write that RPA initiatives are increasingly being taken throughout different organizations in order to streamline processes and increase efficiency. Generally, academic literature in the area of RPA is relatively new. The authors mention in their study about themes and challenges of RPA that there is a lack of research in the RPA area. More specifically, a framework on which CSFs to consider when implementing RPA does not exist. This brings difficulties in achieving development in the field. Therefore, the author argues that there is a need for further studies, as it will generate better outcomes when adopting RPA Syed et al. (2020).

After going through the current literature, a literature gap has been found in the combination of RPA and IT service desks. Therefore, it is concluded that there is a need for qualitative research in the RPA area of ITSM. For instance, Rieth & Hagemann (2022) emphasize the need for further research on the relationship between automation and human workers, to ensure that automation is being implemented in ways that improve human work. Previous research has been conducted to identify the CSFs for technology adoption in general. Awa, Ojiabo & Orokor (2017) present an evolved variant of the T-O-E Framework named *Integrated T-O-E Framework for Technology Adoption*, with additional factors that influence the adoption and implementation of new technologies within an organization. However, the authors emphasize that every IS innovation is different from each other and requires different factors for a successful adoption, which no single framework covers (Awa, Ojiabo & Orokor, 2017). This indicates that research about technology adoption varies depending on which technology that is being studied. Therefore, there is need for research that focuses on specific technologies, such as RPA within IT service desks, in order to explore the CSFs for adoption of the technology.

## 1.3 Research question

After identifying the problem area, the research question that this study aims to answer is:

What factors are needed to successfully adopt RPA within IT service desks?

## 1.4 Purpose

Through a qualitative approach, the purpose of this study is to identify the critical success factors for RPA adoption within IT service desks. By doing so, the study aims to identify a set



of critical success factors that are validated by both literature and employees in the fields of RPA and IT service desks.

## **1.5 Delimitations**

The study is limited to a focus only on the combination of RPA and IT service desks and will therefore not cover RPA within other contexts. Additionally, this is a study conducted in the anonymous organizations; organization X and franchisee Y, which intends to capture their employees' opinions and previous experience with RPA solutions in IT service desks.

## 2 Literature review

### 2.1 Robotic Process Automation (RPA)

Divanshu et al. (2021) describe Robotic Process Automation (RPA) as software that automates rule-based and repeatable tasks. The software can mimic the actions of a human employee and execute processes faster and more precisely than humans. Furthermore, RPA technology enables software to do repetitive tasks independently without requiring emotional, reasoning, and decisive abilities (Reungyu & Waiyanet, 2022). Lacity & Willcocks (2016) highlights that RPA is strictly a software solution, as a robot in RPA is equivalent to a software license. Further, Reungyu & Waiyanet (2022) explain how RPA is optimal for repetitive tasks with a big amount of information and frequent occurrence of mistakes. Moreira, Mamede & Santos (2023) also state the main requirements to make processes suitable for RPA, which are well-defined rules, repetitive tasks, a high level of standardization, and a process with many occurrences. Moreover, Lacity & Willcocks (2016), give additional examples of when RPA should be used, and refer to them as “swivel chair” processes. According to the authors, “swivel chair” processes describe the processes by which “a human sits in a swivel chair at a workstation and takes in work from many electronic inputs (like emails and spreadsheets), processes it using rules, adds data as necessary by accessing more systems and then inputs the completed work to yet other systems, like ERP or customer relationship management (CRM) systems” (Lacity & Willcocks, 2016, pp. 22). RPA can replace this kind of work since the RPA software can communicate with different computer systems, like a human would, only better, faster, and more cost-efficient (Lacity & Willcocks, 2016).

Regarding the benefits of RPA, Pramod (2021) describes how RPA technology brings value by improving business efficiency, productivity, time reduction, and accuracy. The author continues by presenting that RPA also enables organizations to save money on processes which in turn makes it possible to reposition the budget. Madakam, Holmukhe & Kumar Jaiswal (2019) argue that as RPA usage increases in organizations, business operations will change substantially. This is because RPA makes it possible to drastically improve labor efficiency and resilience. As a result, companies can reduce costs, and minimize both errors and risks. In addition to this, Madakam, Holmukhe & Kumar Jaiswal (2019) mention how RPA also can improve employee morale as it increases productivity. Lacity & Willcocks (2016) express how “lightweight” RPA is, which means that the RPA information technology does not disturb underlying computer systems, making it easy to implement and maintain. Syed & Wynn (2020) also discuss the non-invasive nature of RPA, as it does not integrate with the IT infrastructure of the organization. In turn, implementing RPA will lead to low turnaround time and fewer risks (Syed & Wynn, 2020).

Lacity & Willcocks (2016) further mention how easy RPA is to configure because developers are in no need of programming skills. Madakam, Holmukhe & Kumar Jaiswal (2019) write that non-technical employees also have access to tools that enable them to configure their own software robots. This supports Lacity & Willcocks (2016) in their idea that even individuals without technical backgrounds can participate in the automation process.

Regarding the challenges surrounding adopting RPA within an organization, Pramod (2021) explains that an RPA implementation demands resources in terms of time and effort.

Therefore, it is important to determine where to implement RPA, to gain the most value. Additionally, Syed et al. (2020) write that there is a challenge in knowing where to deploy RPA. Pramod (2021) confirms this by also mentioning that the process of identifying the tasks that are possible to automate can be challenging. Syed et al. (2020) presents that another challenge is organizational resistance to new technology. Asatiani & Penttinen (2016) explain how some doubt surrounding RPA is referring to the impact it has on the current employees. The authors claim that employees can view the robots as their competitors, rather than a coworker. This could lead to tension in the workplace, affecting both management and employees in terms of morale (Asatiani & Penttinen, 2016). Accordingly, Asatiani & Penttinen (2016) recommend that the deployment of RPA should be handled delicately when considering the human aspects.

### *2.1.1 Robotic Process Automation vs. Artificial Intelligence*

Dignum (2019) explains that defining Artificial Intelligence (AI) can be hard since the field is broad and includes many different definitions. The author continues by explaining that some definitions describe AI as “as a computational artifact built through human intervention that thinks or acts like humans, or how we expect humans to think or act” (Dignum, 2019, p.9). However, current AI systems act far from humans. Therefore, some definitions describe AI as artifacts that perform some aspects of human behavior. These kinds of aspects include the adaptability to the environment and changes, ability to take actions to achieve its goals as well as to interact with systems or humans (Dignum, 2019).

Sharma, Bharadwaj, Dutt & Tomar, (2022) explain that AI and RPA are associated technologies. However, the authors highlight that there exists a distinction between them. Sharma, Bharadwaj, Dutt & Tomar, (2022) distinguish between RPA and AI by stating that RPA technology uses robots to simulate human actions only based on restricted algorithms, while AI technology mimics human-like intelligence through reasonable abilities.

## **2.2 Information Technology Service Management (ITSM)**

MacLean & Titah (2023) highlight that information technology service management (ITSM) is becoming progressively popular when managing the IT functions of an organization. The authors note that “ITSM promotes the perspective of the IT function as a provider of a portfolio of IT services that support organizational goals” (MacLean & Titah, 2023, pp. 1). MacLean & Titah (2023) argue that when an organization adopts ITSM, there is an enhanced alignment of IT resources and the needs of the customer, which ensures that the resources will contribute to the business processes and operations, ultimately improving the performance of the organization.

Looking closely at the ITSM approach, MacLean & Titah (2023) mention that its objective is to transfer the responsibility of controlling and evaluating performance from the employees who are carrying out the tasks to the management. In addition to this, the authors define ITSM as a top-down approach where managers, with the help of guidelines and frameworks, understand the requirements of the IT function in the organization. Berrahal & Marghoubi (2016) mention that ITSM is performed by a combination of processes, people, and information technology. Moreover, MacLean & Titah (2023) define ITSM as an approach focused on processes, aiming to standardize and measure interconnected activities carried out

within the IT department. The same study argues that a process-centric mindset encourages the ability to repeat procedures, ultimately resulting in uniformity and steadiness when adapting to changes within the organization or the external environment.

ITSM is a service-centric management approach to IT operations management (Iden & Eikebrokk, 2013; MacLean & Titah, 2023). Iden & Eikebrokk (2013) mention in their literature review of ITSM that a technology approach to IT operations is becoming outdated. They argue that IT service providers must shift their focus from technology and internal operations to prioritize the quality of their services and cultivate strong relationships with their customers. This shift in focus is essential for their continued success in today's business landscape (Iden & Eikebrokk, 2013). Moreover, MacLean & Titah (2023) argue that the goal is for the IT function in ITSM to become more service dominant, where the IT department delivers a cohesive set of IT elements that facilitate the service the customer seeks. Thus, making the IT function more customer-centric and driven by benefits (Berrahal & Marghoubi, 2016; MacLean & Titah, 2023).

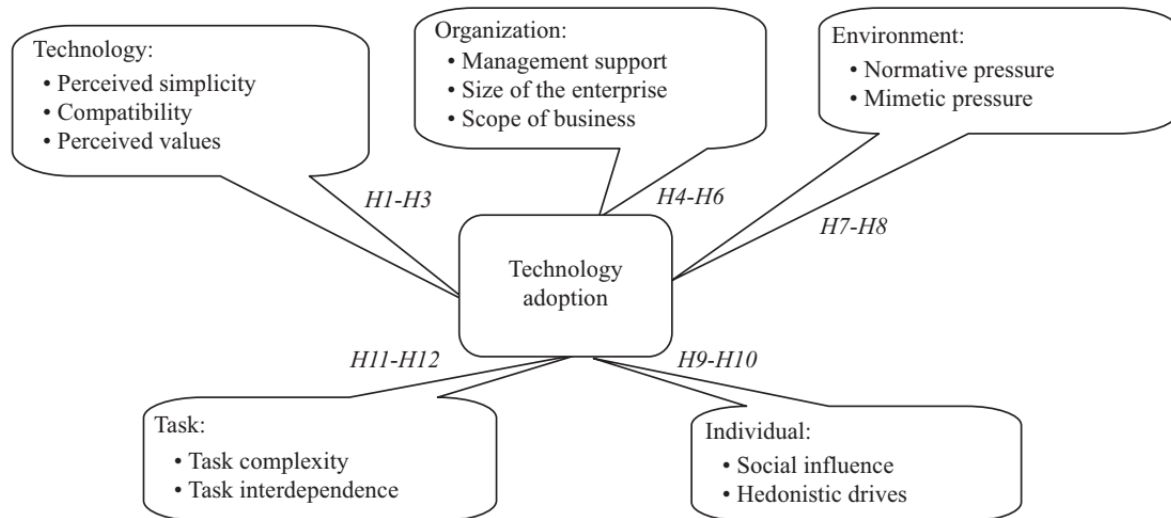
### 2.2.1 Information Technology Service Desk

The main purpose of ITSM and IT Service Desks is to support the organization. An implementation of an IT Service Desk is anticipated to enhance the business in terms of service performance and functioning IT services (Firmansyah & Subriadi, 2022). Al-Hawari & Barham (2021) explain how the IT Service Desk acts as a single point of contact for the users in order to handle requested services and technical issues. Furthermore, it can deliver relevant data in the form of reports and KPIs, which in turn serves a useful insight into the IT department's functions and achievements.

Al-Hawari & Barham (2021) point out that the user's perception of the IT service desk is crucial when it comes to the organization's view on the IT services. To build a successful IT Service Desk, Al-Hawari & Barham (2021) continue by presenting some of the basic requirements. Generally, the requirements are about meeting the employee needs by providing them with the right accesses, information, and communication channels. More specifically, one of the requirements is to satisfy the coworker by allowing them to interact with IT agents to get a better understanding of the issue and resolution. This can be achieved by enabling exchange of comments and files while handling an incident (Al-Hawari & Barham, 2021).

## 2.3 Integrated technology-organization-environment (T-O-E) taxonomies for technology adoption

Awa, Ojiabo & Orokor (2017) propose the *Integrated T-O-E Framework for Technology Adoption*, to explain the adoption of technologies. The framework has integrated the task-technology-fit (TTF) framework, along with the unified theory of acceptance and use of technology (UTAUT) framework with the T-O-E framework to capture different contexts of technology adoption. As a result, *Integrated T-O-E Framework for Technology Adoption* was developed, and it provides a 12-factor theoretical framework with five different adoption contexts (see Figure 2.1). The authors found that all factors in the framework were statistically crucial and critical adoption determinants (Awa, Ojiabo & Orokor, 2017).



**Figure 2:1:** Integrated T-O-E Framework for Technology Adoption (Awa, Ojiabo & Orokor, 2017, pp. 896)

### 2.3.1 Technology context

In the proposed framework by Awa, Ojiabo & Orokor (2017), the first adoption context refers to technology. In this context, technology relates to anticipated behavioral control, which involves the users' agility and adoption formed by cognitive skills. Within the technology adoption driver, there are three critical technology factors. The first one refers to *Perceived Simplicity*, which is the perceived effortlessness that occurs when simplifying the manipulation of the system, to make adoption faster. Moreover, according to the authors, perceived simplicity substantially aids adoption. The second factor is the *Perceived Compatibility*, where it is shown that adoption is faster when new technologies provide compatibility and integration with existing technologies. The third and last factor within technology adoption context is *Perceived Values* that refers to the degree to which a new technology is perceived to build a competitive advantage compared to existing technologies. Moreover, the authors argue that if the new technology is perceived to offer a relative advantage, it is more likely to be adopted (Awa, Ojiabo & Orokor, 2017).

### 2.3.2 Organization context

According to Awa, Ojiabo & Orokor (2017) in the IS context, organizational factors can refer to various aspects. For example, the using internal resources, facilitating conditions, social influences, and organizations' mission. According to the framework, the first factor within the organization adoption context is *Management Support* (TMS), which refers to the financial and non-financial incentives set by management while adopting a new technology within the organization. A critical adoption determinant for organizations is therefore that top management provides powerful support and creation of a climate where communication and reinforcement of corporate values are encouraged. The second factor in the organizational context is *Size of Enterprise*, where the authors reinforce that "Large enterprises are more likely to adopt new technologies faster than those that are small" (Awa, Ojiabo, & Orokor, 2017, pp. 900). This is due to several things, for example that bigger organizations tend to have more complex and complicated tasks than smaller organizations, which increases the need for modern technology. Another aspect is that bigger organizations have better abilities to grow and expand as well as to handle risks (Awa, Ojiabo, & Orokor, 2017). The last factor in the organizational context is *Scope of Business* that highlights that "The scope of the

business operations significantly determines the possibility of adopting new technologies; firms with large scope of operations adopt technologies faster than those with smaller scope” (Awa, Ojiabo, & Orokor, 2017, pp. 900).

### 2.3.3 Environment context

Awa, Ojiabo & Orokor (2017) summarize the environmental factors with previous research surrounding normative and mimetic pressures. *Normative Pressures*, occurs when there are demands from customers, governments, legal institutions, and others. Consequently, high normative pressure calls for faster adoption of technologies. *Mimetic Pressures* refers to when organizations mimic the actions of other organizations to remain competitive. When a successful competitor chooses to adopt a new technology, chances are that the organization will mimic the adoption. Therefore, it is concluded by the authors that “The existence of mimetic pressures amongst rivals positively affects the likelihood of technology adoption; when such pressures are high, adoption is assumed faster” (Awa, Ojiabo, & Orokor, 2017, pp. 901).

### 2.3.4 Individual context

Regarding the individual context, Awa, Ojiabo & Orokor (2017) argue that each organization is unique and specific to the people making decisions within the organization. This is since decision makers have their own ways of thinking, which can influence how the organization operates. Therefore, the authors measure the individual contexts by *Social Influence*. They argue that “The existence of social influence positively affects technology adoption; when group members show cohesiveness to the common norms and values relating to technology, they tend to adopt faster” (Awa, Ojiabo, & Orokor, 2017, pp. 901). Another factor in the individual context is *Hedonistic Drives* which describes that both individuals and organizations are driven by the pursuit of pleasure or enjoyment. Further, the authors mention that hedonistic drive is an important factor in the adoption and use of new technology. In other words, people are more likely to adopt and use new technologies if they derive pleasure from them (Awa, Ojiabo & Orokor, 2017).

### 2.3.5 Task context

Awa, Ojiabo & Orokor (2017) consider the task context as task characteristics measured by task complexity and interdependencies. The authors argue that matching task demands, and technology's capabilities has a positive impact on adoption. If technologies are not capable of meeting the task requirements, they cannot be used to gain a competitive advantage and are therefore less likely to be adopted. The first factor in this context is *Task Complexity*, where the complexity of the task has a positive effect on technology adoption. This is since when there is a complex task, organizations are more likely to adopt new technologies that streamline them. Another critical factor is *Task Interdependence*, which refers to the degree of interconnectedness between tasks and organizational units. Moreover, the authors argue that “Interdependence amongst tasks significantly affects adoption of technologies; when tasks are interrelated and interdependent, adoption of technologies that effectively integrate them is faster.” (Awa, Ojiabo, & Orokor, 2017, pp. 903).



## 2.4 RPA Specific Critical Success Factors

### 2.4.1 Change Management

Regarding RPA specific CSFs, Plattfaut, Borghoff, Godefroid, Koch, Trampler, & Coners (2022) presents in their study, with the purpose to build a structured framework of CSFs for RPA implementation, several success factors for three different RPA lifecycle-based perspectives. One of these perspectives is the RPA development. Firmansyah & Subriadi (2022) argues that the most reported concern about implementing an IT service desk is coworkers' opposition to change. The authors further discuss that it is inevitable that there will be rejection. Thus, human psychological problems can be a cause for postponement in the system implementation. Furthermore, the management will need to endorse the implementation of the new system, otherwise, the new technologies may not meet the organization's objectives and strategic plans (Firmansyah & Subriadi, 2022). Plattfaut et al. (2022) writes about the importance of change management and presents four CSFs regarding Change Management when developing RPA technology.

To start with, the presented framework by Plattfaut et al. (2022) emphasize the influence of *management support* to ensure managerial engagement across the RPA project. This applies specifically when ensuring *active stakeholder management*, which is about providing projects and operations with sufficient resources, in terms of involving all relevant stakeholders and specialists (Plattfaut et al., 2022). Lack of management support has also been shown to be one of the biggest challenges when implementing IT service desks. Without support from top management, one of several consequences tends to be not working in line with the business strategy and goals (Firmansyah & Subriadi, 2022).

Plattfaut et al. (2022) also address that change management involves the *development of adequate skills*. In the development phase, this success factor involves preparing and training employees for their future roles and tasks. The authors establish that a possible way of doing that is by an active engagement of employees in the development phase. If this is not done, there is a risk of employees not being knowledgeable enough to understand and handle unfamiliar processes and exceptions, which in turn leads to the business not gaining the full value from RPA. In addition to this, Kinkel, Baumgartner & Cherubini (2022) mention in their article about prerequisites for the adoption of AI, that many companies' biggest obstacle surrounding a digital transformation is skills development and the accessibility of skilled staff. Further, Kinkel, Baumgartner & Cherubini (2022) argue that digital skills are crucial for the adoption of advanced technologies to ensure efficient usage. Rieth & Hagemann (2022) also express that system knowledge is essential for the collaboration of humans and automation. This refers to the general understanding of the system's processes, limitations, and capabilities.

Lastly, Plattfaut et al. (2022) point out communication as a CSFs for every change, including RPA. Within the development phase, communication is about thoughtfully maintaining solid communication throughout the whole project. Related to RPA, the communication has to involve what influence RPA has on human labor and management, as well as the possible redeployment of employees (Plattfaut et al., 2022). Aditya (2023) agrees and argues that communication within change management is vital. The author mentions how unacceptance and resistance to change among employees is the major reason for the failure of the change process. This is because the employees expect negative outcomes from the change. Therefore, Aditya (2023) highlights the importance of communication as it can ensure resolvment of

conflicts and positive outcomes of change. Costa, Mamede & Mira da Silva (2022) also highlight communication between RPA developers and process experts as one of the frequently identified characteristics among organizations that succeeded with a implementation of RPA.

#### 2.4.2 Human-RPA Collaboration

With RPA becoming increasingly popular in organizations, co-work between humans and robots calls for a new form of collaboration (Zhu & Kanjanamekanant, 2022). Rieth and Hagemann (2022) discuss in their article the phenomena of human-automation teaming (HAT). They describe a human-autonomy team as a team who has at least one human and one autonomous agent that work together to complete a task. Rieth & Hagemann (2022) define an autonomous agent as computer-based entities that can monitor their environment and pursuing one or more goals within that environment with little to no human interference.

Rieth & Hagemann (2022) conduct research into the requirements for successful HAT by doing qualitative interviews with participants from different industries who were chosen due to their experience with automation. The results show that to successfully implement HAT, it is required for the automation to provide *safety and reliability*. The authors argue that when the automation is lacking in reliability, it can disrupt the human's trust in the technology, and therefore increase workload and risk of negative performance (Rieth & Hagemann, 2022). Syed & Wynn (2020) supported this and expressed that system quality, technical infrastructure and system performance are crucial factors to generate user trust.

Another key requirement for HAT is *transparency and explainability* of the automation (Rieth & Hagemann, 2022). Thus, enabling the users to understand the automation's functions, which generates better trust, performance, and perceived usability. Rieth & Hagemann (2022) argue that the automation's explainability makes the technology comprehensible for humans, which is also important for users' trust and performance. Syed & Wynn (2020) agree and argue that the lack of general knowledge regarding RPA and its abilities is a major challenge to pay attention to when deploying RPA. Moreover, the authors mention that the users must understand their processes and its complexities for the bot developer to produce sufficient by effective RPA.

It was also shown that it is important for automation to *consider the human needs and emotions* and be supportive and adaptive (Rieth & Hagemann, 2022). The authors argue that "If the human operator is tired or cognitive workload is high, automation should notice and support more" (Rieth & Hagemann, 2022, pp. 4). In addition to this, Rieth & Hagemann (2022) mention that if automation can consider human emotions, it can foster an environment of social interaction and will give the perception of a purely human team. Zhu & Kanjanamekanant (2022) support this and found in their study regarding human-bot co-working that job autonomy is a positive predictor for intention of use of RPA within organizations.

Syed & Wynn (2020) support the notion that it is important for automation to give the perception of a human team. However, the authors highlight that along with human personification of the automation, there is a need to create awareness that the bot is not equal to the human's capabilities and does not have the ability to make critical decisions. Consequently, this lack of awareness could lead to confusions among employees and other negative consequences.



## 2.5 Literature Summary

### 2.5.1 Robotics Process Automation and IT Service Desks

RPA is software that automates rule-based tasks by mimicking human actions (Reungyu & Waiyanet, 2022). Key benefits with RPA are improved efficiency, productivity, and cost reduction (Pramod (2021). It is lightweight, easy to implement and configure, and does not disrupt underlying computer systems (Lacity & Willcocks, 2016).

The IT service desk is a part of ITSM and is designed to support the organization and improve service performance and functioning IT services (Firmansyah & Subriadi, 2022). IT service desks act as a single point of contact for users and provide relevant data in the form of reports and KPIs to assess the IT department's function and achievements. A successful IT service desk requires meeting employee needs and allowing them to interact with IT agents through exchange of comments and files while handling an incident (Al-Hawari & Barham, 2021).

RPA is most effective for repetitive tasks with a large amount of information and frequent errors (Reungyu & Waiyanet, 2022). Further, Lacity & Willcocks (2016) argue that RPA can replace this work since it can communicate with different computer systems like a human, only better, faster, and more cost-effectively. Moreover, it is arguable that certain IT service desk operations would be suitable for this kind of work. As mentioned by Hawari & Barham (2021), IT service desks act as single point of contact for users to address requested services and reported issues, meeting the employee needs by providing them with the right accesses, information, and communication channels. Furthermore, the majority of tasks in the IT service desks fulfill the criteria successful for RPA implementation, as it entails handling data, reports, requests, and accesses.

### 2.5.2 Integrated technology-organization-environment (T-O-E) taxonomies for technology adoption, Change Management and Human-RPA Collaboration

The *Integrated T-O-E Framework for Technology Adoption* by Awa, Ojiabo, & Orokor (2017) proposes a framework for technology adoption in organizations. The framework identifies four contexts: technology, organizational, environmental, individual, and task context. The technology context involves three critical factors that drive technology adoption: perceived simplicity, perceived compatibility, and perceived values. The organizational context includes management support, size of enterprise, and scope of business. The environmental context includes normative and mimetic pressures. The individual context includes social influence and hedonistic drives. Finally, the task context involves matching task demands and technology capabilities, where task complexity and interdependence play a crucial role. The article highlights the importance of considering these factors when promoting technology adoption in organizations (Awa, Ojiabo & Orokor, 2017).

Since Awa, Ojiabo & Orokor (2017) acknowledge that due to the highly differentiated nature of IS innovations, no single adoption framework is comprehensive enough to cover all aspects of their adoption. Therefore, it could be necessary to complement the framework with, other CSFs, for example, covering the topic of change management with RPA implementations. Firmansyah & Subriadi (2022) argue that management support is critical for IT service desks, as coworkers' opposition to change can cause delays in implementation. Without management endorsement, IT service desks may not meet organizational objectives. In addition to this,

Plattfaut et al. (2022) emphasize the importance of developing adequate skills and training employees for their roles and tasks. Additionally, communication is critical for change management and RPA implementation success, as pointed out by Plattfaut et al. (2022) and Aditya (2023).

Another area to which the *Integrated T-O-E Framework for Technology Adoption* by Awa, Ojiabo, & Orokor (2017) can be complemented for RPA adoption within IT service desks is human-bot collaboration. As organizations increasingly adopt RPA, collaboration between humans and robots requires a new form of teamwork (Zhu & Kanjanamekanant, 2022). For successful human-automation teaming (HAT), the automation must provide safety and reliability, transparency and explainability, and consider the human needs and emotions (Rieth & Hagemann, 2021; Syed & Wynn, 2020).

### 2.5.3 Theoretical Framework

Using the provided CSFs, a theoretical framework (see Table 2.1) was composed. The theoretical framework will later be used to create an interview guide.

**Table 2.1:** Theoretical Framework

| Context      | Critical Success Factor                | Source   |
|--------------|--|--|
| Technology   | Perceived Simplicity                   | <i>Integrated T-O-E Framework for Technology Adoption</i> (Awa, Ojiabo, & Orokor, 2017)      |
|              | Perceived Compatibility                | <i>Integrated T-O-E Framework for Technology Adoption</i> (Awa, Ojiabo, & Orokor, 2017)      |
|              | Perceived Values                       | <i>Integrated T-O-E Framework for Technology Adoption</i> (Awa, Ojiabo, & Orokor, 2017)      |
|              | Development of Adequate Skills         | (Plattfaut et al., 2022), (Kinkel, Baumgartner & Cherubini, 2022)), (Rieth & Hagemann, 2022) |
|              | System safety and reliability          | (Rieth & Hagemann, 2022), (Zhu & Kanjanamekanant, 2022), (Syed & Wynn, 2020)                 |
|              | System transparency and explainability | (Rieth & Hagemann, 2022), Zhu & Kanjanamekanant (2022), Syed & Wynn (2020)                   |
|              | Consider human needs                   | (Rieth & Hagemann, 2022), (Zhu & Kanjanamekanant, 2022), Syed & Wynn (2020)                  |
| Organization | Management Support                     | <i>Integrated T-O-E Framework for Technology Adoption</i> (Awa, Ojiabo, & Orokor, 2017),     |
|              | Size of Enterprise                     | <i>Integrated T-O-E Framework for Technology Adoption</i> (Awa, Ojiabo, & Orokor, 2017),     |
|              | Scope of Business                      | <i>Integrated T-O-E Framework for Technology Adoption</i> (Awa, Ojiabo, & Orokor, 2017),     |
|              | Communication                          | (Plattfaut et al., 2022), (Aditya, 2023), (Costa, Mamede & Mira da Silva, 2022)              |

|             |                               |   |
|-------------|-------------------------------|---|
|             | Active Stakeholder Management | (Plattfaut et al., 2022)  |
| Environment | Normative Pressures           | <i>Integrated T-O-E Framework for Technology Adoption</i> (Awa, Ojiabo, & Orokor, 2017) |
|             | Mimetic Pressures             | <i>Integrated T-O-E Framework for Technology Adoption</i> (Awa, Ojiabo, & Orokor, 2017) |
| Individual  | Social Influence              | <i>Integrated T-O-E Framework for Technology Adoption</i> (Awa, Ojiabo, & Orokor, 2017) |
|             | Hedonistic Drives             | <i>Integrated T-O-E Framework for Technology Adoption</i> (Awa, Ojiabo, & Orokor, 2017) |
| Task        | Task Complexity               | <i>Integrated T-O-E Framework for Technology Adoption</i> (Awa, Ojiabo, & Orokor, 2017) |
|             | Task Interdependence          | <i>Integrated T-O-E Framework for Technology Adoption</i> (Awa, Ojiabo, & Orokor, 2017) |

## 3 Methodology

### 3.1 Research Approach

The empirical purpose of this study was to identify CSFs that are needed to successfully adopt RPA within IT service desks. The focus of the research is the people working closely with IT service desks and RPA. To get a deep understanding of their experience and opinions it was important to use a suitable research approach for collecting the empirical data. The study is therefore qualitative and based on semi-structured interviews with relevant stakeholders.

#### 3.1.1 *The Qualitative Approach*

Alvehus (2023) writes that the qualitative method for collecting empirical data is about showing complexity and nuance, and being able to analyze different social contexts. In addition to this, Alvehus (2023) mentions that the qualitative research is highly interpretive. The author argues that the interpretation is not about the interpreter understanding the subject themselves. It is rather about providing the reader with a contribution of a general understanding of the phenomenon (Alvehus, 2023). Furthermore, Alvehus (2023) concludes that the qualitative approach is generally about developing our way of thinking and giving a more nuanced understanding of the environment.

On the contrary, the quantitative approach was also an option for this study. However, since this study aims to capture a nuanced understanding of experiences and opinions, the quantitative approach was not suitable for this research, as it calls for the interviewee to stay within a predefined framework (Jacobsen, 2002). Therefore, if this study was strictly quantitative, it would not generate any new aspects of the subject at hand, due its lack of discussion. Therefore, the qualitative method was suitable, in order to capture the result this study is searching for, considering different perspectives, opinions and experiences.

Alvehus (2023) however mentions that the qualitative approach has quantitative aspects linked to it. The quantity is significant if a certain phenomenon is continuously repeated (Alvehus, 2023). For example, if a big quantity of respondents brings forward the same opinion or experience, the results are statistically established to be accurate. In this study, the quantitative aspect of the empirical collection was of importance, as the aim was to find CSFs for the adoption of RPA within IT service desks. If most respondents agreed that a certain success factor is crucial, generates a more accurate result. Additionally, the respondents were asked to rate the different CSFs' importance, which was also another quantitative aspect to this study.

#### 3.1.1.1 *Semi-structured Interviews*

The empirical collection of this study is conducted through interviews, in order to ensure detailed information about the subject at hand (Oates, 2006). The author addresses interviews as a advantageous method when asking questions that are open and subject to change depending on interviewee. Additionally, Oates (2006) claims that interviews are convenient when wishing to observe emotions, experience, or feelings around the topic, which are not easily detected by questionnaire responses. The conducted interviews found that the personal contact during interviews was beneficial when it comes to gathering deep information, as well

as a perspective on the respondents' feelings and attitudes towards RPA. Since the interviewees in this study were of different titles and professional background, it was expected that each interview could generate different answers due to different perspectives.

When deciding which interview type to use, the choice fell on semi-structured interviews. As previously mentioned, the goal was to get a deeper understanding about the respondent's experience and opinions about RPA within IT service desks. The aim was to have an interview guide with broad and open questions allowing the respondents to openly interpret and reflect. Oates (2006) confirms that semi-structured interviews allow the interviewees to speak their minds, but also lift additional issues and thoughts relevant to the subject. Furthermore, if needed, the semi-structured interviews give the opportunity to ask additional questions that have not been prepared in advance.

### 3.2 Literature Collection

The previous research presented in the literature review (see chapter 2) has been collected through a systematic exploration of relevant literature. The literature review consists of journal articles and conference papers from existing studies on RPA and IT service desks. Regarding the credibility of the literature, it was of high importance that most of the articles were peer reviewed. Additionally, the literature was gathered through Lund University Library search (LUBsearch), Google Scholar and Scopus using search terms mentioned below.

- Robotic Process Automation
- User attitudes RPA
- RPA Success
- RPA Process
- RPA Organizations
- Automation in the Workplace
- Human-automation interaction
- User attitudes automation
- Trust in RPA
- IT Service Desks
- RPA Service Desk

The search terms were subject to change in word order for the purpose of generating more answers in the databases. Additionally, when there was a sufficient foundation of literature, the search terms could be more niched to find supporting literature.

To sieve out irrelevant articles and pick out those with relevance to the research question, the procedure continued with reading abstracts and conclusions of each article found. For the article to meet the required criteria, it was necessary that its common themes were automation, RPA, ITSM and/or IT service desks. Lastly, the usable articles were reviewed and summarized for further usage.

During the literature collection, it was decided to use the theoretical framework *Integrated T-O-E Framework for Technology Adoption* by Awa, Ojiabo, & Orokor (2017) to answer our research question. This framework is an extended version of the popular T-O-E framework, as aspects of TTF framework and UTAUT framework were integrated into it (Awa, Ojiabo, &

Orokor (2017). Further, the *Integrated T-O-E Framework for Technology Adoption* captures five different contexts for technology and provides 12 different technology adoption drivers. Moreover, after careful consideration, it was decided that this framework was appropriate for this study, as it covers a plethora of aspects for technology adoption. However, as mentioned in the problem area (see chapter 1.2), Awa, Ojiabo, & Orokor (2017) expressed the need for further studies capturing other dimensions and determining factors for technology implementation and adoption. In addition to this, the authors also argued that “IS innovations are highly differentiated technologies for which no single adoption framework is all-encompassing; adoption takes place after many factors, including those that conventionally appear favorable, had been assessed carefully” (Awa, Ojiabo & Orokor, 2017, pp. 911). In conclusion, the *Integrated T-O-E Framework for Technology Adoption* will be used, but will be complemented with other factors for it to be applicable for RPA adoption within IT service desks.

Given the data collected as mentioned above, a table was created with the different CSFs found (see Table 2.1), including factors from *Integrated T-O-E Framework for Technology Adoption* and RPA specific factors from other literature. This has the purpose of facilitating the process of creating interview questions.

### 3.3 Empirical Collection

In the empirical collection phase of the study, various criteria had to be fulfilled both on the organization and respondents' levels. The selection of appropriate respondents and organization were critical in achieving the objective of identifying the CSFs for adopting RPA within IT service desks. Through careful selection of organization and respondents, we were able to gain a more accurate and comprehensive understanding of the factors that contribute to successful RPA implementation within service management operations.

#### 3.3.1 Selection of Organization

When selecting the organization, there were two requirements that needed to be met in order to answer the research question. The first one was well standardized service management with an implemented IT service desk. Secondly, it was necessary that RPA technology had been adopted and implemented in one or several parts of the service desk. The choice of organization fell on organization X, which is a big retail company from Sweden with multiple franchisees. To keep the interviews anonymous, the selected company will remain anonymous. Further, the interviews were conducted with employees from organization X and one of its franchisees (franchisee Y). The companies were contacted since they both have implemented IT service desks and claim working actively with RPA. Regarding RPA, franchisee Y has implemented RPA technology within a part of its IT service desk. However, organization X is currently working on implementing RPA within their IT service desk. These two perspectives gave us a comprehensive insight in the RPA and IT service desk field since they overreach several phases. Furthermore, both companies had knowledgeable and reliable employees with the right expertise in the RPA field.

In the choice of the organization, there was a consideration of contacting several companies outside of the franchisee chain. However, the size of the organization, as well as its franchisees, gave us versatile understanding of the subject. Furthermore, the organization and

its franchisees are established internationally which influences the business and experience that can be shared. In summary, this gave a credible perception and was the basis of the decision to stick with the chosen organizations.

### 3.3.2 Selection of Interviews

The selection of appropriate respondents was a critical step in achieving the objective of this study. To ensure that the data collected was reliable and of high quality, we conducted a series of meetings with potential respondents. The chosen area is specific since it concerns RPA within IT service desks. Therefore, we aimed to interview employees who had experience in both RPA and service management, which would enable us to gain a more accurate and comprehensive understanding of the factors that contribute to successful RPA implementation within service management operations. Since franchisee Y had already implemented RPA within their IT service desks, the majority of the interviews fell on franchisee Y. Furthermore, the respondents were either more service management-oriented or RPA-oriented. This ensured the possibility of analyzing the success factors from various angles, enabling us to identify and analyze potential synergies between the two domains.

To further ensure that the selected respondents had the necessary expertise and knowledge, we sought out individuals with significant experience in the field. It was important that interviewees from the service management side had prior exposure to RPA within their operations. Moreover, to guarantee that the respondents were well-prepared for the interviews, we gave them a brief explanation of the intended study and provided them with an interview guide. This helped to ensure that the respondents could prepare for the interviews to the extent they felt comfortable.

What became clear after conducting the interviews was that there was a need for one additional evaluation regarding the respondents' relevance in order to ensure that the study stayed within the intended field. At first, we held six interviews, which after the evaluation resulted in four interviews that were useful for this study and its purpose. The four remaining interviews were of high relevance, long and rich of data and conducted with reliable people, all with a managerial perspective.

**Table 3.1:** Table of respondents

| Respondent | Role  | Organization   | Country     | Years of experience | Interview length | Date       |
|------------|---|----------------|-------------|---------------------|------------------|------------|
| R1         | Project leader for automation requests              | Franchisee Y   | Sweden      | 1                   | 33:07            | 17-04-2023 |
| R2         | Platform leader                                     | Organization X | Netherlands | 7                   | 34:10            | 17-04-2023 |
| R3         | Engineering Manager for the robotic automation area | Franchisee Y   | Sweden      | 3                   | 44:54            | 24-04-2023 |



|    |   |              |        |   |       |            |
|----|---|--------------|--------|---|-------|------------|
| R4 | Engineering Manager for software products | Franchisee Y | Sweden | 6 | 42:47 | 24-04-2023 |
|----|---|--------------|--------|---|-------|------------|

Ensuring the selection of suitable respondents was a crucial factor in reaching the objective of this study. By selecting individuals with the necessary expertise and knowledge, we were able to gain a more accurate and comprehensive understanding of the CSFs for adopting RPA within IT service desks.

### 3.3.3 Interviews

After collecting and reviewing relevant literature, various CSFs for RPA adoption within IT service desks were identified and compiled, and an interview guide was created (see appendix 5). Given that this study implemented the framework *Integrated T-O-E Framework for Technology Adoption*, one of the goals was to examine if its adoption drivers were compatible and useful with technology in the form of RPA within IT service desks. In the context of this study, the adoption drivers mentioned in the framework are interpreted as types of CSFs and are therefore categorized as CSFs. Moreover, there was a need to complement the framework with new CSFs, collected from other relevant literature. To categorize and divide the CSFs, it was applicable to use *Integrated T-O-E Framework for Technology Adoption*'s different contexts. If possible, the newly identified CSFs were placed within suitable context. In that framework, the contexts and CSFs served as a foundation for the creation of interview questions.

The conducted interviews were all held on Microsoft Teams and were approximately 30-45 minutes. Before the interview questions (see Appendix 6), the respondents were asked to briefly describe their profession and their connection to RPA and IT service desks.

Considering the interviews being qualitative and semi-structured, the questions were open-ended, in order to ensure a discussion and test the identified CSFs. To begin with, every context starts with an open question with the purpose of letting the interviewee reflect around and bring up their own experienced CSFs for a successful adoption of RPA within an IT service desk. Our CSFs were then mentioned one by one, and the interviewees were asked to explain and reflect their thoughts and experience about it. Additionally, the respondents were given the opportunity to rate the importance of the mentioned CSF from a scale of zero to five, zero being not important at all and five being very important. The rating enabled us to understand and summarize how important the CSFs were to the respondents, to evaluate the found CSFs. Furthermore, the ratings were intended to summarize the opinions of each CSF, and not to be substantial evidence of its general importance. In addition, it is necessary to look at the given reflections of each CSF to gain a complete understanding of its importance to RPA adoption within IT service desks. More specifically, the rating was only intended to quantify the qualitative data, to compile the degree of influence.

## 3.4 Data Analysis

In terms of transcription, the dictate function in Microsoft Word was used in all interviews in order to transform speech into text during the interview session. This enabled a full focus on the questions to ask and the respondents answers and behavior. To ensure the transcription



captured everything being said, the interviews were also recorded. Afterwards, the audio recording was used to manually correct and verify the transcription made by Microsoft Dictate. These corrections involved modifying transcription errors and categorizing the occurrence of questions and answers. Moreover, it was necessary to remove repetitions with the risk of making the transcription confusing. This was naturally done without changing the meaning of the content.

The created interview guide was beneficial in terms of categorizing the transcription for data analysis. Since the questions were already categorized by the different contexts in *Integrated T-O-E Framework for Technology Adoption*, the transcription could be categorized by a deductive approach. Oates (2006) explains the deductive approach as using existing theories being presented in the literature review as a base for categorizing the transcription. In the context of this study, Table 3.2 shows the categorization with different colors, used to highlight parts of the interview related to a specific context and CSF. Additionally, the grading of the importance of the CSFs was categorized by its own color.

**Table 3.2:** Categorization colors

| Color | Category             |
|-------|----------------------|
|       | Technology context   |
|       | Organization context |
|       | Environment context  |
|       | Individual context   |
|       | Task context         |
|       | CSF rating           |
|       | New CSF              |

Oates (2006) highlights the importance of not staring blindly at the categories and being attentive of new themes in the transcribed data. Since some interviews mentioned new CSFs of importance to ensuring a successful adoption of RPA within IT service desks, these were also highlighted with a specific color presented in Table 3.2. The full transcriptions can be found in the appendix (see Appendix 1-4).

### 3.5 Ethics

Regarding the ethical aspects of the conducted interviews, it was crucial that each respondent's privacy and consent were respected. Jacobsen (2002) presented that ethical dilemmas often occur when keeping the study's purpose undisclosed with the study's participants. It was therefore important for this study to remain transparent with its participants regarding the usage of the data collected and the objectives of collecting the data. On this theme, Jacobsen (2002) proposed three fundamental requirements a study should follow to remain ethical- informed consent, right to privacy and correctly representing the

respondent. Moreover, this study flowed these requirements when handling the respondents to establish an ethical practice.

To ensure informed consent amongst the interviewees, Jacobsen (2002) proposed four components each interview should have in place. The first one being that the respondent should have the correct competence to participate in the interview. The study should not affect the participants in any negative way, and they must therefore be able to make an informed decision on the matter (Jacobsen, 2002). Through continuous conversation with the potential respondents ahead of the interviews and having the opportunity to read the interview guide beforehand, we could ensure that each participant was of right competence and could make good judgements. The second component the study should fulfill in regard to informed consent according to Jacobsen (2002) is voluntariness. Each participant was informed ahead of the interview that it is voluntary to participate in the study, and at any time, they are free to withdraw. The third component is that the respondent should have full information about the study's purpose and be aware of possible risks and advantages of their participation (Jacobsen, 2002). This was reiterated through an email ahead of the interview, and through an introductory segment during the interview emphasizing the meaning of the study and the participant's rights. This also captures the fourth and last component presented by Jacobsen (2002), where each participant should understand the information given to them. During the interview, time was spent on asking the participants if there are any questions regarding the participation to ensure full understanding. This aspect was also kept in mind throughout the selection process through continuous conversation with the participants.

In terms of privacy, Jacobsen (2002) emphasized the right to privacy, meaning that the study should not infringe on the interviewee's personal life. To ensure privacy, the respondents will be asked if they want to receive the transcription of the interview to confirm that the organizations and their privacy was respected. Moreover, if there are any wishes of removing a statement, it will be removed. They and their organization will also be kept anonymous, ensuring that their privacy is being respected and that they feel comfortable responding to the questions.

Lastly, Jacobsen (2002) presented the final requirement for remaining ethical when conducting a qualitative study, which is to correctly present the given data. This entails properly rendering complete results in the right context. To ensure this, the interviews were both recorded and transcribed.

### 3.6 Validity and reliability

Regarding validity, Jacobsen (2002) divides validity into internal validity and external validity. Jacobsen (2002) emphasizes that internal validity ensures that the result must be valid and relevant and argues that it can be achieved by choosing applicable methodology and appropriate data sources (Jacobsen, 2002). One additional aspect is whether the study investigates what it is intended to investigate (Alvehus, 2023). To make sure that this research measured what was intended and captured valid results, it was based on a theory applicable for the research question. *Integrated T-O-E Framework for Technology Adoption* is a framework for qualitative measurements of technology adoption of different kinds (Awa, Ojiabo & Orokor 2017). More specifically, it is a framework relevant for investigating CSFs needed for a successful adoption of RPA technology within IT service desks due to its comprehensiveness. Therefore, the framework, as well as previous research within the RPA

field, were utilized as a foundation for the interview guide, making sure that the questions asked during the data collection were within the area that was being studied. In order to secure valid results, the respondents also needed to have the right competence. The aim was to include as many perspectives of RPA within IT service desks as possible, while keeping a high level of expertise. This was achieved by meetings with relevant people within organization X and franchisee Y as well as letting the potential respondents assess whether they were suitable for this study or not.

In terms of external validity, the aspect focuses on whether the study is applicable for other contexts (Jacobsen, 2002). In this study, several of the interviewees have experience of RPA in various situations and conditions, not only IT service desks. Therefore, one could argue that the study is applicable to RPA in general. However, it is necessary to consider that the empirical collection is based on four interviews which can make it difficult to claim that the result covers a general truth for various contexts outside of the RPA field.

Regarding reliability, Jacobsen (2002) means that the result must be authentic and reliable. Concerning the reliability of this study, it was necessary to present the methodology in a transparent and detailed way, ensuring that the study can be repeated. This has been done by documenting every step of the literature and empirical collection in a transparent manner. Regarding qualitative semi-structured interviews, Bryman (2011) claims that those can be hard to replicate due to their varying fashion. Therefore, the interview guide has been structured in a detailed and comprehensive way ensuring that the questions can be reused. The questions were also created and formulated in the same way, which led to less misunderstandings and inconsistencies during the interviews. Additionally, every respondent was given the same prerequisites in the terms of receiving the interview guide well in advance for the interview, which gave them enough time to prepare themselves for the interviews to give well thought-out and accurate answers.

## 4 Result

The empirical result of the data collection is presented below and follows the structure of the interview guide (see Appendix 5). Further, the respondents that the results are based on, are referred to as R1, R2, R3 and R4 (see table 3.1). This will ensure the respondents anonymity.

### 4.1 Technology Context

#### 4.1.1 Perceived Simplicity

Regarding perceived simplicity, R1 explained that the RPA solution should be user friendly and well documented for RPA to be successful (R1:10). The IT service desk workers are customer-oriented, and their purpose is to figure out what the customer's problem is, and then being able to solve the problem as fast as possible. Time is often a limited resource for service desk workers. Further, R1 expressed that it is crucial for RPA to be fast and simple (R1:12). R2 described how today's technology, in the form of recorded tutorials, makes it easy for a service desk to set up an RPA (R2:13). R2 further highlighted the benefit of making the RPA tool simple enough for anyone to use and set up, as it prevents the need for hiring in expensive niche profiles (R2:17). Correspondingly, R3 claimed that the end user's opinion about the system's simplicity is crucial since the purpose of the RPA technology is to simplify the user's work. Additionally, R3 explained how their way of creating simple RPA tools is much about developing RPA tools that do not require any interaction between the user and the robot (R3:14).

*“The end user is the most important and if the end user thinks that a technology is not being simple and not making their life better, then we failed. Currently the way we are implementing our RPA is that the end user does not really have any interaction, given the fact that most of the robots that we are implementing are unattended.” (R3:14)*

R4 also pointed out perceived simplicity as a crucial factor for the adoption rate. R4 addressed the purpose with RPA, which is to make processes easier. Furthermore, R4 claimed that how the users perceive the tool also affects the adoption success (R4:16).

#### 4.1.2 Perceived Compatibility

R1 explained that perceived compatibility is crucial for successful RPA adoption. The RPA solution must be well-integrated with the systems that are used daily (R1:10). If the organization is more mature, the value that comes with perceived compatibility will make it easier for everybody within the organization (R1:18). Additionally, R1 described that the infrastructure is important. Sometimes, the old systems in the organizations are difficult to automate (R1:72). R2 also claims compatibility being necessary for a successful adoption. Moreover, R2 brought up the importance of integration between applications and systems (R2:09). However, the respondent describes compatibility as quite contextual since it depends on which systems the service desk is using (R2:23). The respondent mentioned the example of

cloud resources, which are an efficient tool to utilize to remove the dependencies, as well as the importance of a useful UI (R2:09).

Further, R3 also rated perceived compatibility very important for the adoption rate and asserted that one of the key benefits with RPA technology is it being adaptable to the legacy systems as well as to the new ones within their organization (R3:18). Correspondingly, R4 mentioned integration and compatibility as very important factors in order to succeed with RPA adoption. R4 continued by explaining that workers within the service desk often are very familiar with certain platforms and systems, which can make them resistant to a new system that is not integrated with the existing landscape. Therefore, it is favorable to strive for a seamless integration between the tools within the service desk (R4:12).

*“If you spend like 90% of your workday on a certain platform and you don't have any integration between them, well then it probably becomes more difficult to get a positive adoption on those things” (R4:12, own translation)*

#### 4.1.3 Perceived Value

R1 mentioned that the perceived value of the RPA solution will increase the efficiency and improve the accuracy of problem-solving, due to the fact that there is a decrease in the manual labor. Which will give the end-user a quicker and better solution. This enables the service provider to conduct more proactive work (R1:22). Moreover, R2 mentioned that the perceived value is instantly visible after RPA has been implemented and freed up service agents from basic repetitive work (R2:25). R2 also explained that it is important to look at the value versus benefit. More specifically, R1 highlighted that it is crucial to evaluate how much money you are spending on a process and if it can be done faster by a robot (R2:49).

In addition, the third respondent emphasized the importance of knowing the value of RPA and why it is being implemented in order to merge people processes with the technology (R3:08). However, R3 highlighted that once RPA has been implemented in production, soon everybody sees the value in terms of speed of delivery, simplicity, and clarity (R3:22). R4 claimed that informing about the perceived value is an important part of the change management process. The respondent highlighted the necessity of bringing the senior employees along, since they often have big professional pride in doing tasks as they always have (R4:24).

*“And a big reason for that, I think, is that when you're going to lead a change management process around RPAs, it's probably important to really involve those who are very senior in this professional category, so that the rest of the team will follow. [...] And it's extremely important that they understand the value in this process, because if they're not on board, no one else will be either.” (R4:24, own translation)*

#### 4.1.4 Development of Adequate Skills

Regarding development of adequate skills, R1 explained that it is important to have the right people at the right place. To be mindful of the time it takes to implement new things in an organization and ensure that everyone is on board (R1:28). Moreover, R1 also explained that it is crucial to have the technical competence amongst the coworkers. As a result, it will help

the implementation (R1:24). R2 explained how setting up RPA tools and running with it needs special skills. Further, R2 mentioned that the skill set of people within the service desk and the RPA team differ, which leads to the RPA team handling most of the setup (R2:27). R2 also pointed out the security aspects, which require comprehensive skills set that at the moment prevents service desk to set up RPA themselves. However, the respondents highlighted that developing adequate skills within the service desk is something worth working with since it enables the RPA team to focus on more important work, especially when the systems are simple enough and get over current security challenges (R2:29).

Furthermore, R3 pointed out that the need for adequate skills is very much dependent on the delivery model of RPA. More specifically, R3 explained that a centralized development model includes a team within the organization doing all the development for all the business units. In that case, the business units just adopt the robots and the tasks that require specific skills are handled by the digital team. Contrary, R3 explained that a federated model of deliveries is about every business unit handling the development, maintenance, support, and engineering of the robots on their own. In that case, R3 asserted a high need for development of adequate skills (R3:30).

However, R4 did not consider development of adequate skills being important at all since the workers within the service desk often are curious to learn the tools by themselves. Instead, R4 claimed that it is more important to inform about the value generated by RPA, which in turn will make people keen on learning the new tools (R4:30).

*“I don't think it's as important because these are usually very clever people who are curious about solutions. They will figure out how to use it without needing explicit instructions on how to do it and in which scenarios. If you're very clear about the value instead, you can just provide them with that, and they will solve it themselves. I don't believe this is so important, at least not in the context of the colleagues and coworkers I've had. [...]”*  
(R4:30, own translation)

#### 4.1.5 System Safety and Reliability

When asking the respondents about system safety and reliability as a CSFs, R1 mentioned that organizations should be careful and considerate safety. Especially when you have a service desk that manages customer related problems. Further, R1 expressed the need for cyber security and ensuring that the RPA solution is something that is allowed to be used. It is also important to consider a broader perspective than Sweden. For example, Germany is a country where they have a stricter approach to cybersecurity (R1:32). R2 also considered system safety and reliability being very important, since there can be a lot of sensitive information handled by the robots. Further, the respondents mentioned the need for a security assessment as well as different security measures to secure information not being shared incorrectly (R2:31).

R3 highlighted the importance of handling the global panic about robots being unreliable to succeed with the adoption. The respondent continued with explaining how this panic often decreases when the users get to see and test the robots. In addition, R3 pointed out that they often come across that RPA executes tasks in a more secure way than humans, since they do not make shortcuts or misunderstand (R3:34).



*”There’s a global panic around robots and whenever we mention and we offer what we offer the people are often like ‘oh how can we rely on this?’“(R3:34).*

R4 chose to separate safety and reliability when elaborating the answer. Regarding reliability, R4 rated it as very important that the users feel that they can rely on the new system being introduced. When talking about the security aspect, R3 mentioned that security is a crucial part when handling certain types of information. Yet, the respondent did not think it had a big impact on the adoption of RPA since people often find it boring to deal with (R4:32).

#### 4.1.6 System Transparency and Explainability

Regarding system transparency and explainability, R1 described how it is important to understand the need for the RPA solution. Moreover, the automation must be explainable. An organization should look at the underlying motives to implement RPA within IT service desks. The organization could cut costs, by only implementing RPA where it's necessary (R1:36). Furthermore, R2 addressed the importance of the people within the service desk understanding why the tools act in certain ways. However, the respondent mentioned that they generally do not go that deep into it since it is very technical, and the service desk focuses more on the business side as well as to define the use cases (R2:39). At the same time, R2 asserted that there is room for improvement and learning for the service desk, since the understanding can help the adoption of RPA (R2:41).

R3 explained how they put much effort into being transparent with the business ordering the RPA solution. More specifically, the respondent mentioned that the transparency includes explaining what the robot does, which data it relies on and sharing the written code in specific repositories (R3:38). In cases when something goes wrong, R3 explained how it is important to keep informing the end user as much as possible (R3:42). Further, R3 asserted that they cannot do anything without a close collaboration with the business, since it is the business that sets the requirements (R3:38).

*”When it comes to RPA, we are always transparent on what's being done and how things are being done. This is simply because we cannot do anything without close collaboration with the business. The business is the one that sets the requirements. Whenever we are developing a robot, we must do exactly what the business needs, otherwise we will not really succeed. We have a huge transparency I would say on what the robot does and what data we collect and how we present it. Those are things that we do not compensate about.” (R3:38).*

This is supported by R4 who claimed that employees often want to know what is going on behind the scenes. R4 added that wanting to know how the RPA solution works is based on professional pride, but also about the people within the service desk being suspicious towards IT systems, since they work with fixing IT problems (R4:36).

### 4.1.7 Consider Human Needs

R2 did not rate the importance of robots considering human needs high at all. Rather the opposite, since the respondent thinks there are currently no robots with emotions (R2:45). Correspondingly, the third respondent found it hard to rate the importance of robots considering human needs since the robots are not built to act “outside the box” (R3:46) (R3:44). More specifically, R3 explained that the robots are not AI, meaning there is no reasoning behind the robots’ actions (R3:44).

However, R2 mentioned another aspect of robots considering human needs, which referred to the outcome that the robot delivers. R2 continued by explaining that the outcome can be emotional, since the robot is taking care of a lot of the task that, when handled manually by the employee, could cause different feelings in the person (R2:45). Furthermore, the respondent argued that this aspect is necessary to consider in order to succeed with adoption of RPA within IT service desks (R2:47). R1 also mentioned that employees are often afraid that an increased integration of RPA could lead to people losing their jobs. In this case, the respondent claimed that it is crucial to make people aware that jobs will be changing. Management should therefore be there to support and show coworkers how to find their new role with RPA (R1:42). However, in terms of the robot itself understanding human needs, R1 did not express it being of importance.

*“It's just that automating things can greatly impact people because they become afraid of losing their jobs. And obviously, in today's situation, there are many people thinking about AI. They're thinking, "Oh, our jobs will disappear," but that doesn't necessarily mean the job will disappear. It's more about having something that assists you in many ways. Because there are always other tasks as well. But yes, the job changes. That's where managers need to take the lead and guide and show employees where they can develop and continue working, finding their new role in RPA.” (R1:42, own translation)*

R4 brought up that it is important to consider the human needs when developing RPA. In other words, R4 addresses that there must be a strong business case that indicates that the humans need the robot. The respondent also highlighted that if the robot does not generate any value to the human work, no one will use it (R4:42).

## 4.2 Organization Context

### 4.2.1 Management Support

Regarding organizational conditions needed for successful implementation of RPA within IT service desks, R1 highlighted management support and argued that the management needs to support the coworkers and the organization (R1:40). R1 continued and explained that management is also required to provide the organization with the necessary resources (R1:46). Additionally, R1 mentioned that the management should look at the employees and their attitudes towards automation (R1:72). Similarly, R2 also claimed management support being very important when implementing RPA within the service desk. Moreover, R2 described it being necessary that managers show the value of RPA for service processes (R2:51).



Correspondingly, R3 addressed the need for management support and highlighted the importance of managers driving change management and showing the value of why they are implementing RPA. In addition, R3 mentioned that management has an important role in demystifying the panic about robots taking over humans' jobs (R3:52).

*” [...] without management support and showing the value of RPA for service tasks it will not be adopted because it has to go through budget cycles and implementation cycles and there is much more around it, like architecture security, so all that has to go through.” (R2:51)*

Regarding if management support is needed, R4 claimed that it is not a necessity. More specifically, R4 asserted that the most crucial part is that the RPA solution brings value to the service desk and its employees. The respondent continued by explaining that if the solution maintains good quality, the support will spread naturally within the organization, as well as among the managers (R4:48).

#### 4.2.2 Size of Enterprise

R1 explained that the size of the enterprise impacts the implementation. Since organization X is a large company, R1 argued that there is a complexity with the implementation when there are so many countries involved. The way to solve this is through continuous discussions with every part of the organization (R1:50). However, R1 expressed that generally it is more difficult to implement RPA within a service desk when the organization is large (R1:52). Likewise, R3 argued that it is harder to adopt RPA within larger organizations. Further, R3 explained that this is due to a bigger number of stakeholders to align with which can make the process more complicated (R3:56). However, R2 argued for a different fact. R2 claimed that the bigger the organization, the easier it is to adopt RPA. In other words, R2 explained that bigger organizations have more applicable use cases than smaller ones. Furthermore, the respondent described how smaller organizations tend to not have the right solutions in place since it often is the same people handling multiple areas within the business (R2:53).

Conversely, the fourth respondent did not believe that the size of the enterprise affects the adoption at all. Instead, R4 argued that the size of the team and department adopting the RPA solution has a greater impact on the adoption rate. R4 continued by pointing out that it is important to have high communication and interaction between the workers, which is easier with a smaller team (R4:56).

*“The size of the company, I don't think it matters, but the size of the team, I believe, does matter. For example, if you have an IT service department with 50 employees, it can be challenging, but if you have the same department with several small sub teams consisting of 6-8 people each, then I think you have a much better chance to make this change. There needs to be a lot of communication and interaction among the employees.” (R4:56, own translation)*

### 4.2.3 Scope of Business

Regarding the scope of the business in the context of adoption of RPA within IT service desks, R1 mentioned that RPA can increase the efficiency and productivity and therefore produce less mistakes (R1:56). Moreover, R1 expressed that a bigger scope of the business positively affects the RPA adoption (R1:58). Furthermore, R2 explained how a bigger scope affects the adoption of RPA within IT service desks. The respondent described that a bigger scope could include an outsourced IT service desk, which makes the organization more focused on productivity and revenue. R2 continued by advocating that it is important for these organizations to implement RPA technology in order to improve efficiency and cost savings. Lastly, R2 mentioned that RPA is the only way to automate legacy applications (R2:57).

*” [...] with a larger scope, one can really increase efficiency and productivity quite immediately and achieve fewer errors and faster solutions. Additionally, a broader perspective can provide employees with new ideas on how they approach their daily tasks. RPA can also be beneficial in identifying opportunities to change processes by highlighting areas where improvements can be made.” (R1:56, own translation)*

R3 explained that the effect the scope of the business has on the adoption is dependent on how the service desk is set up. It was argued by R3 that a bigger scope can make units more dependent on each other which brings more complexity when adopting RPA within IT service desks (R3:63). However, R4 expressed that the scope of the business does not affect the adoption of RPA within IT service desks at all (R4:60).

### 4.2.4 Communication

When speaking about the communication in the context of adopting RPA within IT service desks, R1 mentioned that it is important to communicate with both stakeholders and the product owners of the RPA solution. At some point, the customer of the RPA solution should even be involved with the adoption. Without the communication, the IT service desk fails (R1:62).

*“It's really important, both with stakeholders and with those who own the product to be automated. But also with the end-users, and in some cases, even the customers may need to be involved and informed that there is an automation in place, and if there are any steps they need to do differently. Communication is key in all of this. Without it, it will fail. Otherwise, the service desk will end up just scratching their heads in the end.” (R1:62, own translation)*

R2 highlighted the importance of good organizational change management that includes communication from top management down to different levels. The same respondent explained how people tend to be resistant to RPA, since they are afraid that they will be replaced by robots. Therefore, R2 asserted that the communication should include handling these fears (R2:63).

R3 highlights that communication as the key for success (R3:65) Furthermore, R3 pointed out the necessity for a close collaboration with the end users and departments where RPA is being

implemented (R3:50). As mentioned before, R3 also highlighted the importance of managers to communicate the value and reason for implementing RPA (R3:52). Adding to that opinion, R4 agreed by addressing communication as the most efficient way of proving your business case. The respondent continued by explaining that it is very important to involve the users as soon as possible in the development phase, as well as communicate the intentions and ambitions with the RPA project. Moreover, R4 addressed the importance of communicating to gain feedback from the users about where automation is needed (R4:42) (R4:62).

#### 4.2.5 Active Stakeholder Management

R1 explained that active stakeholder management is very important as it promotes engagement and builds trust. Further, R1 mentioned that it is necessary to involve other people within the organization, not only the RPA team, to discuss the matter (R1:68). Aligned to this, R2 mentioned that organizations need to work with stakeholder management in combination with communication (R2:63). The respondent claimed that without an active involvement of stakeholders, RPA will not be successful, especially if it is a big use case (R2:65). The fourth respondent also chose to connect active stakeholders with communication and argued that it is important to do some kind of stakeholder mapping and evaluate how to inform the right people about the project. However, R4 meant that it is more important that the RPA solution is able to speak for itself (R4:64).

When asking R3 about active stakeholder management, the respondent chose to bring up the term “hospitality”. Furthermore, R3 explained active stakeholder management as showing hospitality in the terms of always striving to understand the stakeholders, meet their expectations and maintain relationships (R3:67).

*“I feel that the key to success is hospitality. They call it stakeholder management in the business, but I feel it's very much about hospitality and how we make our end users feel. It's the same when someone comes to your house right, a friend that is coming frequently to your place. You meet your friends, you greet your friend, you have a chit chat. It's very much about hospitality and continuing working and continuously kind of like trying to understand what their pain points are, how can we work better, where can we improve, where do we see ourselves and in a couple of months or years. So yes, absolutely a key to success.” (R3:67).*

### 4.3 Environment Context

#### 4.3.1 Normative Pressure

R1 emphasized the impact of normative pressures on the adoption of RPA within IT service desks, especially the legislative aspect. The respondent explained that sometimes, legalities can delay the implementation of RPA which can lead to a decrease in cost efficiency (R1:74). R2 had not experienced any governmental or legal challenges in implementing RPA. The respondent explained that if something is sensitive, then they do not try to automate it (R2:69). However, R2 pointed out that in some cases, there can be pressures from different countries where you must accommodate different laws about processing user information.

Still, the respondent did not rate the normative pressure as a factor with high impact on the adoption of RPA within IT service desks (R2:71).

Once again, R3 brought up the ongoing panic about robots taking human jobs, which is an important factor to consider and handle. Further, R3 described that this panic is coming from the outside, creating resilience among employees, which in turn affects the adoption negatively. Secondly, R3 pointed out that every country's rules and legislation is something that they need to adjust to, which can be good in certain situations but bring complexity in others (R3:75). In fact, this is something that R4 supported by bringing up experience from laws like GDPR. More specifically, R4 explained that laws and legislation have had an impact on how fast a certain solution can be implemented, but also on how the users follow to the rules. The respondent continued by pointing out an example when the users did not want to do anything wrong, according to the new GDPR law, which in turn affected the adoption rate of robots handling information that goes under the GDPR law. However, R4 addressed the importance of communicating about these laws and why a robot should handle these kinds of processes (R4:70).

*“So, we have been through a number of scenarios related to laws and regulations, and of course, it has had an impact on how quickly we have achieved a certain adoption rate. I'm thinking of, for example, a few years ago when GDPR came into effect.”* (R4:70, own translation)

#### 4.3.2 Mimetic pressure

Regarding mimetic pressures, R1 highlighted that because organization X is a large organization with different franchisees, they affect and motivate each other to adopt more RPA (R1:78). The organization is constantly trying to improve their processes (R1:80). Further, R2 brought up benchmarking as a type of mimetic pressure. More specifically, the respondent emphasized that there is a lot of benchmarking available in the market that indicates how much organizations should be automating within the service desk. However, R2 did not rate the impact of benchmarking being that high, since not all organizations are doing it (R2:75). Moreover, R3 did not claim mimetic pressure having a big impact on the adoption rate since it depends on the priorities that they have set in the organization (R3:79).

*“[...] It depends on the priorities that they have set in the organization. Maybe they have other priorities that they need and that they're focused on working. Here it's more about a matter of priority.”* (R3:79)

R4 explained the impact as dependent on who you ask. More specifically, R4 asserted that mimetic pressures have an impact on managers but not the users. Further, the respondent emphasized that the users only focus on their own business and how different processes can help them with their work (R4:76).

## 4.4 Individual Context

### 4.4.1 Social Influence

R1 mentioned that social influence affects the adoption of RPA within IT service desks. Within their organization, people are very curious about new innovations, such as AI (R1:84). When people speak about innovations, they become trendy. Moreover, the respondent explained that this is a phenomenon that occurs within franchisee Y as well (R1:86). R1 argued that the solution itself must be adequate, in order for people to be inclined to use it (R1:86). Furthermore, R3 addressed that social influence has a big impact on the adoption rate. The respondent explained that the best marketing is people spreading their experience with and feelings towards RPA (R3:83).

*“The best marketing that you can get is to have people spread their experience. [...] So, there is definitely that factor of spreading the rumor, the good rumor and then you get people after you. Sometimes we just sit back and relax and then people just come to us. So, I think that's very important when it comes to the adoption of RPA.” (R3:83)*

The fourth respondent supported this and mentioned that it is very important to have in mind that people influence each other. Moreover, R4 explained that some people are more likely to adopt a new technology than others, which is important to pay attention in order to get the early adopters on board. R4 continued by explaining that these people later will affect those who do not adapt to a new technology that fast (R4:80). Lastly, R2 mentioned that there are many events and happenings where people get influenced and inspired (R2:77). However, the respondent claimed that the influence is more value driven since RPA brings different values for different people (R2:79).

### 4.4.2 Hedonistic Drives

When speaking about hedonistic drives' effect on adoption of RPA within IT service desks, R1 expressed that people are more prone to adopt when they hear that it is fun to use (R1:86). Moreover, R2 asserted that the hedonistic drive is very individual and impacts people at different levels (R2:81).

The third respondent highlighted that it is very important how people feel in adopting the technology (R3:87). Further, R3 explained that they recently received information that RPA in some cases can increase the stress level among employees. This is since they are left with only the complex task since they are losing the task that did not require much of a cognitive workload from them.

*“[...] What came to surprise is that people can sometimes feel stressed when their tasks are being automated. Not because they're losing those tasks and fear of losing their job, but it's more about losing the tasks that did not require much of a cognitive load on them. That was kind of like a relaxed time during work. [...]” (R3:87)*

For R3's team, this was surprising news which now have made them look for a way to measure these kinds of feelings (R3:87). Furthermore, R4 mentioned that it can be favorable

to have hedonistic drives in mind when developing for example interfaces since it can be a contributing factor to how people feel and talk about the new tool (R4:84).

## 4.5 Task Context

### 4.5.1 Task Complexity

In regard to how task complexity impacts the adoption of RPA within IT service desks, R1 mentioned that when there is a large block of data involved RPA is better to implement. Through RPA, an organization can moreover save time and effort. Another factor that can affect adoption is if the task is repetitive and the data is structured (R1:96). R1 argued that the more complex tasks are harder to automate (R1:98). Moreover, R3 claimed that it is important to categorize and know which kind of task to automate. The respondent explained that they always start simple and small with the least complex task (R3:95) (R3:93). In contradiction, R2 claimed that task complexity helps the adoption since the easy tasks already can be done quickly without RPA (R2:85).

Furthermore, R4 argued that the task complexity does not have an impact on the adoption rate. However, R4 claimed that the most important part is to remove the repetitive tasks, to give people within the service desk more time to spend on first line problems. In addition, R4 explained the experience of people wanting to solve more complex tasks (R4:92).

*“The employees want to eliminate repetitive tasks to be able to spend more time on things they find enjoyable. I've worked in traditional organizations where we wanted to solve as much as possible on our IT service desk, which is what you call first line support. We actually tried to disconnect everything related to second line and backline support. For us, it was classic to remove all the repetitive tasks but still keep the complexity, that was what we wanted.”* (R4:92, own translation)

### 4.5.2 Task Interdependence

Lastly, when talking about task interdependence, R1 expressed that if the tasks are dependent on each other, it will be harder to adopt RPA. Therefore, R1 highlighted the importance of determining where an RPA solution is easier to integrate (R1:101). Correspondingly, R3 asserted that interdependence adds complexity when adopting RPA within the service desk (R3:99). In order to succeed with RPA, R3 pointed out the importance of understanding and revisiting the processes and its dependencies (R3:97).

Yet, R2 had experienced of RPA being quite advanced in terms of handling the dependencies, which makes it manageable (R2:89). Further, R3 thought that the task interdependence's effect on the adoption rate is dependent on how frequent the tasks are done as well as how embedded they are in work. Additionally, R4 claimed that task interdependence has a big impact on the adoption rate. More specifically, the respondent highlighted that it is easier and better for the adoption to automate a whole process flow, instead of just a task in the middle of the chain that is dependent on many other tasks (R4:100).



*“[...] I believe it's much easier to isolate an entire process. It's probably very difficult to have a process that consists of several independent tasks, where you try to isolate and automate only the final third. I think that would be very challenging. In that case, we would have to take the entire workflow. Or should we not look at other simpler workflows that can be isolated? It seems strange to start at one point, then automate and end manually on a computer. I don't think that would be appreciated. [...]” (R4:100, own translation)*

### 4.5.3 Ratings of Critical Success Factors

Each respondent was asked to rate the given CSFs from a scale of zero to five, with zero being the least important for RPA adoption, and five being very important. Below, the rating of each identified CSF is presented. Table 4.1 is ordered of highest to the lowest rating.

**Table 4.1:** Average ratings of CSFs

| CSF                                    | Average importance rating |
|--|---------------------------|
| Communication                          | 5                         |
| Perceived simplicity                   | 4.5                       |
| Perceived compatibility                | 4.5                       |
| Active stakeholder management          | 4.5                       |
| Perceived value                        | 4.5                       |
| System safety and reliability          | 4.5                       |
| Consider human needs                   | 4.5                       |
| Social influence                       | 4                         |
| Hedonistic drive                       | 4                         |
| Task interdependence                   | 4                         |
| System transparency and explainability | 4                         |
| Management support                     | 3.5                       |
| Normative pressures                    | 3.5                       |
| Scope of business                      | 3.5                       |
| Development of adequate skills         | 3.25                      |
| Task complexity                        | 3.25                      |
| Size of enterprise                     | 3                         |
| Mimetic pressures                      | 2                         |

#### 4.5.4 *New Critical Success Factors*

Regarding the task characteristics, two respondents mentioned standardization as a crucial task characteristic for the task that have the potential to be automated by RPA. The second respondent argued that if there is a same way of doing it and if it can be documented, RPA can do it instead (R2:83). Moreover, R3 claimed that to implement any automation tool, there is a crucial need for standardized and optimized processes (R3:10).

*“So, RPA is very much a technology that is there to bring direct simplification and improvement to the current way of working. Because if you want to implement RPA, or any automation tool, you have to have standardized and optimized your processes and ways of working. With that said you need to simplify how people actually work and execute operations, daily operations, in order to implement any process automation in this case RPA.” (R3:10)*

R4 asserted that the most important part is that the task is repetitive (R4:88). This is something that every respondent agreed with and brought up at some point of the interview. Further, R3 also emphasized that where humans put a lot of effort in terms of rule-based, time-consuming, and repetitive tasks that do not require much one to one human interaction, are good candidates for automation (R3:91).



## 5 Discussion

### 5.1 Technology context

*Perceived simplicity* according to Awa, Ojiabo & Orokor (2017), is referencing the perceived effortlessness that occurs when simplifying the manipulation of the system. The authors argue that perceived simplicity has a positive effect on technology adoption. The empirical results of this study revealed that there was an overall agreeableness surrounding the importance of perceived simplicity when talking about RPA adoption within IT service desks. The findings showed that simplicity surrounding the system is of high importance for RPA adoption. The average rating for this CSF was 4.5, which was quite high in relation to other CSFs. Further, the result indicated that the perceived simplicity is connected to user friendliness, good system documentation and the speed of the system.

According to the empirical findings, the purpose of RPA technology is to simplify the user's work. The end user's opinion about the system's simplicity is crucial for the success of RPA. The obtained results also demonstrated that RPA tools should not require any interaction between the user and the robot, making simplicity a key requirement for creating RPA tools. This supports Lacity & Willcocks (2016) statement saying that the RPA solution can complete this process better, faster, and more cost-effectively, thus simplifying the user's work. Furthermore, looking at the IT service desk perspective, MacLean & Titah (2023) argue that the goal of the IT function is to be service dominant and customer-centric, giving the customers a cohesive set of IT elements to facilitate the service the customer seeks. The findings agreed with this and argued that IT service desk workers are customer-oriented and focused on solving problems quickly. Therefore, time is a limited resource in their work. For an RPA tool to be successfully integrated into the IT service desk, it would need to be easy to use or not require any interaction at all.

According to Awa, Ojiabo & Orokor (2017), *perceived compatibility* brings faster adoption of new technologies as it provides compatibility and integration with already existing technologies. Looking at this study's empirical findings about perceived compatibility in the context of RPA adoption within IT service desks, the average rating of importance was 4.5. Indeed, this advocates that the perceived compatibility is of high importance. For example, it was mentioned in the empirical results that when the organization is more mature, the perceived compatibility will bring more value to the organization. However, it was also expressed that the compatibility is quite contextual, and dependent on which systems are being used.

Interestingly, the results showed that the compatibility is one of the key benefits with RPA. The findings illustrated that the IT service desk workers are often very familiar with certain platforms and systems. Therefore, if the RPA solution fails to integrate with the existing landscape, it can lead to a resistance and as a result negatively affect the adoption. Further, it indicated that the RPA technology is very acceptable to all systems in the organization and can easily be integrated into the organization. This corresponds with Lacity & Willcocks (2016) statements regarding how "lightweight" RPA is, as the RPA technology will not disturb underlying computer systems. This information shows that the RPA technology itself brings value in terms of compatibility to the existing systems and is therefore crucial in terms of adoption.

Regarding the CSF *perceived values*, the result showed a high opinion of its importance, as it was given the average rating of 4.5. Awa, Ojiabo & Orokor (2017) mentions that this CSF refers to the competitive advantage the new technology brings, in comparison to existing technologies. Therefore, if the new technology is perceived to have a relative advantage, adoption will be better.

In the result it was demonstrated that RPA solution enhances efficiency and accuracy. Lacity & Willcocks (2016) agree with this and further argue that the RPA solution can replace manual tasks with faster and better. Considering a previous statement in the empirical findings, made about the limited time of IT service desk workers, the RPA solution will moreover provide a competitive advantage to IT service desk operations. Pramod (2021) agree that the RPA solution brings different values to the core business. The findings illustrated that with the RPA solution freeing up time, service providers can engage in proactive work. Furthermore, the findings highlighted that the benefits of RPA become instantly visible after implementation, freeing service agents from repetitive tasks, improving speed, simplicity, and clarity. This indicates that the instant value shown with RPA implementation, will lead to better system acceptance and adoption. Therefore, it is crucial that organizations pay attention to and consider the value that will be generated from a RPA initiative.

According to Firmansyah & Subriadi (2022), one of the primary concerns when implementing an IT service desk is the resistance to change from coworkers which can pose a challenge in the change management process. The result highlighted that perceived value plays a crucial role in managing change effectively. Interestingly, as previously mentioned, the implementation of the RPA solution demonstrates its value right from the start, which can be beneficial in facilitating the change management process. Consequently, if the change management process is successful, there is a higher possibility for the adoption to be successful, due to the removal of coworker resistance.

The CSFs *development of adequate skills* was rated at 3.25. In general, the results showed that it is important to train the employees accordingly. This is in accordance with the expressed need to develop digital skills to ensure effective adoption and human-automation collaboration (Kinkel, Baumgartner & Cherubini, 2022; Rieth & Hagemann, 2022). The findings showed varying perspectives on the importance of developing skills for adopting RPA within IT service desks. Parts of the results indicated that the need for skill development depends on the specific RPA delivery model. On the other hand, the result also showed that the skill set of service desk employees differs from that of the RPA team, resulting in the RPA team taking on most of the setup tasks. Correspondingly, Kinkel, Baumgartner & Cherubini (2022) acknowledges that one of the major challenges in digital transformation is developing skills and accessing qualified staff. Furthermore, the findings demonstrated that investing in skill development is worthwhile as it allows the RPA team to focus on more critical tasks.

On the other hand, the findings also showed the viewpoint of skills development to be necessary by suggesting that employees in the IT service desk are naturally interested in learning about the tools independently, implying they already possess the necessary skills and interest for successful RPA adoption. Therefore, skill development is not crucial for IT service desk workers. Instead of solely teaching employees how to use RPA, the findings proposed that for the adoption to be successful, it is more important to emphasize the benefits

of RPA. This would motivate employees to proactively learn the new technology instead, and the skills development will come naturally.

Rieth & Hagemann (2022) mention that in order to successfully implement a collaboration between automation and humans, the automation is required to provide safety and reliability. Also, being a crucial factor for automation implementation in general, it ought to be crucial for RPA adoption. This is indeed validated by the rating on *safety and reliability*, in terms of importance for adoption success, which was 4.5, which is considered to be quite a high score.

Reliability is a key factor highlighted in the empirical result. The findings emphasized the importance of employees being able to trust and rely on the system. Given that the IT service desks of organization X and franchisee Y handle customer issues and sensitive information from around the world, it was universally recognized that the RPA solution must prioritize confidentiality to gain the trust of IT service desk workers. Rieth & Hagemann (2022) also support this view, noting that coworker trust is compromised when automation lacks in reliability, leading to increased workload and decreased performance. Further, system quality, infrastructure, and performance contribute to the perception of safety and reliability, thereby fostering trust (Syed & Wynn, 2020). The findings supported this viewpoint and highlighted the visibility of RPA performance as crucial. Further, the findings showed that employees often experience “panic” when relying on a robot, which can negatively impact adoption. However, when the system's performance is visible and users can witness the results, this anxiety diminishes. Additionally, the result highlighted that RPA solutions execute tasks in a more secure manner than humans, agreeing with Lacity & Willcocks (2016) who express that RPA delivers superior outcomes in terms of efficiency and cost-effectiveness. Consequently, ensuring the safety and reliability of the system is vital for a successful RPA adoption within IT service desks.

The factor *system transparency and explainability* refers to the users' understanding of the automations functions, and enables a better trust, performance, and usability of the automation (Rieth & Hagemann, 2022). This is especially important when looking at the collaboration between humans and automation. Regarding the empirical result, it indeed indicated that the system's transparency and explainability plays a crucial role in RPA adoption within IT service desks, which resulted in an average rating of 4.

According to the findings, one of the respondents argued that the workers usually are not interested in gaining a deep understanding of the system, because the IT service desk workers are more focused on the business side. However, the rest of the result emphasized the importance of the people within the IT service desks understanding the way certain tools act. For example, one aspect within the findings indicated that employees often care about what happens behind the scenes, and that the IT service desk workers often are suspicious towards new systems because they work with solving IT problems. Ultimately, transparency and explainability among RPA solutions is crucial in order for IT service desk workers to adopt the RPA solution. Syed & Wynn (2020) support this and finds the lack of knowledge problematic and highlight the importance of the users understanding of the RPA processes and its complexities, to develop sufficient RPA. This indicates that there is a need for transparency in order to give the users the opportunity to understand why the robots are acting in a certain way. If the users do not feel informed about this stuff, there is a risk for resilience, which will negatively affect the adoption.

The aspect of the automation *considering the human needs and emotions* gave different answers due to the respondents having different perspectives and knowledge about RPA. For example, parts of the findings showed that it was impossible for RPA to consider human needs as there is no RPA robot with the ability to reason, as RPA is not equal to AI. This is supported by Sharma et al. (2022) who explain that there is a difference in RPA and AI technology, with AI having intrinsic reasoning abilities.

Ultimately, the automation “considering human needs and emotions” was given a score of 4.5 of its importance to the RPA adoption within IT service desks. This is a high score in comparison to other factors. However, the respondents had different perspectives tackling this factor. This factor is based on Rieth & Hagemann’s (2022) statements surrounding automation being able to be supportive and adaptive toward the human worker. It is argued that if the automation is supportive, it can foster a better environment around the automation. This is something that two out of four respondents agreed with. Specifically, R2 continued to reflect that if the robot alleviates the workload of the human worker, the outcome can be emotional. This suggested that the human will for example feel glad, relaxed, or satisfied, and ultimately have a positive effect on job autonomy. Additionally, Zhu & Kanjanamekanant (2022) explains that job autonomy is a positive predictor for intention of use of RPA within organizations. If this is the case, it suggests that the RPA solution will have a positive effect on adoption within IT service desks.

R1 mentioned another important aspect to automation considering the human needs and emotions; the awareness of the jobs changing. When the RPA solution becomes supportive and adaptive, it can give the perception of a human. However, Syed & Wynn (2020) emphasizes the need to be vigilant along with human personification of the automation and expressed that the bot is not equal to the human. It suggests that if the employees think that the bot is an equal, it could increase the fear of losing their job to the bot. Furthermore, there is a possibility for the employee to view the robots as their competitor, rather than a coworker (Asatiani & Penttinen, 2016). R2 supported this and said that the increased integration of RPA could lead to the fear of employees losing their jobs. Consequently, this negatively affects the adoption of RPA within IT service desks, and Asatiani & Penttinen (2016) recommend that the deployment of RPA should be handled delicately when considering the human aspects. However, keeping in mind the general score and the answers given about the jobs changing, it suggests that the meaning behind this factor is rather about the underlying communication surrounding the implementation of the RPA solution. For example, R1 mentioned that it is crucial to make people aware that jobs will be changing, suggesting that for the adoption to be successful, the organizational change needs to be communicated.

## 5.2 Organization context

According to Awa, Ojiabo & Orokor (2017), *management support* refers to the need for powerful support from managers in terms of creating an encouraging climate where communication and business value are emphasized when adopting a new technology (Awa, Ojiabo & Orokor, 2017). The overall expression of the respondents' answers regarding the importance of management support showed a general consensus. More specifically, three out of four respondents rated the importance of management support high and argued that managers play a crucial role in providing the right resources as well as communicating the value of and motives behind implementing RPA. Moreover, parts of the findings showed that managers also have the responsibility to demystify the panic about robots taking over humans'

jobs. Firmansyah & Subriadi (2022) support three of the respondents rating when arguing that it is crucial to ensure support from managers to succeed with RPA projects.

However, one interesting aspect of the findings is that the total rating of the importance of management support was only 3.5, which does not reflect the degree of importance that three of the four respondents argued for. Nor does it support previous research conducted by Awa, Ojiabo & Orokor (2017) and Firmansyah & Subriadi (2022), where management support is presented as a crucial factor for success. This is due to R4 who rated top management as not important at all. The respondent asserted that managerial support is a factor that comes naturally if the solution maintains high quality. More specifically, the respondent opined that the most important part for a successful adoption is that the solution brings value to the service desk and its workers. Thereafter the support will spread among managers and other parts of the organization.

Even though this result does not reflect the previous research about top management's impact on technology adoption, it goes in line with the impact of social influence that is presented by Awa, Ojiabo & Orokor (2017). The authors highlight that social influence has a beneficial impact on technology adoption when people in the organization show positive feelings towards a certain technology (Awa, Ojiabo & Orokor, 2017). This corresponds with the findings where it was indicated that employees who talk positively about RPA technology, will in turn impact how other people view and feel about the new solution.

Regarding the *size of the enterprise*, the empirical result showed that it is not a factor that has a big impact on the RPA adoption within IT service desks. The rating was 3, which is the second lowest rating of all 18 CSFs. Moreover, only one of the respondents' answers supported the *Integrated T-O-E Framework for Technology Adoption* that argues that bigger organizations adopt new technologies faster and better than smaller ones (Awa, Ojiabo & Orokor, 2017). R2 asserted that smaller organizations do not have the same amount of use cases and solutions to handle RPA adoption as bigger organizations, which makes the adoption slower. Otherwise, the rest of the results opined the opposite and indicated that a bigger size of the enterprise affects the adoption negatively, due to higher complexity and more stakeholders to communicate and align with.

These results are interesting since they contradict the framework. While the respondents argued that complexity affects adoption negatively, Awa, Ojiabo & Orokor (2017) argue that complexity affects positively because it increases the need for new technology, as well as bigger organizations having better resources to handle change. There is a possibility that both statements can be justified since the one does not exclude the other. However, it is worth remembering that the respondents did not rate the importance of factor high, which makes it necessary to consider if the size of the enterprise is a prioritized CSF.

The empirical findings on *the scope of the business* in the context of adopting RPA within IT service desks, were like the CSF on size of the enterprise. The average rating was 3.5, but the perception of how the scope affects the adoption varied. One of the respondents indicated that a bigger scope affects the adoption of RPA within the IT service desk positively. These findings align with the literature where Awa, Ojiabo, & Orokor (2017) argue that enterprises with a bigger scope adopt technology faster. More specifically, one respondent highlighted that a bigger scope can include an outsourced IT service desk, which forces the organization to be more focused on cost savings and productivity. Further, this makes them more likely to adopt RPA. As mentioned in the literature, Pramod (2021) presents how RPA technology



increases productivity and at the same time decreases costs. Lacity & Willcocks (2016) describes RPA as “lightweight” and easy to integrate without disturbing underlying computer systems as well as being easy to maintain. Consequently, this indicates that RPA is an effective and advantageous technology to implement in a bigger enterprise scope, which in turn can push the organizations to adopt faster.

However, two of the respondents disagreed and argued that a bigger scope affects the adoption negatively since it can bring complexity. Additionally, one of the respondents even asserted that the scope does not have an impact at all. Similar to the reflection on the size of the enterprise, the one may not exclude the other. Yet, the ratings were not among the highest which indicates that other CSFs are more important for a successful adoption.

The findings of this study indicated that *communication* is the most important CSF for RPA adoption within IT service desks. The result emphasized that communication is the key to success and a decisive part in change management, which was stressed in the average rating concerning its importance ending at 5. This is supported by Plattfaut et al. (2022) and Aditya (2023) indicating that communication is the most vital part in every change. Furthermore, parts of the findings highlighted the necessity of communicating the value and ambitions with the RPA implementation. Majority of the respondents mentioned that it is important to maintain a solid communication with different stakeholders, users, and departments. In accordance, Costa, Mamede & Mira da Silva (2022) explain that one of the most common success factors among organizations that successfully implement RPA is communication between developers and process experts.

One interesting finding is that several respondents, at different occasions during the interview, brought up possible resilience among employees as a necessary factor to consider. For example, R2 explained that employees tend to be resistant to automation, since they are afraid that the robots will take their jobs. Therefore, the respondent continued by addressing the need for an open and communicative dialog that handles these fears. This is a topic specific for automation of different kinds which Plattfaut et al. (2022) touches on. The author argues that it is important that communication involves the influence RPA has on human labor and if it can include possible redeployment. Moreover, Aditya (2023) highlights that resilience among employees is one of the major reasons for failure since people are afraid that the change will bring negative consequences. Because of that, it is important to communicate to solve possible conflicts and present positive outcomes. Asatiani & Penttinen (2016) talk about how employees can see the robots as their competitors which can lead to conflicts in the workplace. What can be seen in the empirical result is that several of the respondents have experienced resilience from employees when introducing RPA technology and rate the importance of communication very high. These findings are interesting but not surprising considering previous research mentioned. However, it is never unnecessary to emphasize the importance good communication has on different change processes.

*Active stakeholder management* is described in the literature as being a part of management support. This ensures that the RPA projects are involving the right resources in terms of stakeholders and different specialists (Plattfaut et al., 2022). The general respondent impression supported the literature, and the average rating was 4.5, which is one of the highest ranked CSFs. The result strictly indicated the importance of involving relevant people and stakeholders. One respondent described an active stakeholder management as showing hospitality in terms of striving to meet their needs and maintaining relationships, which is an interesting factor to consider when adopting RPA within IT service desks. Moreover, R2 and

R4 chose to connect active stakeholder management with communication and argued that it is important to work with those two together. To have high quality on the stakeholder management, there is a need for information sharing, which can only be achieved through good communication. Managers have an important role in ensuring that these two factors are promoted and maintained throughout the whole project of adoption RPA. The literature and the empirical result together indicate that management support, communication and active stakeholder management go hand in hand.

### 5.3 Environment context

Regarding the *normative pressures* in the environmental context, Awa, Ojiabo & Orokor (2017) argues that when there are high normative pressures, there is a faster adoption of new technologies. The empirical results showed that it is important for adoption of RPA within IT service desks. However, the average rating of 3.5 did not reflect the statements in the result. This could be since the respondents viewed the normative pressures important, but not as important as previous factors.

Awa, Ojiabo & Orokor (2017) mention the aspect of legal pressures when describing normative pressures. This was something that every single respondent brought to light when getting asked about normative pressures. For example, the result illustrated how legalities can sometimes delay the implementation of RPA, which can affect the adoption rate of RPA, as well as how the users accommodate to the rules. Further, the findings showed that due to organization X and franchisee Y being international companies, it becomes more complex to handle different countries' rules and legislation, since they have different ways of processing and storing data. For example, one part of the findings highlighted laws like GDPR, that can affect the adoption rate due to the users being afraid of making an unlawful mistake. Further, the result emphasized the importance of communicating these laws and why the robot is suitable to handle a certain process.

Interestingly, there are other aspects to normative pressures that have not been mentioned in the interviews, such as demands from customers. Because the IT service desk's main purpose is to support the organization and provide functioning IT services (Firmansyah & Subriadi, 2022), the customers of the IT service desks are internal within the organization, rather than external. Moreover, the IT service desk customers do not provide the organization with direct profit, which could be the reason for its insignificance to the respondents. Therefore, this indicates that the only aspect of normative pressures that is of importance is legal pressures.

In terms of mimetic pressures, Awa, Ojiabo, & Orokor (2017) claim that when there is an existence of mimetic pressures between rivals, there is a higher likelihood for faster technology adoption. However, this was something that was not supported by the result, where the factor got a rating of 2, which is the lowest among the ratings. The majority of the respondents expressed how it does not have a big impact on the adoption. On the other hand, one respondent mentioned how benchmarking is a type of mimetic pressure and argued that it has a high impact on determining when organizations will automate within the IT service desk. Since not all organizations are doing it though, R2 said that it currently has a low impact.

Further, R4 argued that the importance of mimetic pressures depends on who you ask. If you ask a manager, mimetic pressures could be important. On the other hand, if you ask a user,



mimetic pressures have no importance since the users only focus on their processes and how it can help them with their work. Further, R3 also mentioned how the importance of mimetic pressures depends on the priorities set in the organization. This suggests that mimetic pressures are deeply contextual. Moreover, since this study is limited to the adoption of RPA within the IT service desk, the information indicates that the mimetic pressures have no effect on the IT service desk workers' adoption rate, and therefore the factor mimetic pressure is not validated.

## 5.4 Individual context

Awa, Ojiabo, & Orokor (2017), presents that the existence of *social influence* in the organization will positively affect the technology adoption. This statement was supported by the result, where the general rating of importance was 4. This rating is deemed to be high on the scale of importance to the RPA adoption within IT service desks.

Specifically, the findings showed that people within the respondents' organization are very curious about new innovations, and when people talk about the innovation, it becomes trendy. Awa, Ojiabo, & Orokor (2017) support this by mentioning that when members of a group show cohesiveness to the norms surrounding the technology, the adoption will consequently be faster. One respondent further discussed the factor of social influence and mentioned the importance of early adopters. Later, these early adopters will influence other employees to adopt, which will of course affect the overall adoption rate in a positive way. However, to do this, the findings also highlighted the need for the RPA solution to be adequate. Otherwise, people will not be inclined to use it in the first place.

The factor social influence is indicated to have its foundation in the communication within the organization. For example, R3 mentioned that the best kind of marketing is word of mouth. Plattfaut et al. (2022) agree and argue that communication is a CSF for every change, including RPA implementation within a service desk. If the communication is lacking, Aditya (2023) presents that the consequence could be unacceptance and resistance to the new change. Because of this, the users' adoption rate could be jeopardized when introducing RPA within IT service desks. Furthermore, in order for the social influence to exist, there needs to be communication within the organization, which highlights the overall importance of remaining communicative within the organization to ensure adoption success. Ultimately, while social influence is largely based on another CSF; communication, it is still deemed to be crucial for RPA adoption within the IT service desk among the respondents.

The factor *hedonistic drives* are summarized by Awa, Ojiabo & Orokor (2017) as the pursuit of pleasure and enjoyment among individuals and organizations. The authors argued that when people find enjoyment or pleasure when using new technologies, they are more likely to adopt. Consequently, this positively affects the technology adoption. Looking at this from an RPA within IT service desk perspective, the respondents found that hedonistic drives are crucial, giving the factor a rating of 4.

Implementing Robotic Process Automation (RPA) in IT service desks has a significant impact on the business. RPA is applied to repetitive and rule-based tasks, freeing up time (Madakam, Holmukhe, & Jaiswal, 2019; Pramod, 2021). Furthermore, the authors argue that RPA enhances employee morale and productivity by reducing errors and risks in IT service desk operations. Thus, eliminating errors brings pleasure to employees and boosts their

productivity. On the other hand, R3 mentioned that studies within their organization have shown that RPA implementation can in some cases affect the stress levels of employees. This happens when the brainless tasks have been removed through RPA, and employees are left with tasks that require more cognitive workload. Eliminating brainless tasks from the workday would mean employees are continuously engaged in cognitively challenging tasks, without breaks provided by these simpler tasks. This could affect the attitude towards the RPA negatively. Furthermore, R3 recommended measuring these feelings to ensure that the RPA is effective, and that people have positive associations with RPA. Ultimately, from both perspectives given, it is indicated that for the adoption of RPA to be successful, it is necessary that the users feel enjoyment and pleasure along with RPA implementation. However, there are aspects to keep in mind, like how to make sure that RPA does not affect the employee's stress level negatively.

## 5.5 Task context

Regarding task characteristics, the first one tested in this study was *task complexity*. Awa, Ojiabo & Orokor (2017) describe how complex tasks determine the adoption rate and help technology adoption since it makes organizations more willing to streamline them. The empirical findings from this study showed that this is not applicable on RPA technology within IT service desks. The average importance rating was 3.25 and only R2's answer supported this claim. The reasoning behind R2's answer was that the easy tasks already can be done without RPA. The rest of the results indicated the opposite and highlighted that it is important to start with the most repetitive and easy tasks. R3 addressed that it is important to know which task to automate. This has been shown to be one of the biggest challenges with RPA (Prasad, 2021; Syed et al., 2020). R3 continued by explaining that they always start with the "low hanging fruit", meaning the least complex tasks. Further, the findings showed that the most important part is to remove the repetitive tasks with a large block of data so that employees can spend more time on complex tasks. This is supported by Reungyu & Waiyanet (2022) who describes that RPA is optimal for repetitive tasks with a big amount of data circulating as well as a high frequency of errors.

These findings demonstrated that there are other task characteristics that determine the adoption of RPA within IT service desks. For example, repetitiveness and amount of data. Of these two, repetitiveness was mentioned several times in the result. The way RPA technology streamlines tasks are not mainly by making the complex processes easier. Instead, the main purpose is to streamline a workflow by removing the repetitive work that only takes valuable time from the employees. Often, the repetitive tasks are easy and do not require high cognitive effort.

The second and last task characteristic tested in this study was task interdependence. Awa, Ojiabo, & Orokor (2017) state that the interdependence among tasks affects the adoption of technologies positively, since they are interdependent and related to each other which makes the integration go faster. The empirical findings showed that task interdependence has an impact on the RPA adoption, since the average importance rating was 4.

However, the respondents did not argue for the same statements that Awa, Ojiabo, & Orokor (2017) did. According to the empirical result, the way task interdependence impacts the adoption of RPA is quite contextual and dependent on how well the processes and its dependencies are revisited and understood. In general, the findings showed that a high amount

of dependencies can add complexity when adopting RPA in different areas. Therefore, R1 pointed out that it is important to evaluate where an RPA solution is easy to integrate. However, R2 has experience of RPA technology being good at handling the dependencies. In summary, the findings illustrate that it is important to have task dependencies in mind, which makes it a prioritized CSF. Yet, the findings contradict the literature in terms of whether or not interdependence affects the adoption positively or negatively.

## 5.6 New Critical Success Factors

This study mainly aimed to investigate the 18 CSFs found in *Integrated T-O-E Framework for Technology Adoption* as well as in RPA specific literature. However, as predicted, there existed a possibility that the respondent brought up additional factors worth considering for a successful adoption of RPA within IT service desks. With that said, there were two additional relevant factors that the respondents brought up several times during the interviews.

Firstly, the findings indicated that standardized and optimized processes are needed task characteristics for processes that have the potential of being streamlined by RPA. R2 argued that it must be a documented and standardized way of doing a task. If a task can be written down step by step, it can easily be automated through RPA. Moreover, R3 opined that the processes need to be rule-based, standardized, and optimized, meaning that the tasks should be simplified and well-defined before implementing any RPA tool. Correspondingly, the literature supports this statement and argues that tasks eligible to be streamlined by RPA require well defined rules and a high level of standardization (Moreira, Mamede & Santos, 2023). Considering the literature and the findings, it is arguable that standardized and optimized processes is a task characteristic to have in mind when adopting RPA technology within IT service desks. To successfully standardize a process, it is needs to be evaluated and optimized. This is a factor that will enable the organization to gain the most value out of a RPA implementation, but also an easy adoption to existing operations and way of working.

Secondly, another new CSF that was found to be crucial for adoption of RPA within IT service desks in the findings was task repetitiveness. During the empirical collection, every respondent brought task repetitiveness at some point of the interview. For example, R4 emphasized that the most important requirement for RPA implementation is that the task is repetitive. Further, R3 agreed and gave further requirements that the task should be time-consuming and rule-based to be good candidates for automation. The task repetitiveness aspect has been presented multiple times in the literature and is therefore validated through previous research (Lacity & Willcocks, 2016; Moreira, Mamede & Santos, 2023; Reungyu & Waiyanet, 2022). Further, Syed et al. (2020) mention that knowing where to deploy RPA is a major challenge. Moreover, it is very important to implement RPA in the right tasks to gain the most value from the RPA solution and succeed with RPA adoption. To further discuss why this influences the adoption rate of RPA within IT service desks, R1 mentioned that the RPA solution will enhance the efficiency and accuracy of the automated tasks and will bring instant value to the core business, as R2 and R3 highlighted. Furthermore, this indicates that when an IT service desk choose to replace repetitive tasks done manually with an RPA solution, the result will show an instant value to the users, and ultimately affect their adoption rate positively.

## 6 Conclusion

The purpose of this study was to identify the CSFs for RPA adoption within IT service desks. There were 18 CSFs gathered from the *Integrated T-O-E Framework for Technology Adoption* and RPA specific research, which were tested by qualitative interviews with experts in the RPA and service management area. Through analysis of the empirical findings, two additional CSFs emerged that were of importance for this purpose. Furthermore, the requested CSF ranking assisted in the determining of the degree of importance that a specific CSF has on the adoption rate.

This study found support for 14 CSFs found in in the literature review, seven of which were found in the *Integrated T-O-E Framework for Technology Adoption*, five CSFs that were found in RPA specific literature, and two major additional CSFs that were established through the empirical findings.

The first CSF is (1) *Perceived Simplicity*. The purpose of RPA technology is to simplify the users' work, which makes the users' perception of the simplicity of the tool crucial for a successful adoption. To make a tool as simple and efficient as possible, it is important to strive for less interaction between the solution and the service desk workers. Secondly, another CSF is (2) *Perceived Compatibility*, which indicates that a high compatibility and integration between existing systems and RPA solution is needed for a successful adoption. Otherwise, there is a risk of resistance among employees. Further, the (3) *Perceived Value* plays an important role when implementing any sort of technological change. When it comes to RPA, the value should be instantly visible after implementation. It was also shown that (4) *System Safety and Reliability* was a CSF for the adoption of RPA within IT service desks since the employees need to trust and rely on the system and its way of executing different tasks. (5) *System Transparency and Explainability* is another CSF that will generate trust among the users. Therefore, it is a recommendation to give the users the opportunity to get insight and understanding of how the system works. Moreover, the findings indicate that one more necessary CSF is (6) *Considering Human Needs*. To adopt an RPA solution, it is important to consider what the outcome will bring to the employees as well as which needs to have in mind. However, this CSF should not be confused with AI technology's decision-making capabilities, as RPA is not equal to AI.

When it comes to the organizational CSFs for RPA adoption within IT service desks, (7) *Management Support* was deemed to be of importance, since a visible support at a managerial level increases the chance of a better adoption. Managers are responsible for providing the necessary resources and effectively communicating the value and reasons for implementing RPA to the organization. This goes along with the next CSF, which is (8) *Communication*. Organizations that aim to adopt RPA within their IT service desk, are recommended to maintain a high level of communication in the change process to everyone involved. The communication should include value and ambitions with the RPA implementation, as well as handle the questions and fears regarding redeployment and decrease of human labor. Further, one more CSF that is associated with management support and communication is (9) *Active Stakeholder Management*. It is highly advised to involve relevant stakeholders as well as working on frequent information sharing between parties. Without an active stakeholder management, the project is of risk to lack in support through the whole organization, which will ultimately affect the adoption.

In terms of environmental CSFs, normative pressures through the findings were specified as (10) *Legal Pressures*. It is suggested to have legal factors in mind when implementing RPA technology. Otherwise, it can slow down and make the adoption process more complex. Regarding the individual context, one CSF is (11) *Social Influence*, which needs to exist within the adoption process. Social influence positively affects technology adoption, and factors such as curiosity, trendiness, and the influence of early adopters contribute to a faster adoption rate. Effective communication within the organization is emphasized as a CSF to facilitate social influence and ensure successful adoption of RPA. At an individual level, the findings also showed that (12) *Hedonistic Drives* is a CSF for RPA adoption within IT service desks. When users experience enjoyment and pleasure with RPA, it positively influences adoption. It's important to address potential stress levels and cognitive workload challenges to ensure positive associations with RPA.

Regarding CSFs for the tasks that have the potential to be automated through RPA, the findings showed that there were two major additional factors with importance for the adoption, outside of the *Integrated T-O-E Framework for Technology Adoption*. One of those is (13) *Task Repetitiveness*. It is critical for the task that is going to be automated through RPA to be repetitive, to fulfill the purpose of RPA and in turn positively affect the adoption. The same stands for (14) *Standardized and Optimized Processes*, which is another critical task characteristic.

The finding showed that multiple of the CSFs in the *Integrated T-O-E Framework for Technology Adoption* were of minimal importance for RPA technology adoption within IT service desks. These are *Development of Adequate Skills*, *Size of Enterprise*, *Scope of Business*, *Mimetic Pressures* and *Task Complexity*, due to them not being validated throughout the empirical results. When it comes to *Task Interdependence*, the findings show that RPA technology is easier to adopt if the dependencies are low. However, this is not supported by the *Integrated T-O-E Framework for Technology Adoption*, which indicates the need for further research in the subject.

Lastly, the findings in this study gives a contributory insight about the subject of RPA adoption within IT service desk, and not a general picture that is applicable in every situation. Therefore, there is a demand for further research in the subject of RPA adoption within IT service desks. More specifically, it can be favorable to conduct this type of study on a larger group, to gain a more comprehensive picture of what factors that are needed for a successful RPA adoption in this context.

## Appendix 1 - Interview R1

Date: 17-04-2023

Length: 33:07 minutes

Participants: Respondent 1 (R1), Lovisa Nilsson (LN), Irma Vajraca (IV)

Language: Swedish

| Row | Person | Transcription   | CSF | Context |
|-----|--------|---|-----|---------|
| 1   | IV     | Det är en sak super då kör vi igång först om du kan förklara lite om din roll och vad du jobbar med?  |     |         |
| 2   | R1     | Jag är projektledare för franchisee Y del i en automation som görs med ett externt bolag med, ja, organisationen X relaterade produkter.  |     |         |
| 3   | IV     | Hur länge har du haft den här rollen?   |     |         |
| 4   | R1     | Ja, i snart ett år. Är ganska ny på den.  |     |         |
| 5   | IV     | Har du någon tidigare erfarenhet av robotic process automation eller automatisering i andra former?   |     |         |
| 6   | R1     | Inte mer än vad jag blev involverad i mitt dagliga arbete här på servicedesken. För där har man ju redan nu haft saker som har blivit automatiserade. Så då har man ju mer suttit som användare och fått den till sig att ”nu har detta blivit automatiserat”, och ibland är det ju någonting som vi gör och ibland är det ju någonting som bara händer bakgrunden. |     |         |
| 7   | IV     | Och när du säger automatisering, är det RPA då?   |     |         |
| 8   | R1     | Jag skulle ju vilja tro det. Vissa har ju varit RPA och vissa har ju varit andra typer av automatiseringar.   |     |         |
| 9   | IV     | Och tidigare erfarenhet av servicedesk det har du, då det har vi gått igenom. Nu går vi in på de här olika sammanhang, och det första är då “technology context”. Så fråga ett då, när man inför RPA på servicedesk, vilka teknologiska   |     |         |



|    |    |   |   |            |
|----|----|---|---|------------|
|    |    | faktorer krävs för en framgångsrik adoptering?  |   |            |
| 10 | R1 | Ja, där tänkte jag ju framför allt att det är användarvänligt. Det ska vara enkelt eller i alla fall att det är bra dokumenterat, och den kommer nog att komma tillbaka till ganska mycket dokumentation på hur man använder sig av det. Också hur den är tillgänglig. Är den tillgänglig 24/7 eller är den bara tillgänglig vissa stunder. Att man får information när den ligger ner och sådana saker. Och sen hur den är integrerad med de andra systemen som man använder sig av dagligen. Det kan ju göra det enkelt men det kan ju också bli mycket svårare om det är att du ska in i något annat ställe. | Perceived simplicity<br><br>System transparency and explainability<br><br>Perceived Compatibility | Technology |
| 11 | IV | Just det, och nu kommer vi vidare till våra critical success factors som vi har hittat och som vi vill då testa nu, och se vad ni tycker om dem. Så om jag säger "perceived simplicity" i då sammanhanget av att införa RPA på servicedesk, vad tycker du om det?   |   |            |
| 12 | R1 | Det ska vara snabbt och enkelt. Oftast när du sitter i en servicedesken så har du inte riktigt tiden till allting, för först måste du ta reda verkligen på var problemet ligger, men slutanvändaren och kunden den vill ju ha ett snabbt avslut, för att den kan ha suttit i kö länge. De kan vara stressade för att de inte har tiden att höra av sig. Så det är ju att det ska vara snabbt och enkelt.  | Perceived Simplicity  | Technology |
| 13 | IV | Om du får betygsätta den här faktorn "perceived simplicity" från noll till fem Hur viktigt är det för adoption?   |   |            |
| 14 |    | Ja, en fyra skulle jag nog säga.  | Perceived Simplicity  | Technology |
| 15 | IV | Okej jättebra. Nästa fråga är då en till faktor "perceived compatibility". Vad tänker du när du hör det då i sammanhanget av att införa RPA?  |   |            |



|    |    |   |  |                            |
|----|----|---|--|----------------------------|
| 16 | R1 | Ja, det blev väl upplevd kompatibilitet på svenska eller någonting?   |  |                            |
| 17 | IV | Ja precis.  |  |                            |
| 18 | R1 | Om organisationen är mogen, då kommer det högre värdet att göra det enklare för alla. Men det är ju att den mogna organisationen menar att cheferna också är för förändringar. För du kan hamna i en situation där inte hela teamet eller cheferna är med på det hela, och då blir det bara kryss i mössan. Så det är en mogen organisation där cheferna också förespråkade hela. | Perceived Compatibility<br>Management support        | Technology<br>Organization |
| 19 | IV | Om du får betygsätta vikten av den?   |  |                            |
| 20 | R1 | En fyra skulle jag nog ge den också.  | Perceived Compatibility                              | Technology                 |
| 21 | IV | Och sen enligt din åsikt, då hur påverkar "perceived value" adoptionen av RPA inom servicedesk.   |  |                            |
| 22 | R1 | Ja. Det ökar effektiviteten och förbättrar noggrannheten eftersom det inte är någon manuell handpåläggning på det hela och det drar ner i kostnaderna. Och ger slutanvändaren en snabbare och bättre lösning. Ja och det ger ju också möjlighet för IT service desk medarbetare än att sitta och göra mer proaktivt arbete och hitta andra förbättringspotential.                 | Perceived Value                                      | Technology                 |
| 23 | IV | Precis, och hur viktigt tror du att de som ska anamma RPA känner till de här "perceived", eller alltså hur viktigt är det att folk vet vad man kan skapa för värde av RPA.  |  |                            |
| 24 | R1 | Jo men det är ju jätteviktigt verkligen. Jag tänker mig alltså att, igen handlar det ju lite om hur organisationen fungerar låter cheferna en veta vad som händer i bakgrunden och du har den tekniska kompetensen hos medarbetarna. Rätt person på rätt plats lite. Då kommer det till att påverka det hela och hjälpa en.   | Management Support<br>Development of adequate skills | Organization<br>Technology |

|    |    |   |                                |            |
|----|----|---|--------------------------------|------------|
| 25 | IV | Om du får då betygsätta?  |                                |            |
| 26 | R1 | Den skulle jag nog ge en femma faktiskt.  | Perceived Value                | Technology |
| 27 | IV | Super, när vi säger då att lära upp folk, inläringen av färdigheter, ja hur påverkar den adoptionen?  |                                |            |
| 28 | R1 | Det är väl lite det som vi gick in på det här att man behöver ha rätt människor på plats och att man tillåter det att det tar tid för nya saker kan ta tid och implementera. Du måste också till att nej-sägarna att du mottar dem lite, så att du hittar vägar kring det hela, så att du får med dig mer människor direkt. Även att det att man inte ger ut ofärdiga lösningar kanske. Att man faktiskt tänker sig för innan man pushar 1.0, att ja det kanske är som så att 2.0 kanske ska finnas där redan. Man har sett förbättringar.  | Development of adequate skills | Technology |
| 29 | IV | Och då om du får betygsätta "development of adequate skills" från noll till fem?  |                                |            |
| 30 | R1 | Fyra ja.  | Development of adequate skills | Technology |
| 31 | IV | Hur påverkar systemets säkerhet och tillförlitlighet adoptionen av RPA inom servicedesk?  |                                |            |
| 32 | R1 | Där måste man ju vara väldigt försiktig eftersom servicedesken hanterar kundrelaterade saker hela tiden. Så det är ju man har lösenord och allting, så man måste ju ha gått genom cyber security för att säkerhetsställa att det är OK lösningar som man får använda dig av. Och att också det att vissa länder har andra sätt att se på det, man kan inte bara stirra sig blind på hur det ser ut i Sverige till exempel. Utan ja men, ska denna lösning in i Tyskland, kan jag ta som ett exempel på, är det väldigt andra strikta förhållningsregler till vad man får göra och inte. Ja men det var nog det jag tänkte på den. | System safety and reliability  | Technology |

|    |    |  |  |              |
|----|----|--|--|--------------|
| 33 | IV | Ja, om du får lägga ett betyg där noll till fem?   |  |              |
| 34 | R1 | Alltså den är ju oerhört viktig. Jag tycker att det är ju en sådan sak som man verkligen måste ha tittat in på för att implementera. Det är ju en femma på den aspekten.   | System safety and reliability          | Technology   |
| 35 | IV | Och hur påverkar systemet transparency and explainability? Jag vet inte riktigt hur vi ska översätta det så vi tar det på engelska. Hur påverkar det adoptionen av RPA på service desken?  |  |              |
| 36 | R1 | Att man måste ju ha sett till att man i alla fall säkerhetsställer behovet. Att man inte bara utvecklar någonting för att utveckla, utan att man kollar till vad är det som behövs utvecklas. Att man tittar till hela organisationen för man kan ju se att i mitt dagliga arbete kanske jag ser att "Ja men detta är jättestort", men i det stora hela kanske det är en "low hanging fruit" så då kan jag inte det är det bästa jag ska börja med att automatisera. Utan jag kanske måste kolla bakomliggande saker att "ja men om vi tar dom här sakerna först så vinner ju vi mer på det" för att vi sparar pengar på det sättet. | System transparency and explainability | Technology   |
| 37 | IV | Om du får betygsätta vikten av transparency and explainability.  |  |              |
| 38 | R1 | En fyra.   | System transparency and explainability | Technology   |
| 39 | IV | Okej, nästa fråga har att göra med att systemet ska ta hänsyn till mänskliga behov, då de anställdas behov, hur tänker du kring?   |  |              |
| 40 | R1 | Jag skrev lite om att det är ju ledarskapet hela vägen upp i toppen, som måste vara delaktiga har i detta. Och att de faktiskt måste det kanske tittar in lite på att hur supporterar jag och hjälper med medarbetarna och organisationen till att   | Management support                     | Organization |

|    |    |   |                      |              |
|----|----|---|----------------------|--------------|
|    |    | ta sig an detta. Kolla på förhållandena som är i dagsläget och utgå ifrån.  |                      |              |
| 41 | LN | Yes och just RPA handlar ju om att en bot efterliknar människors jobb och supportar de mänskliga arbetarna. Hur tänker du att det här att det kommer påverka acceptansen på något sätt? Alltså att den här roboten då liksom "considers the human needs" så att säga.   |                      |              |
| 42 | R1 | Det är ju som så att automatisera saker kan ju påverka folk väldigt mycket för de blir rädda att förlora jobbet. Och det är ju klart i dagens läge så är det ju väldigt många, eftersom alla tänker på AI, i dagens läge. Och tänker "Oh vårt jobb kommer att försvinna", men det behöver ju inte innebära att jobbet försvinner. Det är ju mer bara att man får någonting som hjälper en i mångt och mycket. För det finns ju alltid annat också, men visst jobbet förändras. Det är ju där cheferna måste ta en ta ledning och faktiskt guida och visa var man som medarbetare kan utvecklas och jobba vidare med och att hitta sin nya roll i RPA. | Consider human needs | Technology   |
| 43 | IV | Om du kan betygsätta den här då noll till fem?  |                      |              |
| 44 | R1 | Den känns ändå som att den är ganska hög eftersom den har så får femma hade jag nog velat sätta en dag eftersom där är det viktigt att du har ledarna med dig.  | Consider human needs | Technology   |
| 45 | IV | Jättebra då har vi gått igenom första kontexten. Då går vi över på "organization context". Det är kanske lite det vi har varit inne på redan, men vi går lite djupare in på det. Finns det några organisatoriska förhållanden som du tror kan påverka adoptionen och framgången då med RPA inom servicedesk?  |                      |              |
| 46 | R1 | Det känns lite som att det kanske var lite det jag svarade på det där innan, med att det är ledningsstöd och sådant också. Att man tillhandahåller nödvändiga resurser och sånt kanske?   | Management support   | Organization |

|    |    |  |                    |              |
|----|----|--|--------------------|--------------|
| 47 | IV | Det är faktiskt lite det vi har punktut redan här. Nästa fråga handlar ju då om ledningsstöd, och det har du ju pratat mycket om nu. Så om du skulle betygsätta den på skala noll till fem ja?   |                    |              |
| 48 | R1 | Men en femma tror jag.   | Management support | Organization |
| 49 | IV | Sen går vi in i "size of enterprise", om storleken på företaget påverkar adoptionen av RPA på något sätt? Vad tänker du kring det?   |                    |              |
| 50 | R1 | Och där märker jag ju att som organisation X är ju extremt stort så där märker jag ju av komplexiteten. Eftersom nu har jag ju haft stakeholders i jättemånga olika länder också, vilket innebär att man ser komplexiteten för att vi är så stora. Alla jobbar på olika sätt och man måste verkligen ta in hur alla länder får och hur de jobbar och allting, så att ja, den är stor och svår. Men dock så behöver man ju faktiskt se till att man automatiserar med EU, så man måste ju hitta de där vägarna kring det hela, och samarbetar på bästa möjliga sätt. Men det handlar ju också om att pratar väldigt mycket, och följa upp på diskussionerna så att man inte bara släpper det. Så att det inte blir att "men okej de gör det på sitt sätt, ja men då struntar vi i dem" utan istället "ja men okej hur hade det funkat för er?". | Size of Enterprise | Organization |
| 51 | IV | Så generellt sett skulle du säga att ju större företag desto svårare kan det vara egentligen?  |                    |              |
| 52 | R1 | Ja   | Size of Enterprise | Organization |
| 53 | IV | Okej, om du ska betygsätta då vikten av storleken på företaget?  |                    |              |
| 54 | R1 | Jag tror ändå jag sett en trea på den för det kan ju också vara väldigt enkelt.  | Size of Enterprise | Organization |
| 55 | IV | Ja precis, det känns som att mycket annat påverkar det också egentligen. Och den   |                    |              |

|    |    |   |                   |              |
|----|----|---|-------------------|--------------|
|    |    | här är ju lite inne på samma grej men ”företagsomfattningen” ”scope”, vad tänker du kring dess påverkan på adoptionen?  |                   |              |
| 56 | R1 | Där, med ett större scope kan man ju verkligen att öka effektiviteten och produktiviteten ganska så omgående, och få till mindre fel och snabbare lösningar. Sen att man kan ge ett nytänk för medarbetaren också på hur de ser på sina dagliga arbetsuppgifter. Och RPA:n kan ju också gynna till att man ser att ”jo men detta är ju faktiskt möjlighet till att vi skulle kunna ändra på den här processen”.                               | Scope of business | Organization |
| 57 | IV | Så företagsomfattningen påverkar alltså ju större företagomfattning, så skulle du säga desto bättre adoption?   |                   |              |
| 58 | R1 | Ja, jag tror ändå det är.   | Scope of business | Organization |
| 59 | IV | Och vikten där noll till fem?   |                   |              |
| 60 | R1 | Tre eller fyra, vi kan säga att den är en fyra.   | Scope of business | Organization |
| 61 | IV | Okej, det har du varit inne på också, ”Active stakeholders management”, då att förse, ja nej nu hoppade jag över en, förlåt. Vi går över och tar ”kommunikation” först kommunikationsfaktorn i det här sammanhanget. Vad tänker du när jag säger kommunikation?   |                   |              |
| 62 | R1 | Den är ju jätteviktig, både med stakeholders och med de som äger produkten som ska automatiseras. Men även slutanvändaren, och viss del kan även kunden behöva bli involverad och få veta att det finns en automation på det hela, och att om det är något steg som de ska göra annorlunda. Kommunikationen är ju A och O i det hela. Utan den så fallerar det ju. För att då sitter servicedesken där tillslut och bara kliar sig i huvudet. | Communication     | Organization |

|    |    |  |  |                             |
|----|----|--|--|-----------------------------|
| 63 | IV | Yes, och om du kan betygsätta vikten av kommunikation?   |  |                             |
| 64 | R1 | Den sätter jag en femma på.  | Communication  | Organization                |
| 65 | IV | Nu kommer det jag pratade om innan "Active stakeholder management" som är då förse projektet med rätt personer och rätt kunskap. Vad tänker du om då?  |  |                             |
| 66 | R1 | Det är den "aktiv intressenthantering"?  |  |                             |
| 67 | IV | Ja   |  |                             |
| 68 | R1 | Jag skrev att det kan ju bygga upp ett bra förtroende och stöd och att man främjar engagemanget också bland alla för projektet. Ja, att behoven blir tillgodosedda och att man faktiskt hittar rotorsaken till allting så att man gör en bra lösning på det hela. Och att man kan identifiera och engagera de rätta människorna i det, så att man kanske inte bara ska ta den från ett RPA-team till exempel. Att bara "oh vi sitter här och är finurliga", utan man kanske behöver ha någon ifrån servicedesken och lite sånt. Så att man har olika personer och diskuterar frågorna. | Active stakeholder management  | Organization                |
| 69 | IV | Om du får betygsätta vikten av "Active stakeholder management"?  |  |                             |
| 70 | R1 | Den är femma.  | Active stakeholder management  | Organization                |
| 71 | IV | Okej. Så då hoppar vi in i "Environment context", när det kommer till miljön runt införandet av RPA finns det några faktorer som du tror kan påverka adoptionen?   |  |                             |
| 72 | R1 | Infrastrukturen. Om det är byggt för att det ska funka. Ibland så kan man ju ha väldigt gamla system som ska automatiseras, och det kanske inte funkar i det nya helt och hållet. Och sen resurser. Bara så att man ser till att man har resurserna som behövs och att de är tillgängliga vid rätt tillfälle också. Och  | Perceived Compatibility<br>Management Support<br>Normative Pressures | Organization<br>Environment |



|    |    |   |                     |             |
|----|----|---|---------------------|-------------|
|    |    | sen så får man ju också kolla på de anställda, de på servicedesken om de är ja-sägare eller nej-sägare i det hela. Ja, för det finns alltid de som säger "ja men jag gör på det gamla sättet", även när man har fått till automatisering av saker så vill de ändå ha som på samma gamla vanliga sätt. Och sen är det här reglerna, att det kan påverka ur ett säkerhetsperspektiv igen. Så det är väl lite de sakerna som jag ser med infrastrukturen där.  |                     |             |
| 73 | IV | Ja, jättebra, då ska vi gå igenom några faktorer här med så vi har hittat. Hur tror du att införandet av RPA inom Servicedesk påverkas av normativa påtryckningar, och då menar vi olika påtryckningar från kunder, regeringen, rättsliga institutioner, och så vidare.   |                     |             |
| 74 | R1 | Just det regelverket, den kan påverka jättemycket. För det kan vara att man tycker att man har världens bästa lösning, men man får inte. Man får inte trycka på knappen för att gå live för att regelverket säger det. Och att och att det kan dra ut väldigt länge på tiden och då kanske det inte blir någon kostnadseffektivitet av RPA-lösningen. För att då kanske man under tiden som man går och väntar så har det hänt så pass mycket att man måste göra om RPA lösningen. Så ja, det tänkte jag väl direkt på i alla fall. | Normative Pressures | Environment |
| 75 | IV | Om du då får betygsätta hur stor vikt och påverkan normativa har?   |                     |             |
| 76 | R1 | Fyra skulle jag nog säga.   | Normative Pressures | Environment |
| 77 | IV | Och samma fråga där fast kring mimetiska påtryckningar, så då hur andra företag jobbar, om det påverkar ens egen vilja att adoptera RPA inom servicedesk?   |                     |             |
| 78 | R1 | Nu har jag ju bara jobbat på franchisee Y sedan jag kom ut på arbetsmarknaden eller sen när jag började jobba. Och jag kan ju se hur det ser ut i alla fall från  | Mimetic Pressures   | Environment |

|    |    |  |  |                            |
|----|----|--|--|----------------------------|
|    |    | olika organisationer inom organisationen X, hur det påverkar det hela. Och då kan man ju se att om något ställe börjar trycka på, ja men då kan det höja att en annan del också bara gör spekulera och funderar och kolla runt. Så att det trycks ju ändå uppåt från de olika organisationerna också.  |  |                            |
| 79 | IV | Just det.  |  |                            |
| 80 | R1 | Så att ja, det tycker jag väl att det påverkar ganska mycket. Att man vill förändra och förbättra förbättringsprocesser finns nog där hela tiden hos många.  | Mimetic Pressures                      | Environment                |
| 81 | IV | Och om du får betygsätta vikten av den här påverkan?   |  |                            |
| 82 | R1 | Jag tror ändå jag får sätta en trea på den för jag känner liksom inte att den är jättestor så från mitt perspektiv.  | Mimetic Pressures                      | Environment                |
| 83 | IV | Just det jättebra. Nu går vi in i "individual context". Hur tror du att människor inom din organisation påverkar varandra när det gäller införandet av RPA?  |  |                            |
| 84 | R1 | Tror i alla fall att de påverkas ganska positivt, för just hur man hör hur de pratar om AI och allt annat så känns det ändå positivt än så länge. Det är ingenting som är negativt med när vi pratar automatisering över huvud taget, utan många nyfikna, och det ger ju också att många lägger fokus på det. Men där har vi nog också den röda tråden att vår toppchef också kommer därifrån också liksom. Att det är där uppe ifrån redan som det trycker på om automatisering, för det sprider ju sig ner i organisationen. | Social influence<br>Management Support | Individual<br>Organization |
| 85 | IV | Precis. Då går vi vidare till faktorerna på vilket sätt tror du att adoptionen av RPA inom Servicedesk påverkas av det sociala inflytandet?  |  |                            |
| 86 | R1 | Alltså man blir ju lite mer benägen av att använda sig av det, och särskilt om man   | Hedonistic drives                      | Individual                 |

|    |    |  |                   |            |
|----|----|--|-------------------|------------|
|    |    | <p>hör att andra har roligt när de gör det liksom. Det är ju bara man tittar på Chat GPT, det är ju också en sådan här sak som när någon börjar prata om det så börjar helt plötsligt alla. Och det blir ju det blir ju samma sak lite med en automation som man gör här inom franchisee Y också. Så länge det är en bra lösning så blir det ju en positiv påverkan, och alla ser att ”ja men jag fick mer tid över att bara trycka på 2 knappar”.</p> | Social influence  |            |
| 87 | IV | Ja, om du får betygsätta vikten av det sociala inflytandet?  |                   |            |
| 88 | R1 | En fyra på den.  | Social influence  | Individual |
| 89 | IV | Ja, det här var ju inne lite på nu, men hur tror du att känslomässiga drivkrafter påverkar adoptionen av RPA inom servicedesk?   |                   |            |
| 90 | R1 | Jag tror att det har en positiv påverkan och även motivationen för att få det implementerat. Men igen så är det ju att man måste ju ändå ha sett till att allting är på plats innan, med dokumentationer och förklaringar till varför.   | Hedonistic drives | Individual |
| 91 | IV | Du nämnde innan också det här med att ha kul, när man jobbar med RPA då. Är det liksom också något du tänker har en positiv påverkan?  |                   |            |
| 92 | R1 | Ja men precis.   | Hedonistic drives | Individual |
| 93 | IV | Okej, om du får betygsätta vikten av de här känslomässiga drivkrafterna?   |                   |            |
| 94 | R1 | Men ja, det här är en fyra kanske. För att har du en positiv kollega som sprider det, så är det ju enklare också och hoppa på det.   | Hedonistic drives | Individual |
| 95 | IV | Ja, det låter vettigt. Vi går vidare till task context. Genom att titta på uppgifter och processer som har potential att effektiviseras genom RPA, kan du definiera några karaktäristiska faktorer   |                   |            |

|     |    |   |                      |      |
|-----|----|---|----------------------|------|
|     |    | som har en positiv påverkan på RPA-adopteringsen?   |                      |      |
| 96  | R1 | Jag tror att det är viktigt som jag sa innan lite att man kollar på höga volymer. Stora datamängder är väl lämpade för RPA, så att det ju inte är allting som är lämpat för RPA lösningar. Men det som har stora volymer och att man kan spara tid och ansträngningar på det. Och sådant som man gör repetitivt är att man hela tiden gör samma sak om och om igen. Det är ganska skönt när bot sitter och gör det åt en. Och strukturerade data så den bara kan följa en form som finns där. Men det är ju lite det repetitiva som man sitter och gör dagligen, att man har en bot som gör det istället. | Task Complexity      | Task |
| 97  | IV | Ja, och på vilket sätt tror du införandet av RPA inom IT Service Desks påverkas av taskens komplexitet? Tror du det har någon påverkan?   |                      |      |
| 98  | R1 | Alltså om det är rutinmässiga uppgifter, som jag sa där innan, repetitiva. Då är det enklare. Och det är ju också att kommer ni med någonting som folk tycker är tråkigt att sitta och göra manuellt, då blev det ju större positiv påverkan här ju. Men sen så komplexa uppgifter det finns det ju alltid och där är det ju bättre att man sitter och gör det manuellt känns det som. För det är ju svårare att automatisera.  | Task Complexity      | Task |
| 99  | IV | Så om du får betygsätta vikten av komplexiteten på uppgiften?   |                      |      |
| 100 | R1 | Men det är nog en fyra ändå?  | Task Complexity      | Task |
| 101 | IV | Ja, då kommer vi till den sista frågan faktiskt. Hur påverkas, ja det här får vi nog säga på engelska, task interdependence. Då beroendena bland tasken.  |                      |      |
| 102 | R1 | Ja precis, alltså om uppgifterna är beroende av varandra, då blir det svårare för en RPA lösning och ta hand om det.  | Task interdependence | Task |

|     |    |   |                      |      |
|-----|----|---|----------------------|------|
|     |    | Så där är det ju också att man måste urskilja vad som är enkelt för en RPA lösning att gå in, och vad det är enklast att en mänsklig hand sitter och gör. |                      |      |
| 103 | IV | Ja, jag förstår. Om du får betygsätta vikten av det här beroendet mellan uppgifterna?   |                      |      |
| 104 | R1 | En fyra.  | Task interdependence | Task |
| 105 | IV | Jättebra. Känner vi att det är något vi behöver?  |                      |      |
| 106 | LN | Nej, är det någonting mer du vill tillägga?   |                      |      |
| 107 | R1 | Nej, jag tror inte det. Jag tycker att det har varit tillräckligt.  |                      |      |
| 108 | IV | Ja, absolut verkligen, jag tycker det var bra. Vi kan stänga av inspelningen nu.  |                      |      |

## Appendix 2 - Interview R2

Date: 17-04-2023

Length: 34:10 minutes

Participants: Respondent 2 (R2), Lovisa Nilsson (LN), Irma Vajraca (IV)

Language: English

| Row | Person | Transcription   | CSF | Context |
|-----|--------|---|-----|---------|
| 1   | LN     | We can start. Ok. So beginning with some background questions. Could you explain your role in your organization today   |     |         |
| 2   | R2     | Sure, I'm platform leader of service now platform which is used in across IT service desk the resolves the people who have issues they can log tickets then it's security HR and much more so yeah customers and GRC governance risk and compliance   |     |         |
| 3   | LN     | Yes, how long have you had that role?   |     |         |
|     | R2     | Overall experience is around eight years in this kind of role but franchisee Y I recently joined in December, but seven-year last seven years were in Heineken  |     |         |
| 4   | LN     | Mm, do you have any previous experience with the RPA, robotics process automation, or any type of automation?   |     |         |
| 5   | R2     | Yes, so in my previous organization as well and over here we're trying to work with RPA a bit UI path be provided by service now or other automation so absolutely it's very key for our success to remove all the manual work that is there which is very mundane for the IT service desks |     |         |
| 6   | LN     | Yeah, so you have previous experience with service desk?  |     |         |
| 7   | R2     | Yeah  |     |         |

|    |    |   |                         |            |
|----|----|---|-------------------------|------------|
| 8  | LN | Ok great so let's start with the... we're going to divide the interview up to five different contexts. So, starting with the technology context. When adopting RPA within IT service desks and what are some key technological factors that are necessary for successful adoption?  |                         |            |
| 9  | R2 | OK from a technology perspective it works very well when you have cloud resources to utilize because then you remove the dependency on doing port opening and setting up in the way, but RPA is also used a lot with legacy applications where there are no direct integrations available to automate so if you specifically look at RPA they only technological requirement that you will look at is that there should be a UI that can be utilized by the bots. | Perceived compatibility | Technology |
| 10 | LN | Yeah alright, so we have found some Critical Success Factors for our research so we're going to mention some of them and then you will be able to talk a bit about them and then rate them from a scale from zero to five. Zero being the being not important at all and five being super important. So, when we say perceived simplicity in the context of adopting RPA, what comes to mind?   |                         |            |
| 11 | R2 | So, when you say perceived simplicity of adopting RPA. So, what you are trying to say is, how easy it is for a service desk to start working with RPA?  |                         |            |
| 12 | LN | Yeah, we are thinking about how easy or difficult it is perceived by the user to learn and use RPA technology, to perform their tasks.  |                         |            |
| 13 | R2 | I am not sure about the users, but the service desk people, in the context of service desk only, it is quite easy because nowadays you can do a screen record with clicks and the tools are so smart that they're able to easily identify and do all the steps and record it. So, I think with the latest technology it's very  | Perceived simplicity    | Technology |



|    |    |   |                         |            |
|----|----|---|-------------------------|------------|
|    |    | easy for a service desk to set up an RPA.   |                         |            |
| 14 | LN | Yeah  |                         |            |
| 15 | R2 | So, from scoring perspective, I would say five is very easy   | Perceived simplicity    | Technology |
| 16 | LN | Hmm so you would say that it's very important for the...  |                         |            |
| 17 | R2 | Absolutely, absolutely. So, if you look at in the current world, we are struggling with having the expertise. There is so much shortage of the people who have the knowledge so if he can make the tool so simple that anybody can set it up, then we have more value out of it. if it's too complex and I have to hire some niche profiles that's very difficult and very expensive.   | Perceived simplicity    | Technology |
| 18 | LN | Yeah  |                         |            |
| 19 | R2 | So, simplicity is the top.  |                         |            |
| 20 | LN | Yeah. Great. Continuing, perceived compatibility in the context of adopting RPA, what comes to mind?  |                         |            |
| 21 | R2 | Umm, perceived compatibility. Can you elaborate on that what do you mean by perceived compatible?   |                         |            |
| 22 | LN | We are thinking that it's how well the RPA technology fits in with existing processes and systems in the IT service desks, and how well it can be integrated with existing tools.   |                         |            |
| 23 | R2 | Yeah, it's quite contextual, it depends on what service desk is using from that perspective but if you take a mature organization, they will have a tool like service now or top desk or something and not working only with excel or emails. So, if you want to take that segment of the organizations then compatibility is absolutely necessary. The easier you can integrate with those tools is much easier, but if it is not then I | Perceived compatibility | Technology |

|    |    |  |                                |            |
|----|----|--|--------------------------------|------------|
|    |    | think it's fine a bit, so I would say around a four or so. Compatibility is important because you can still cover a bit in or outside the tool as well.  |                                |            |
| 24 | LN | Ok, great. Next, we have perceived values in the context of adopting our RPA. So, it means kind of like the service desk workers, what's their perceived value of RPA. What do they think the value is of it?  |                                |            |
| 25 | R2 | Yeah, so nowadays a lot of organizations paper tickets. It's a pay by drink model, and the impact the value of an RPA is instantly visible. So even if you're doing five tickets a day, by the end of the month you're saving money. So, there is a lot of perceived value in the organization. For the service desk agent, it frees them up from the basic work that they must do, you know, constantly going through the same thing. So, then they can focus on the things that they're more interested in or to help the users. So, from a value perspective I think it is a four for sure.   | Perceived value                | Technology |
| 26 | LN | Yes alright. I'm moving on to the next one. When we say development of adequate skills in the context of adopting our RPA what do you think about that?  |                                |            |
| 27 | R2 | So yeah, setting up an RPA and running with it. Setting up those processes in a way needs some skill at least though the tools are being made simple but they still need to have some skill in order to set it up. So, development of skills is needed. That's why you will see that some technical guys in the services become a little bit more senior and they start working with these RPA teams. So far, I haven't seen that service desk has a direct way of setting up themselves. They always have another team or somebody working on it, so within the service desk I don't know how far they can go at the moment because the skill set is a bit different than having an RPA | Development of adequate skills | Technology |

|    |    |   |  |            |
|----|----|---|--|------------|
|    |    | skill set. So, if they can do it it is great, if they do not then it's anyways outside of their view because we start talking about the security of the two. Nowadays security is a big concern, the GDPR is a big concern. What bots are processing is a big concern, so that's why the skill now of service desk will not be at par with setting up RPA themselves.   |  |            |
| 28 | LN | Yeah, how would you rate the importance of developing the right skills from zero to five?   |  |            |
| 29 | R2 | So, I think developing is absolutely necessary so that the RPA team can focus on more important stuff and the service desk can take over part of it. At the moment I would say three, but soon, if RPA is much more simpler than I think it will become a five very soon; if the tool is simple enough and we can get over the security challenges that we have   | Development of adequate skills<br><br>Perceived simplicity | Technology |
| 30 | LN | Yeah, that actually goes along with the next question because we're asking you about the system's safety and its reliability. Could you elaborate on that?  |  |            |
| 31 | R2 | So, like I said the RPA mimics mostly what a user or a service desk agent will do. In the context of a service desk. So that means they see what a service desk agency sees. Service desk agents have signed NDA's and have contracts that OK we will not share this information or process in a wrong way, but these are robots so anybody who has access to the robot can see what they're doing. They can just look at the screen when they're processing and they can see what's happening, because it's on the screen, it's not like an API which just goes and processes. It is something at the back so anybody who gets access to it can see what's happening and how these robots are, what are the processing and if they get the same account as our RPA, that's even more dangerous for the | System safety and reliability                              | Technology |

|    |    |  |                               |            |
|----|----|--|-------------------------------|------------|
|    |    | <p>organization. Safety is very important. Safety and security from that perspective. That is why so far, it's a different team who does it and you always have to do a security assessment of when aboard and what it is going to do. You scope the work that is going to do. You build different user accounts basically, so you never share accounts with the same robot account with others, so it has a specific purpose and that's all it's going to do. You need to uh track what is showing you need to do reporting you need to do job logs. We need to do monitoring on top of it that it's not doing something impossible. You also need to check if the accounts being used for RPA have not been logged in from some other part of the world so you always try to lock it to one system and say this is the only system that this bot can use. If we are using it in Sweden and if somebody tries in Brazil, that's an impossible travel right. Nobody could travel just ten seconds to Brazil, so then you have to lock it down. So, those kinds of security measures have to be in place.</p> |                               |            |
| 32 | LN | How important would you say that is from zero to five?   |                               |            |
| 33 | R2 | Five, five hundred.  | System safety and reliability | Technology |
| 34 | LN | Five hundred haha?   |                               |            |
| 35 | R2 | Yes  |                               |            |
| 36 | LN | Yes haha, great. Also, you talked a bit about the transparency that people who use the system can see what's happening. So, our next critical success factor is system transparency and explainability in the context of adopting RPA within IT service desks. What comes to mind when you hear that?  |                               |            |
| 37 | R2 | Just elaborate a bit, what do you mean about transparency?   |                               |            |

|    |    |   |   |            |
|----|----|---|---|------------|
| 38 | LN | It is about how easy it is to understand how the system works and why it acts in a certain way. It's about giving users the insight into the system's inner workings and the decision-making process.   |   |            |
| 39 | R2 | Yeah um, it's a bit technical from that perspective because there are a lot of screens and things that go behind it. How the authentication happens, how all those things happen is quite technical at the moment, so yeah, it's a bit complex at the moment. In the future it might be different but absolutely it's also important for the service desk to understand why this is in a specific way, but they generally do not go too much deep into it because they stay more on the business side and saying this is what we need, this is what should be processed. Also, they define the use case. So, they say this is how it should go and I'm going to screen record and I'm going to click and at the back how technically it would use the authentication user and passwords to log into those apps is done by a technical team. | Perceived transparency and explainability | Technology |
| 40 | LN | Yeah, so you would say that the people working in the IT service desks that are working next to an RPA solution do not find a system transparency and explainability that important? Does it affect their adoption in any way?  |   |            |
| 41 | R2 | Um, in a way that if they understand, it's better for adoption so they can always think what will work and what will not work for them. So that is absolutely a room for improvement and learning for the service desk as well. For now, I think it's around three.   | Perceived transparency and explainability | Technology |
| 42 | LN | Yes, great. So, our last question in this technology context is when we say the robot understanding the human needs, is it important for the system to take account of human needs and emotion in   |   |            |

|    |    |   |                      |            |
|----|----|---|----------------------|------------|
|    |    | order to be supportive and adaptive?<br>What do you think about that?   |                      |            |
| 43 | R2 | The robot itself or the people who are developing the robots?   |                      |            |
| 44 | LN | The robot itself.   |                      |            |
| 45 | R2 | I think we do not have robots who have emotions yet and it will be very scary if they get into the emotions world for me personally. They are more binary, so they just go with one, zero, one, zero and they do what needs to be done. I don't think they take that into consideration, but the outcome that they deliver is absolutely sometimes emotional for the service desk because they're taking care of a lot of things that the service desk has to do manually, so they take away the pain.  | Consider human needs | Technology |
| 46 | LN | If you could rate that from a zero to five what would you say?  |                      |            |
| 47 | R2 | Considering the human needs by the robot itself, maybe a zero. But if you look at the outcomes that it delivers for the human needs of the service desk, then it's absolutely five.   | Consider human needs | Technology |
| 48 | LN | Yeah great. Alright, moving on to the organizational context. Are there any organizational conditions that you feel could affect the adoption success of our RPA within IT service desks?   |                      |            |
| 49 | R2 | Yes. Money. Each of the robots cost money and sometimes it's expensive as well to do some simplest task. So what anybody else should look at is the value versus benefit. So is it the cost that I'm trying to value versus cost actually. So they need to see how much money we're spending here, can service desk do too much faster than that. So those kind of things is something that you need to consider and that sometimes is a call from that perspective. The other is that if it's sensitive information which we do not want bots to manage or have access | Perceived value      | Technology |

|    |    |  |                    |              |
|----|----|--|--------------------|--------------|
|    |    | to, that is also something that is not desirable. I can take an example. Well somebody wants to have a folder access where you keep your organization strategy. That's where you will don't want robot to have access to where services can still process adding or users of members of groups but you do not want those kind of things. So security is another one. Cost versus value. Cost versus efforts is another one that could be there, and also what is the history with legacy applications in the organization. |                    |              |
| 50 | LN | Alright, so continuing on with some critical success factors that we found in our research. Management support is one of them, in the context of adopting RPA, do you have any opinions about that?  |                    |              |
| 51 | R2 | Yeah absolutely so without management support and showing the value of RPA for service tasks it will not be adopted because it has to go through budget cycles and implementation cycles and there is much more around it, like architecture security, so all that has to go through. Unless you have management support it will not be possible to implement it for services desk. So I rate it five.   | Management support | Organization |
| 52 | LN | OK, continuing on with the next one. Do you feel that size of enterprise affects our RPA in any way and how would that be?   |                    |              |
| 53 | R2 | Yes, the bigger the organizations, the more complex is the use case and then there is also an ease of adoption with a bigger organization because you have too much to do so you know that OK even if you start we have much use case to use. For a very small organization it's difficult to prove it and you will see that in smaller organizations they have a service desk that is done by the same people who are handing over the laptop. They're the same ones who are taking up                                    | Size of enterprise | Organization |



|    |    |  |                       |              |
|----|----|--|-----------------------|--------------|
|    |    | the call handling, over the laptop, running around in the office to fix VIP's issues, so they will not have such a solution in place which can do these things because for them that one person is running the show. Having an RPA has a bigger impact for them. So, absolutely, the size of the enterprise... I would say four for sure.  |                       |              |
| 54 | LN | Yeah interesting. Continuing on that a bit, when we say the scope of the business in the context of our adopting our RPA within IT service desks, what do you think about that?  |                       |              |
| 55 | R2 | So, scope of the business means what type of applications and what part of the business the service desk can help?   |                       |              |
| 56 | LN | We kind of mean it as; does the scope, the size of the company's operations, number of employees, department geographical spread... Does that affect the adoption of RPA a in any way?   |                       |              |
| 57 | R2 | I think it does. If you have an outsourced service desk which for example are working out of the Philippines or India or somewhere else, you have a bit of difference in how it is handled and it's runned. The moment you start thinking of outsourcing, you think about cost saving, having more people. But for the outsourced organization, it's more about productivity of the people that are there. So for them it's important that they push for implementation of these kinds of solutions so that they're spending less on people and getting more money or whatever this service desk offers. So scope and locations and number of applications that are there in the organization, especially the legacy application, is quite a big one because RPA is the only way to automate a legacy application. So scope and locations and number of applications that are there in the organization, especially the legacy application, is quite | Scope of the business | Organization |

|    |    |   |  |              |
|----|----|---|--|--------------|
|    |    | a big one because RPA is the only way to automate a legacy application. So when I say legacy, it's from the 1980s, 1970s. You're still running those applications that do not have an API or anything. They just have a very crappy UI where you can just click to do certain things, so that's where RPA is very helpful.  |  |              |
| 58 | LB | Yeah.   |  |              |
| 59 | R2 | So scope is a five as well.   |  |              |
| 60 | LN | Ok. Communication, what do you think about that in the context of adopting RPA within IT service desks?   |  |              |
| 61 | R2 | Communicating to the requester or to business or to IT service desks themselves?  |  |              |
| 62 | LN | We mean that there's good communication between all parties involved in the adoption so that would be the workers, the RPA team who implements the RPA, the management. Just an overall communication within the organization.  |  |              |
| 63 | R2 | Alright. So we call it organizational change management. You will hear that word, OCM, a lot here. So in organizational change management communication is important because it's an RPA, it's doing some service desk work. If you bring something new like this people might be a bit afraid that they might lose jobs or that somebody else is going to do their work so, you need to handle all these people and explain that nobody's leaving, it is going to do your repetitive work, so you can focus on the new things that you're bringing in the organization. It has to come from top to down, so it has to come from management and then at a different level different communication needs to happen. You need to do stakeholder assessment and stakeholder management | Communication<br><br>Active stakeholder management | Organization |

|    |    |  |                               |              |
|----|----|--|-------------------------------|--------------|
|    |    | as a part of this. So communication gets a five out of five.   |                               |              |
| 64 | LN | Yes. Our next question is actually about stakeholder management as well. How important do you think that is?   |                               |              |
| 65 | R2 | The active stakeholder management by service desk when they're implementing these things is similar like I mentioned with communication, they go hand in hand from that perspective. Without their involvement it will not be successful. If it is a very small use case, it's fine, it's not feasible but the moment you start expanding it's absolutely needed. Therefore, I would say that the importance is around four out of five. | Active stakeholder management | Organization |
| 66 | LN | Great. Moving on to the environmental context, are there any factors that you feel could affect the adoption of RPA?   |                               |              |
| 67 | R2 | Can you define environmental factors? Do you mean like governance, legal and those things?   |                               |              |
| 68 | LN | Yeah exactly, basically everything, social influences and everything around the implementation. What is it that affects the implementation or the adoption of RPA?   |                               |              |
| 69 | R2 | I haven't seen government or legal challenges in implementing RPA as of yet. Like I said, if it's sensitive then we don't do that kind of work. It's basic things that you try to do, but when it comes to external factors, I have no clue at the moment.   |                               |              |
| 70 | LN | Ok, because we were actually thinking of a critical success factor that is called normative pressures, which would entail pressures from customers from governments and legal institutions. Do you feel that any of those affect the adoption in any way?  |                               |              |
|    | R2 | It could be that in some countries like Germany for example, there is a stricter   | Normative pressure            | Environment  |

|    |    |  |                   |             |
|----|----|--|-------------------|-------------|
|    |    | <p>law when it comes to processing user information. So there might be pressure on not utilizing something that could have data in the cloud or somewhere or somebody else is processing their data. So yes, it could be from a government perspective as well or legal institutes, but there is also restriction on what they should do and what they cannot do. But that's organizational governance that they get from other compliance places. So I would say in the middle of the scale, a three.</p>   |                   |             |
| 71 | LN | <p>Yes, we were also talking about mimetic pressures which would entail if an organization is affected by another organization to implement and adopt our RPA. How do you feel about that?</p>   |                   |             |
| 72 | R2 | <p>One organization pressuring another to adopt RPA? So you are saying that one organization is trying to push another organization to do it?</p>  |                   |             |
| 73 | LN | <p>Yeah, do you feel like if one organization is very forward thinking into RPA, maybe a competitor, would you be more likely to adopt RPA within your organization? Do you feel that there's any pressure in that way?</p>  |                   |             |
| 74 | R2 | <p>Ok, in that way you need to think of benchmarking. So what's the benchmarking of automated tickets processed by automation, processed by RPA? There is a lot of benchmarking available in the market. If you look at your Web Part, they have benchmarking already done on how much you should be automating from the service desk or for SAP issues or for Windows issues... So you can find that information. So yes, if it comes to benchmarking, some organizations are quite advanced from that perspective. I would say, but not all organizations are doing that so I would say between two and three so let's take two.</p> | Mimetic pressures | Environment |

|    |    |  |                   |            |
|----|----|--|-------------------|------------|
|    | LN | 2 ok. Alright moving on to the individual context, do you think that people within your organization influence each other when it comes to adopting RPA?   |                   |            |
| 75 | R2 | Yeah. Nowadays people try to run these shops like an entrepreneur, so they absolutely influence each other to adopt. There are so many events happening where people get influenced and inspired actually. So I would say influence and inspired, absolutely.  | Social influence  | Individual |
| 76 | LN | Yeah. How do you feel that the adoption of RPA is affected by social influence and could you rate that from zero to five?  |                   |            |
| 77 | R2 | I think it's not more social, but it's more value driven. For some people RPA shows a lot of value, for some it's nothing. So it's not more social but it's more value driven. If there are use cases where there is value, people will connect like if you talk to somebody who's working in a server team, then the service desk that's doing RPA is nothing. It doesn't care right, so those are part of the same organization working closely but it's difference as well. But I think it's more value driven than social influence from my perspective. So a two. | Social influence  | Individual |
| 78 | LN | Yeah. Another question is how do you feel that the adoption of our RPA is affected by hedonistic drives which would be if the adoption of RPA is affected by how fun people think it is to have and if they are excited or stuff like that?  |                   |            |
| 79 | R2 | It is a difficult one because it's a very individual thing. I cannot say... Maybe a three in the scale, just to be in the middle.  | Hedonistic drives | Individual |
| 80 | LN | Yes. Ok, the last context is task context. First we're gonna ask, looking at the tasks and the processes that have the potential to be streamlined through our RPA, what are some cast characteristics   |                   |            |

|    |    |   |                      |      |
|----|----|---|----------------------|------|
|    |    | that have a positive impact on RPA adoption?  |                      |      |
| 81 | R2 | Alright, if you talk about tasks only and not technology, I think there are two mostly. One is that it's always the same way, so you have a standardized way of doing it. If you can write it down and hand it over to the service desk and say this is how you do it, the same way RPA can actually do it. So, one is that there is a standardized way of doing it, it's the same every time. The second is that it does not need too much access, but that becomes technology... So I would say just standardized steps. If it is repeatable, the same way it can be RPA. | New CSF              |      |
| 82 | LN | Yes, moving on to some critical success factors that we found. Task complexity, do you feel that that affects the adoption in any way?  |                      |      |
| 83 | R2 | I think task complexity helps it, because if the service desk gets to do the complex tasks will take more time or multiple screens. So, I think it helps the adoption. If it's more complex, the better the adoption from that perspective because simple tasks you're able to do in a few seconds while the robots have to take time to process and log into screens whereas service desk can do it faster. So yes, the more the complex the better.   | Task complexity      | Task |
| 84 | LN | Ok, so what would you rate that from a zero to five?  |                      |      |
| 85 | R2 | I think four should be enough, yes.   | Task complexity      | Task |
| 86 | LN | Super. The last question, we are asking about task interdependence. How do you feel like that affects the adoption of our RPA in IT service desks?  |                      |      |
| 87 | R2 | I think nowadays RPAs are quite advanced in terms of understanding the dependencies, so it can be managed. If there is any in the use case that can   | Task interdependence | Task |

|    |    |  |  |  |
|----|----|--|--|--|
|    |    | easily be understood and set up by RPA themselves so take around three from that perspective, so that's important yes. |  |  |
| 88 | LN | Alright, that was all of our questions today.  |  |  |
| 89 | IV | Do you have anything to add?   |  |  |
| 90 | R2 | Uh no they're quite nice questions, quite detailed, quite thought through. So it's good, very good. Thank you.         |  |  |
| 91 | IV | Ok, then I'll pause the recording.   |  |  |
| 92 | LN | Yes, great.  |  |  |



## Appendix 3 - Interview R3

Date: 24-04-2023

Length: 44:54 minutes

Participants: Respondent 3 (R3), Lovisa Nilsson (LN), Irma Vajraca (IV)

Language: English

| Row | Person | Transcription  | CSF | Context |
|-----|--------|--|-----|---------|
| 1   | LN     | OK first some background questions. Could you explain your role today in your organization?  |     |         |
| 2   | R3     | My role today is engineering manager for the robotic automation area, within Organization Y digital and we work within the global team. We provide robotic process automation solutions slash robots for global Organization Y in all business functions within like different models of the deliveries.   |     |         |
| 3   | LN     | How long have you had that role?   |     |         |
| 4   | R3     | Is it three years already? I think it's around three years.  |     |         |
| 5   | LN     | We know that you have previous experience with the RPA, but do you have any previous experience with IT service desks?   |     |         |
| 6   | R3     | Yeah, I mean I've worked at Organization Y for like 8 years. I think it's around six years that I kind of worked delivering services to end customers and the service desk is the first point of contact for everybody within a company, or how its is designed here, to call, it's like an emergency call you know. This doesn't work for me for any kind of services that they work with and encounter challenges. So definitely the IT service desk is always there or service desk. I mean even if you work within the |     |         |

|    |    |  |                 |            |
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|    |    | systems or teams that are working with the very infrastructure backend stuff, the journey starts always with the customer or the end consumer and then the end consumer is the one that approaches the service desk for questions and that's where the journey starts.   |                 |            |
| 7  | LN | Ok, great so umm we have divided our questions into different contexts and so the first context is the technology context and we have like I said some critical success factors that we have identified and wanted to test out. But first we're going to ask you a general question. When adopting RPA within IT service desks do you know some critical success factors that are necessary for successful adoption in the technology context?   |                 |            |
| 8  | R3 | Hmm, I mean to have any technology implemented you have to know why you're doing it, where you want to implement it and how you want to implement it. What is the purpose of it. If you exactly know why you need that technology, from there on you need to have a plan. Every technology is an enabler for people to do better and more efficient, more structured work. So to have people processes and technology merged you have to have kind of clear definition and how and what to do in different stages of the implementation. Therefore, the critical success factor would be very much around knowing why you're doing certain technology. | Perceived value | Technology |
| 9  | LN | Alright so we have found that one critical success factor is perceived simplicity, in the context of the adopting RPA within IT service desks. What do you think about what comes to mind?   |                 |            |
| 10 | R3 | Simplicity... So, RPA is very much a technology that is there to bring direct  | New CSF         | Technology |

|    |    |   |                      |            |
|----|----|---|----------------------|------------|
|    |    | simplification and improvement to the current way of working. Because if you want to implement RPA, or any automation tool, you have to have standardized and optimized your processes and ways of working. With that said you need to simplify how people actually work and execute operations, daily operations, in order to implement any process automation in this case RPA.   | Perceived simplicity |            |
| 11 | LN | Alright, so we're going to ask you to rate perceived simplicity from zero to five. Zero being not important at all and five being very, very important.   |                      |            |
| 12 | R3 | Now I need a little bit of guidance here. As in, important for us when implementing RPA simplicity is needed or for when in discussions... Can you liberate a little bit more than that?  |                      |            |
| 13 | LN | We mean that like perceived simplicity... If the users find that the RPA is easy to use or easy to implement and integrate in their business processes and how important is that? Is that something that is very necessary or not that necessary?   |                      |            |
| 14 | R3 | The end user is the most important and if the end user thinks that a technology is not being simple and not making their life better, then we failed. Currently the way we are implementing our RPA is that the end user does not really have any interaction, given the fact that most of the robots that we are implementing are unattended. So the impact on the end user is that the task that they have been doing has now been outsourced to a robot. And when it comes to implementation, they don't really need to do anything more than; yes my digital body works fine and it does the job for me. So that is basically our mindset and where we started when we grouped and formed this team is to make the life of our end consumers as | Perceived simplicity | Technology |

|    |    |   |                         |            |
|----|----|---|-------------------------|------------|
|    |    | easy and simple as possible, without any interference. So we do everything for them, they just need to sit relax and enjoy the benefits.  |                         |            |
| 15 | LN | Yeah, so from zero to five what would you rate that?  |                         |            |
| 16 | R3 | Five plus!  | Perceived simplicity    | Technology |
| 17 | LN | Super! Ok, to the next success factor, perceived compatibility, in the context of adopting RPA within IT service desks. Do you have any thoughts about that?  |                         |            |
| 18 | R3 | RPA is a very adaptable tool and one of the key benefits is that the technology that we use in Organization Y is very adaptable to the old legacy systems and to the new systems. So very adoptable and is there to merge any kind of gap that exists.  | Perceived compatibility | Technology |
| 19 | LN | Alright, if you could rate that from zero to five what would you say?   |                         |            |
| 20 | R3 | Oh five of course.  | Perceived compatibility | Technology |
| 21 | LN | Yeah. Ok, the next one in the technology context. When we say perceived value, the users perceived value of the RPA implementation. What comes to mind?   |                         |            |
| 22 | R3 | Everybody sees the value once things are being implemented in production. Sometimes it does take a little bit more time. I think the value is there when it comes to the speed of deliveries, the simplicity, a lot more clarity as well. So the value definitely is there and the end users are seeing it. Less boring work, faster to deliver, faster to get an answer. | Perceived value         | Technology |
| 23 | LN | And from zero to five how important would you rate that?  |                         |            |

|    |    |  |                                |            |
|----|----|--|--------------------------------|------------|
| 24 | R3 | Oh the value?  |                                |            |
| 25 | LN | Yeah, the perceived value from the users. How do you feel, from one to five, that it affects the users, the people who work within the IT service desks?   |                                |            |
| 26 | R3 | Maybe four, because at the very beginning I think people do not really see the real value. It's only after a while they understand the real value of it, yeah so I would go with 4.  | Perceived value                | Technology |
| 27 | LN | Yeah great. The next one is system safety and reliability which is basically about...  |                                |            |
| 28 | IV | You missed one Lovisa.   |                                |            |
| 29 | LN | Oh, sorry. Ok the one that I was supposed to say is development of adequate skills. Do you feel that the people using it are the people who have integrated RPA within their service desk and within their business processes. Do you feel like they have to develop any adequate skills? Is that important for them?  |                                |            |
| 30 | R3 | Here it is. It's very dependent on the delivery model of RPA in an organization. In our organization what we have is centralized development, meaning a team within the company does all the development for all the business units. The business units are just adopting the robots and they have their digital coworkers. And this was done three years ago, that's when we did the shift. Before that it was a federated model of deliveries, meaning every business function can dirty their hands with the technology and work with it and deliver what they need. In that case you definitely need a competence, a tech competence, in order to develop, maintain, support and engineer the robots. Because regardless of how RPA is being sold from the companies producing the technology as such. RPA is not just you know moving | Development of adequate skills | Technology |

|    |    |  |                                |            |
|----|----|--|--------------------------------|------------|
|    |    | modules around. It's a lot more about engineering, it's a lot about compatibility, about security, about data privacy, governance... You know all the cycles that need to go in engineering that really needs to happen somewhere and in the case when in federated model that's when all lands within the business units who are developing their robots. If that gave you an answer.   |                                |            |
| 31 | LN | Yeah, that's super interesting. If you could rate that from zero to five, the importance of developing the right skills?   |                                |            |
| 32 | R3 | Oh, five. I mean, it all depends on the model of delivery definitely, but if you don't have the skilled people to do the development, at the end of the day you'll not see the real value and benefit of it.   | Development of adequate skills | Technology |
| 33 | LN | Alright, moving on to the next one. Now it's system safety and reliability, which is basically if the users feels that it's safe to use the system or to have the system in their business processes. If they feel like they're confident and can trust and rely on the RPA solution, what do you think about that?  |                                |            |
| 34 | R3 | There's a global panic around robots and whenever we mention and we offer what we offer, the people are often like "oh how can we rely on this?". But then once we have started with the actual testing and showing people what this technology is actually doing, it's when the truth comes out. And what often we have come across is proving that RPA actually does things in a more secure way than what humans do. Often we have seen that, what people have been executed has not been compliant because there are so many other ways of doing, making shortcuts, misunderstandings. Whereas when a robot does it, the robot does it exactly | System safety and reliability  | Technology |

|    |    |  |  |            |
|----|----|--|--|------------|
|    |    | <p>how you tell it to do. It doesn't click anywhere else. So I would say it's more secure than actual humans doing it. And then to add on to that, in the cycle of security data privacy, we are working with continuous assessments. Before implementing anything we always have to do assessments. We do comply with the baselines for security that are in standards that are set by the company. So it's very secure.</p>  |  |            |
| 35 | LN | Yeah great. And a rating from zero to five, what would you give it?  |  |            |
| 36 | R3 | Five plus.   | System safety and reliability          | Technology |
| 37 | LN | Ok. The next one is system transparency and explainability. You kind of brought that up before. It is about being very transparent with the users about what the robot is doing. If you could elaborate on that, do you feel like that's important?  |  |            |
| 38 | R3 | <p>Transparency in general I think it's very important. When it comes to RPA we are always transparent on what's being done and how things are being done. This is simply because we cannot do anything without close collaboration with the business. The business is the one that sets the requirements. Whenever we are developing a robot we must do exactly what the business needs, otherwise we will not really succeed. We have a huge transparency. I would say on what the robot does and what data we collect and how we present it. Those are things that we do not compensate about. We might have a lack of transparency if we say... the code. But even the code, what we write is there in a shared repository, so whoever wants to and is interested in seeing it they will see it. So everywhere where we can, I mean we are exposing and it's visible to the end consumers. Of course you will not give access to</p> | System transparency and explainability | Technology |



|    |    |   |  |            |
|----|----|---|--|------------|
|    |    | certain privacy data, but even that we are explaining how we're doing it and why we're doing it in a certain way. So I would say we are very transparent.   |  |            |
| 39 | LN | Yeah, from zero to five, what would you rate that?  |  |            |
| 40 | R3 | How important is it?  |  |            |
| 41 | LN | Yes.  |  |            |
| 42 | R3 | It's always... I mean five. Be as transparent as possible with people and the end consumers. Let them know what it is and how things are done, and even if sometimes things don't work we share.  | System transparency and explainability | Technology |
| 43 | LN | Yeah, great. The last critical success factor that we found in the technology context is the robot understanding the human and supporting the humans in the context of adopting RPA within the service desk. What do you think about that?  |  |            |
| 44 | R3 | So the robots that we are building are very dummy in that sense. They do just what we tell them to do. There is no reasoning behind what the robot needs to do, meaning there's no AI behind it. There is no modeling behind it. It's very much going from A to B to Z and doing these actions. End of the story. There is not that much of a need to understand and cooperate with the end consumers, so I don't think that the way things are being implemented right now there is any understanding going on. From a human perspective, yes. They will see like ok this is what the robot does or this is what the robot didn't do let me see why the robot didn't do it. That is about it. As basic as it can be. | Consider human needs                   | Technology |
| 45 | LN | Yeah, and what would you rate that from zero to five?   |  |            |
| 46 | R3 | Given the fact that we don't have any collaboration as such, I'm not even sure  | Consider human needs                   | Technology |

|    |    |   |                                     |              |
|----|----|---|-------------------------------------|--------------|
|    |    | how to rate it. If there is an AI and need for interaction, absolutely that is very important but right now let's put it somewhere in the middle.   |                                     |              |
| 47 | LN | Yeah if it's like if we take it in the perspective of your organization right now and you would feel like it's a three or something like that?  |                                     |              |
| 48 | R3 | Let's put it as a three because I don't really have that much of the understanding or data currently. I mean we do provide all the performance tools, if anybody wants to see how the robot is working and collaborating with the other systems. But any high specific collaboration doesn't really happen.                                 | Consider human needs                | Technology   |
| 49 | LN | Alright, that is great. We'll go into the organization context next. So the first general question is there any organizational conditions that come to mind in the aspect of adopting RPA within IT service desks?  |                                     |              |
| 50 | R3 | Absolutely. Where do I start... No difference than any other. It's very much about prerequisites on the business and very close collaboration with the end users or the departments where digital coworkers are being implemented, and the organization that actually creates or designs ways of working and processes. So that is the key. | Communication                       | Organization |
| 51 | LN | Alright. So the first uh critical success factor that we found was management support. What do you think about management support in the context of adopting RPA within the IT service desks?   |                                     |              |
| 52 | R3 | Oh yes definitely. I mean management support always needs to be there. The blessing from management always needs to be there. However, what I think is most important is that the process and ways of working accountables within the company   | Management support<br>Communication | Organization |

|    |    |   |                           |                     |
|----|----|---|---------------------------|---------------------|
|    |    | <p>should drive this change and change management. When it comes to automation and RPA, I think management support is very much needed in elaborating why we're doing this and the importance of it. And to, you know, to remove the panic that exists whenever something is implemented which is taking someone's task or taking someone's job. It is not really like that. You know, just to demystify everything that is ongoing out there. So from that perspective yes definitely but when it comes to actual actions, I mean management can just enjoy the benefits.</p>  |                           |                     |
| 53 | LN | <p>Alright, and from zero to five what would you rate that?</p>   |                           |                     |
| 54 | R3 | <p>Let's say four.</p>  | <p>Management support</p> | <p>Organization</p> |
| 55 | LN | <p>Alright, great. The next critical success factor is the size of the enterprise and we're basically meaning that, depending on the company size there can be different challenges and benefits and opportunities of implementing the RPA within the service desk. What do you think about that? Do you feel like the size of that enterprise affects your organization's RPA implementations?</p>   |                           |                     |
| 56 | R3 | <p>Definitely, I mean the bigger the scale of the organization the more complex it is. So, definitely in larger organizations you have a lot of lot more stakeholders to align with and get the things right. Especially organizations that are on a journey for digital transformations. Us being a you know traditional company, you know no matter what we've been around for quite some years, and are not digital native. So also combining those and the complexity of it all, it would be much easier of course if this company is a smaller size and you need to speak to very few people. Also here in Organization Y we have a global</p> | <p>Size of enterprise</p> | <p>Organization</p> |

|    |    |   |                    |              |
|----|----|---|--------------------|--------------|
|    |    | presence, so you get all the languages, you get all the countries with their own rules and legislation.   |                    |              |
| 57 | LN | How would you rate that from zero to five?  |                    |              |
| 58 | R3 | The complexity?   |                    |              |
| 59 | LN | How would you rate it, five being that the size of the enterprise affects the implementation of RPA within IT service desks much, or zero being that it doesn't affect it at all?   |                    |              |
| 60 | R3 | It does affect it alot. I'm going with five. I feel that I'm just giving you four or five.  | Size of enterprise | Organization |
| 61 | IV | Yeah but that's good, then we know that the critical success factors that we found were good.   |                    |              |
| 62 | LN | So the next one is kind of the same. We're talking about the scope of the business, so the company's operations and their processes and the number of employees, departments, geographical spread and stuff like. In the same way, how do you feel like that affects that implementation of RPA within IT service desks?  |                    |              |
| 63 | R3 | Um, again it depends on how the service desk is set up and working but the more business units are dependent on that same service desk, the bigger the complexity. It is of course easier when there are dedicated areas and service desk areas but then you come across the style work which we all want to kind of get away from. So yeah, it does impact very much so I'll go with the same, five. | Scope of business  | Organization |
| 64 | LN | Great. The next one is communication in the context of adopting RPA within IT service desks, what comes to mind?  |                    |              |
| 65 | R3 | Communication is the key to success no matter what you are doing. From the  | Communication      | Organization |

|    |    |  |                               |              |
|----|----|--|-------------------------------|--------------|
|    |    | most simple things to the most complex ones. I would take five. Sometimes too much communication can as well bring complexity, but it's better to have too much communication than not having it all. So I think it's very important, five   |                               |              |
| 66 | LN | Five, yeah. The last one in the organizational context is active stakeholder management. What do you think about that?   |                               |              |
| 67 | R3 | I feel that the key to success is hospitality. They call it stakeholder management in the business but I feel it's very much about hospitality and how we make our end users feel. It's the same when someone comes to your house right, a friend that is coming frequently to your place. You meet your friends, you greet your friend, you have a chit chat. It's very much about hospitality and continuing working and continuously kind of like trying to understand what their pain points are, how can we work better, where can we improve, where do we see ourselves and in a couple of months or years. So yes, absolutely a key to success. | Active stakeholder management | Organization |
| 68 | LN | Zero to five?  |                               |              |
| 69 | R3 | Five my friend.  | Active stakeholder management | Organization |
| 70 | LN | Ok. Moving on to the next context that we found, the environmental context. Do you have any factors that come to mind in regards to the adoption of RPA within IT service desks?   |                               |              |
| 71 | R3 | Can you elaborate a bit more?  |                               |              |
| 72 | LN | We can go into the critical success factors that we found so you can get a feel of what we mean.   |                               |              |
| 73 | R3 | Yes.   |                               |              |

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|----|----|---|---------------------|-------------|
| 74 | LN | We found that the adoption of RPA can be affected by normative pressures, which would entail kind of like rules and legislation and the outside influences, the norms. How does that affect the implementation of RPA within IT service desks?  |                     |             |
| 75 | R3 | So there are several aspects to the outside impact. First, the panic going on out there that it's created by the media and you know people get information everywhere. It's very natural that they get into a little bit of a panic mode - "robots will take my job", without actually trying to understand what it is that we are doing. And that's when they start creating shells around them and their resilience happens. So that's one of the factors that we all need to really work with. The second is rules and legislations in each country that we need to understand and know and comply with, which do bring complexity when automating globally. However, it also gives us clarity. So in the long run I think those are very good, even though at the beginning when we are implementing something, it kind of takes a side step... which is good I mean, we have to comply with certain things and we have to do it. | Normative pressures | Environment |
| 76 | LN | Again, zero of five, what would you rate that?  |                     |             |
| 77 | R3 | Um, in a perfect world I would say that we wouldn't even notice the resilience and the outsides factor, it would be very much embedded. But the way things are right now, it does slow us down sometimes or often. <b>Let's go with four.</b>   | Normative Pressures | Environment |
| 78 | LN | Great, so the next critical success factor is about mimetic pressures, which is basically if the organization feels inclined to adopt RPA within IT service desks if another organization does it? Do you feel like that affects the  |                     |             |

|    |    |  |                   |             |
|----|----|--|-------------------|-------------|
|    |    | implementation and the adoption of RPA within IT service desks?  |                   |             |
| 79 | R3 | It depends on the priorities that they have set in the organization. Maybe they have other priorities that they need to and that they're focused on working. Here it's more about a matter of priority, so I would go with three maybe.  | Mimetic Pressures | Environment |
| 80 | LN | Great. Again, do you feel like there's any other factors that come to mind and the environmental context?  |                   |             |
| 81 | R3 | No, not really.  |                   |             |
| 82 | LN | Alright moving on to the next context, the individual context. The general question is, how do you think people within your organization influence each other when it comes to the adoption of RPA within IT service desks?  |                   |             |
| 83 | R3 | The best marketing that you can get is to have people spread their experience. Same with any...I'm not hungry but I'm going to give a restaurant as an example... The best marketing you can get is people sharing how they felt when they went there, how they felt when they ate the food, you know the entire experience. So there is definitely that factor of spreading the rumor, the good rumor and then you get people after you. Sometimes we just sit back and relax and then people just come to us. So I think that's very important when it comes to the adoption of RPA. | Social influence  | Individual  |
| 84 | LN | Great, because the critical success factor that we found was social influence and that's basically what you talked about so if you could rate that from zero to five, how much does it affect the adoption?  |                   |             |
| 85 | R3 | Five.  | Social influence  | Individual  |
| 86 | LN | Five. Yes. Alright, the last one in the individual context is hedonistic drives,   |                   |             |



|    |    |  |                   |            |
|----|----|--|-------------------|------------|
|    |    | which basically means that if the people that have implemented RPA within their business operations, if they feel any emotions that comes along with the implementation...So if they feel happy and they feel satisfied and stuff like that. How do you think that affects the adoption of RPA?  |                   |            |
| 87 | R3 | Well, we had some students recently who have worked on that. Especially on the more emotional part. What came to surprise is that people can sometimes feel stressed when their tasks are being automated. Not because they're losing those tasks and fear of losing their job, but it's more about losing the tasks that did not require much of a cognitive load on them. That was kind of like a relaxed time during work. You know, without thinking, I do it and I get a reward that I have done it. So apparently there is something going on there and we're trying to start measuring that. So kudos to those students for finding those diamonds. | Hedonistic drives | Individual |
| 88 | LN | Yeah that's great. What would you rate that from zero to five when it comes to adopting RPA?   |                   |            |
| 89 | R3 | Five. It is very important how people feel.  | Hedonistic drives | Individual |
| 90 | LN | Super. The last context is task related. The general question is, looking at the tasks and processes that have the potential being streamlined through RPA. What are the task characteristics that have a positive impact on the RPA adoption within IT service desks?   |                   |            |
| 91 | R3 | Everywhere we're humans spend a lot of unnecessary cognitive load and tasks which are rule based, repetitive and doesn't really require much of one to one human interaction are the tasks that are golden nuggets for automation and for speed up of of deliveries.   | New CSF           |            |

|    |    |   |                      |      |
|----|----|---|----------------------|------|
| 92 | LN | Yeah. The critical success factor that we found regarding the task is task complexity. People find that some organizations will be more likely to adopt certain degrees of task complexity. How do you feel about it?   |                      |      |
| 93 | R3 | We start first with the low hanging fruits and the tasks that are non-value adding. Those are the first ones to basically harvest. So it is definitely important to categorize and know where to start from.  | Task Complexity      | Task |
| 94 | LN | Yeah, from zero to five, what would you rate that?  |                      |      |
| 95 | R3 | Five. Start simple and small.   | Task Complexity      | Task |
| 96 | LN | Yeah, great. The last critical success factor that we found was task interdependence and how dependent is the task on other tasks and how does that affect the adoption of RPA within IT service desks?   |                      |      |
| 97 | R3 | I mean, absolutely if you don't feed the robot with any tasks that previously should have been done, then the robots will not will not do. That's why, in order to have efficient implementation of RPA or any automation, you have to revisit your processes and the way you deal with your processes, knowing the dependency and clarify who does what. Otherwise, if you don't have that, the robots will be just a waste of machine power. Actually not even the machine power because they will not run, but you know waste of work. | Task interdependence | Task |
| 98 | LN | Do you feel like it's easier or more difficult to adopt RPA if the task that's going to be adopted is dependent on other things and other tasks and processes?  |                      |      |
| 99 | R3 | It depends how frequent those are done and how embedded in a daily work   | Task interdependence | Task |

|     |    |   |                      |      |
|-----|----|---|----------------------|------|
|     |    | they are. But it definitely adds complexity.  |                      |      |
| 100 | LN | Yeah, ok. Zero to five? The last time.  |                      |      |
| 101 | R3 | Five.   | Task interdependence | Task |
| 102 | LN | Five, great. Alright so that was all of our questions. Do you have anything to add?   |                      |      |
| 103 | R3 | No, I think you've done a really good background research or prior research. Very relevant questions, very relevant not only for the IT service desk areas, I think for whenever RPA is being implemented. Often RPA is seen as, you know, a golden nugget to fix all of our problems but there's a lot of other things that need to come into place before RPA. There's a lot of panic and myths that are out there and I feel that globally RPA is not being used enough, simply because people have gotten very scared and there's so much resilience because of the outside factors. It takes a lot of force and talk with people, communication, proving that this works and it's nothing scary. |                      |      |
| 104 | LN | Yeah, that's true. So have you stopped the recording?   |                      |      |
| 105 | IV | No, I haven't yet. Can I stop it?   |                      |      |
| 106 | LN | Yes.  |                      |      |

## Appendix 4 - Interview R4

Date: 24-04-2023

Length: 42:47 minutes

Participants: Respondent 4 (R4), Lovisa Nilsson (LN), Irma Vajraca (IV)

Language: Swedish

| Row | Person | Transcription   | CSF | Context |
|-----|--------|---|-----|---------|
| 1   | IV     | Yes, först ska vi ta lite bakgrundsfrågor om dig. Så om du hade kunnat förklara din roll i din organisation idag?   |     |         |
| 2   | R4     | Yes, jag jobbar idag som något som kallas för Engineering manager vilket innebär att jag är mjukvaruingenjörschef kan man väl säga. Så jag leder och utvecklar ett team som bygger mjukvara inom franchisee Y. Samt så är vi dedikerade till individuella produkter kan man säga då, men jag leder teamet. Sen kan jag vara team flyttas runt och bygga olika typer av produkter eller olika typer av mjukvaror. Så mitt primära ansvar är inte för produkten utan det är för teamet och deras leverans egentligen. Så jag anställer människor, se till att det finns en teamdynamik och liksom ett sätt vi jobbar i teamet, så att vi ska kunna vara så effektiva som möjligt såklart, och är chef liksom att ledare och allt vad det innebär. Kontraktsskrivningar och lönesättning och de här grejerna, liksom också rätt så mycket tråkig admin och sådant som också hör till det. Men vi är ju såklart också ingenjörer, eller mitt team mina medarbetare är ingenjörer. Så jag jobbar ju mycket tillsammans med dem |     |         |

|   |    |  |  |  |
|---|----|--|--|--|
|   |    | om hur vi ska utveckla grejer och hur vi ska göra det på bästa sätt de ska hitta liksom fina lösningar.  |  |  |
| 3 | IV | Hur länge har du haft den rollen?  |  |  |
| 4 | R4 | Den rollen har jag haft i sex månader ungefär. Innan dess så var jag team manager, så jag gjorde egentligen samma sak. Men jag var team manager på IT Servicedesk, det är så ni har kommit i kontakt med mig genom *. Jag var inte chef för *, men jag var chef inom samma organisation. Och det gjorde jag i sex år, kanske tidigare eller någonting. Så chef har jag varit i ungefär sex och en halv till sju år, och har varit fjorton år på franchisee Y eller något sådant och jobbat med IT i kanske tio av de ungefär.                    |  |  |
| 5 | IV | Om vi går in på RPA då robotic process automation, har du någon tidigare erfarenhet av just det?   |  |  |
| 6 | R4 | Ja men det har jag. Egentligen ur ett par olika perspektiv, eller från ett par olika håll kan man säga. Min första kontakt med RPA processer var nog när jag jobbade inom detaljhandel, liksom, när jag jobbade med kundservice ganska tidigt i min karriär inom franchisee Y. Och där var det såklart, kundservice är ju väldigt liksom applicerbar grej när du har många repetitiva processer där du försöker automatisera det via RPA. Jag tror inte liksom att konceptet "RPA" riktigt existerade då, benämningen fanns nog liksom inte. Men |  |  |

|   |    |   |  |  |
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|   |    | <p>man jobbade ju med samma grejer, man försökte hitta liksom processer som upprepas flera gånger om dagen, och kunde man scripta eller automatisera dem på något sätt liksom. Sen har ju detta blivit en business i sig liksom, eller en del så. Men det var väl första gången jag fick komma i kontakt med det. Sen så klart har ju jag jobbat med IT-supportrar och under IT-servicedesken, och där är ju mycket också att koppla till RPA. I dagsläget inom liksom Software Engineering så jobbar vi väl inte riktigt med det på samma sätt för vi har nog samma, vad ska man säga, alltså det finns inte samma business case riktigt i software development. Du har inte de här repetitiva processerna, men vi har ju massa saker, liksom script och automation på andra grejer när vi deployar grejer till exempel. Men vi gör det inte med hjälp av RPA-robotar på samma sätt. Men principen är mycket detsamma.</p> |  |  |
| 7 | IV | <p>Exakt, därför känner vi att du har tillräckligt med erfarenhet kring det också. Du nämnde din erfarenhet av IT service desk, så det har vi gått igenom. Så, nu ska vi då komma in på själva intervjun i sin helhet. Vi har ju då lyckats hitta olika critical success factors från tidigare forskning, som vi då vill testa nu och se om du känner att de är viktiga eller om du känner att det finns annat som du skulle vilja ha med, som vi inte har lyckats hitta. Så vi kommer gå igenom olika critical success factors, och så kommer du få säga vad</p>   |  |  |

|    |    |  |                         |            |
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|    |    | du tycker och känner om dem, och betygsätta vikten av dem.   |                         |            |
| 8  | R4 | Okej.  |                         |            |
| 9  | IV | Men först ska vi ha en liten generell fråga för vi har ju då delat upp de här critical success faktorerna fem olika kontext. Så det första kontexten är "technology context", och den första frågan är: När man inför RPA på service desk, vilka är några viktiga teknologiska faktorer som krävs för en framgångsrik adoptering enligt dig?   |                         |            |
| 10 | R4 | Och när ni säger att man inför RPA så betyder ju alltså både implementation och adoption? För många gånger kan man ha väldigt successful implementation men man har absolut sämst adoption.  |                         |            |
| 11 | IV | Ja, vi har försökt nischa oss lite på just adoption spektrumet. Men många gånger kan det tolkas lite som, eller det kan vara implementationsmässigt också. Men ja, det är väl det mest adoptionen.   |                         |            |
| 12 | R4 | Ja, nej men jag förstår, jag förstår hur ni har tänkt. För de går ju väldigt mycket hand i hand. Alltså vill man ha en successful adoption så måste man ju vara med på den resan, alltså långt innan man implementerar egentligen liksom. Men om vi tittar på liksom teknologiska faktorer så tror jag en sån grej som... alltså dels att det finns en bra integration med nuvarande verktyg, och speciellt när man tittar på IT-servicedesk. Alltså generellt, om jag tittar på hur | Perceived compatibility | Technology |



|  |  |   |  |  |
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|  |  | <p>vi har jobbat inom IT service desk, då har man ju haft en liksom en techstack som redan har funnit. Alltså du har ett primärt operativsystem-</p> <p>(problem med internetuppkoppling)</p> <p>- eller om du använder liksom Windows Active directory, och där har du oftast många människor som är extremt familjära med den Tech stacken. Tar du ett RPA verktyg som är helt byggt i någon egen techstack, så kan det nog finnas rätt mycket motstånd kring det, tror jag. Just för att du introducerar något nytt, som inte riktigt passar in i ditt landskap, tror jag. Så det tror jag är väldigt viktigt att tänka efter, i vilket språk man bygger RPA-roboten till exempel, om pratar man programmeringsspråk, så att det väl stämmer överens med den existerande techstacken som finns. Också, när det kommer till saker som, alltså vad du använder för typ av- alltså vad du har för plattform egentligen. För liksom, ja vad kallar vi det för? Ja men du har ju oftast en plattform där du registrerar incidenter och hanterar incidenter exempelvis. Om du så använder servicenow eller om du använder Remedy BMC, det finns ju en sjö av de olika. Och där tror jag man också måste sträva efter en högre adoption rate, och få någon typ av seamless integration mellan de här verktygen. För om du lägger liksom 90 % av din arbetsdag</p> |  |  |
|--|--|---|--|--|

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|    |    | på en viss plattform och du inte har någon integration där emellan, nej men då blir nog liksom det blir nog svårare att få en liksom positiv adoption på de grejerna. Men kan du få dem att flyta in liksom genom att ta en interface man kan dela, eller så här, då blir det ju väldigt mycket lättare och mycket mer seamless för de som faktiskt använder robotarna.   |                      |            |
| 13 | IV | Ja, jättebra. Vi går vidare till den första critical success faktorn, som är "perceived simplicity" i sammanhanget att införa RPA på servicedesk. Vad tänker du när du hör det?   |                      |            |
| 14 | R4 | Alltså produktiv simplicity det är väl hur enkelt det är att använda egentligen?  |                      |            |
| 15 | IV | Ja, om det på något sätt påverkar adoption?   |                      |            |
| 16 | R4 | Ja men definitivt. Alltså hela syftet med att ha RPA, det är ju att du tar någonting som är liksom antingen en väldigt komplicerad process som du behöver många clicks för att utföra, och göra den enklare och mer smooth. Samma intention, men du kan göra samma grej med färre clicks. Och det är mindre tidsåtgång liksom. Så det skulle jag vilja säga extremt viktigt. Och när man går in just på begreppet "perceived" så är det också extremt viktigt för adoption rate. Det får ju inte se klurigt nu liksom, det måste ju också se väldigt enkelt ut, och man ska ju egentligen när man ser detta från första gången exakt veta när kan jag applicera detta | Perceived simplicity | Technology |

|    |    |   |                         |            |
|----|----|---|-------------------------|------------|
|    |    | och hur kommer det funka när jag applicerar just den RPA processen.   |                         |            |
| 17 | IV | Ja, jättebra om du då får betygsätta vikten av “perceived simplicity” från skala noll till fem, där noll inte är så viktigt och fem är väldigt viktigt?   |                         |            |
| 18 | R4 | Men jag skulle nog vilja säga fyra där kanske, det är nog inte en femma, även om jag tror det kan vara en femma i många andra olika kontexter där man har någon annan publik. Men när vi pratar om IT service desk medarbetare, så har vi oftast ganska liksom nyfikna IT medarbetare som de shyar inte away liksom om det ser för svårt, vissa kan ju nästan tycka det är lite roligt att det är en utmaning, att man måste lägga lite tid på att förstå det liksom, det är nog fyra skulle jag vilja säga | Perceived Simplicity    | Technology |
| 19 | IV | Nästa, när du hör termen perceived compatibility i sammanhanget med att införa RPA på Service Desk, vad tänker du då? det här har du varit inne lite på redan?  |                         |            |
| 20 | R4 | Ja, jag touchade nog lite, det är nog just då med integrationsmöjligheter. Hur väl det linear upp med den techstacken man har sitt arbete idag, och vilka system man jobbar med. Jag tror det, är ja men det är nog väldigt viktigt. Sen beror det ju väldigt mycket på hur landskapet ser ut på arbetsplatsen man jobbar idag liksom, och man kan ju göra andra grejer för att få en ökad “perceived compatibility”. Alltså du kan ju bygga en   | Perceived compatibility | Technology |

|    |    |   |                         |            |
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|    |    | snygg gui som du kallar för toolbox eller vad som helst och så gör du en powershell script runt det och så lägger du allt på ett och samma ställe. Men då får du ju bygga en extra grej för att kanske få den här kompatibiliteten som du vill ha eller eftersträva eller som din target audience vill ha liksom. Hade man kunnat ha det från början så är det ju fantastiskt.  |                         |            |
| 21 | IV | Och om du får betygsätta vikten av det?   |                         |            |
| 22 | R4 | Det skulle jag nästan vilja säga är nog en femma, om jag tittar på de liksom exemplen att vi har haft igår organisationer där vi har försökt introducera, kanske inte liksom RPA processer som så, men säg nya scripts eller nya features eller tools, när vi har misslyckats många gånger så är det för att vi har sagt att "hej har ett nytt verktyg och en ny länk", Ja då ska jag lägga den bland mina 52:a länkar jag har någonstans på skrivbordet eller i min web browser liksom det är kass. Men om jag lägger det, om jag embeddar den länken i en knapp och lägger den i vår interface i vår portal, då kommer den användas, så det är nog väldigt viktigt. | Perceived compatibility | Technology |
| 23 | IV | Okej, nästa är då hur "perceived value" skulle påverka adoptionen? Och med det menar vi hur användarna, de här inom servicedesken, vet om vad det är för värde man kan få ut av RPA, om det påverkar på något sätt?   |                         |            |
| 24 | R4 | Extremt viktigt, jag tror det är en klockren femma tror jag.  | Perceived value         | Technology |

|    |    |   |  |  |
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|    |    | <p>Och en stor anledning till det, tror jag är att när man ska liksom leda en change management process kring RPAer, så gäller det nog att verkligen ha med sig dem som är väldigt seniora i den här yrkeskategorin, för att liksom resten av teamet ska följa efter. Och de här seniora medarbetarna har oftast väldigt stor yrkesstolthet. Alltså det finns en yrkesstolthet är att man kan göra allt det här komplexa, att man vet var man ska gräva i Active directory eller i liksom terminalen för att nå sitt ändamål. Och får man inte de med sig på banan så kommer detta aldrig att hända. Då kommer de liksom göra det på det gamla svåra sättet. Det är ju detta vi detta är vårt jobb liksom det är ju därför bara vi kan göra detta, och inte vem som helst på gatan liksom. Och det är extremt viktigt att de förstår värdet i detta i den här processen, för får man inte de med sig så kommer ingen annan göra det heller.</p> |  |  |
| 25 | IV | Och det satte du en femma på va?  |  |  |
| 26 | R4 | En femma ja.  |  |  |
| 27 | IV | Just det vidare då, när vi säger det är "development of adequate skills", vad tänker du då?   |  |  |
| 28 | R4 | Du får nog ge mig lite mer kontext kring den frågan?  |  |  |
| 29 | IV | Vi tänker då på att användarna skulle behöva utveckla nödvändiga kunskaper och färdigheter, för att använda RPA-tekniken. Om det på   |  |  |

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|----|----|--|--------------------------------|------------|
|    |    | något sätt behövs för att lyckas med RPA adoption?   |                                |            |
| 30 | R4 | Ja alltså de måste ju såklart veta hur man använder verktygen, sen tror jag inte det är lika viktigt för detta är oftast väldigt kluriga människor som är nyfikna på lösningar, de kommer att klura ut hur man använder den utan och liksom få en liksom arbetsinstruktion på hur man ska göra det och i vilka scenarion. Om man är väldigt tydlig med vad värdet är istället, så kan man bara ge dem det så kommer de lösa det själva. Jag tror inte att detta är så viktigt, i alla fall inte i sammanhanget och med de liksom kollegorna och medarbetarna jag har haft. Jag skulle nog sätta detta som en kanske till och med etta. | Development of adequate skills | Technology |
| 31 | IV | Ok, intressant. Vi går vidare på systemets "säkerhet och tillförlitlighet", och med det menar vi då om användarna uppfattar systemet säkert och att det går att lita på det, om det på något sätt påverkar adoptionen?   |                                |            |
| 32 | R4 | Ja men det gör det definitivt. Jag tror det är två separata grejer eller jag skulle nog vilja säga att det är två separata grejer. Tillförlitlighet är superviktigt, ska man introducera någon sådan här grej och det inte funkar första gången man testar det så kommer folk bara vad är det här för skit liksom. Sen kommer de aldrig att vilja röra det igen. Så det är jätteviktigt. Säkerhet är nog... det finns någon anledning till att folk generellt hatar IT säkerhet, för   | System safety and reliability  | Technology |

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|    |    | <p>det är rätt tråkigt liksom. De här människorna är inte intresserade av det, utan är de är intresserade av att liksom hjälpa sina kunder. Så rutiner och sånt, det tämjer man oftast lite på för att de tycker att de vet bäst och de vet bäst många gånger men processen finns ju av en anledning.</p> <p>Tillförlitligheten är jätteviktig, skulle jag vilja säga, och att säkerheten är inte så viktig för adoptionen. Sen är det ju andra anledningar till att säkerhet är jätteviktigt såklart, men inte för en adoption rate.</p>   |  |            |
| 33 | IV | Så om du skulle få sätta de här två i en skala mellan noll och fem?   |  |            |
| 34 | R4 | Jag vill sätta en trea på den, då hamnar någonstans mittemellan.  | System safety and reliability          | Technology |
| 35 | IV | Yes, vidare “system transparency and explainability”, vad tänker du om dem?   |  |            |
| 36 | R4 | Ja men jag tänker att det är rätt mycket kopplat till det här med att visa värde liksom. Och jag kommer tillbaka lite till liksom vad det är för typer av personer vi pratar om när vi tittar på de som jobbar på IT-servicedesk liksom. De vill ju veta vad det är som händer, och de vill veta hur det händer, vilken process är det som liksom faktiskt exekutrar när man trycker på den här knappen liksom, “jo men att det skickar ett console command in i en terminal som connectar till en LINUX server som gör att det uppdaterar”. De vill veta det, för att dels finns det en yrkesstolthet i det. Men | System transparency and explainability | Technology |



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|    |    | också så det finns ingen som litar så lite på IT system som de som faktiskt jobbar med att fixa IT system. Så de vill alltid veta vad det är liksom backupen om den här automationen inte fungerar. Då måste vi kunna göra det manuellt. Så det tror jag definitivt är viktigt.  |  |                            |
| 37 | IV | Om du får betygsätta den?  |  |                            |
| 38 | R4 | Alltså transparensen är superviktig, sen beror det också lite på vad det är för typ av process vi pratar om. Det finns ju också processer som man tycker att "jag bryr mig inte hur det funkar, bara det funkar" grejer. Men det är nog ändå, ja men säger att den fyra då kanske.   | System transparency and explainability | Technology                 |
| 39 | IV | Ja. Vidare, hur skulle du säga att adoptionen av RPA påverkas av att systemet tar hänsyn till de anställdas behov, om du förstår vad vi menar?   |  |                            |
| 40 | R4 | Alltså är det de anställdas behov, det är de som ska använda RPA?  |  |                            |
| 41 | IV | Precis, de som jobbar inom service desk.   |  |                            |
| 42 | R4 | Ja men extremt viktigt. Detta är ju egentligen, ska man bygga någon typ av RPA processer måste man göra ett väldigt starkt business case. Varför har man valt just den här processen och automatisera, och den måste ju också återspegla det eftersom den som faktiskt använder RPA tycker. Och det måste ju finnas ett värde i att man sparar pengar, man sparar tid, och sparar tid, det är ju alltid sparar pengar i slutändan. | Consider human needs<br>Communication  | Technology<br>Organization |

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|    |    | <p>Men skapar man RPA-process för någon som inte tycker att den nuvarande processen idag är ett problem, alltså att detta är något vi mer än gärna gör, så ja då kommer ju ingen använda det. Det måste finnas ett starkt syfte, och det syftet måste också vara kommunicerat och väldigt tydligt varför man har valt, och gärna när man identifierar sin business case varför just den här automationen ska byggas, så måste man ju involvera folk som ska använda det idag. Alltså man måste gå ut och göra intervjuer på sina arbete för att fråga "vad är de arbetsuppgifter som är absolut tråkigast och tar absolut mest tid och inte ger något värde liksom?". Det är dem man ska titta på, så detta är ju absolut superviktigt. Det är ju en klockren femma.</p> |  |  |
| 43 | IV | Intressant, då går vi in på "organization context", skulle du säga att det finns några organisatoriska förhållanden som du tror kan påverka adoptionen av RPA inom servicedesk?  |  |  |
| 44 | R4 | Det finns det absolut. Har ni något exempel på vad det hade kunnat vara?   |  |  |
| 45 | IV | Ja, vi kan vi kan gå igenom dem, våra critical success factors. Till exempel, management support, stöd från ledningen.   |  |  |
| 46 | R4 | Nej, det tycker jag väldigt oviktigt egentligen.   |  |  |
| 47 | IV | Hade du kunnat utveckla vad du tänker kring det?   |  |  |

|    |    |  |                                       |              |
|----|----|--|---------------------------------------|--------------|
| 48 | R4 | När man implementerar en process så som den här, som ska användas av liksom medarbetarna och support-agenterna så tror jag inte det behöver finnas speciellt mycket stöd av liksom en ledningsgrupp eller upper management på något sätt liksom. Detta är ju processer som är till för medarbetarna. När man har man gjort en bra automation, och har man gjort liksom sitt change management arbete, så tror jag detta är något som man ger medarbetarna, och så säger man här kollar vad denna kan göra. Vill ni ha det, använd det. Sedan kommer det att sprida sig naturligt inom organisationen. Man behöver liksom inte ha massa dragningar och presentationer om varför man gör detta liksom, utan det kommer naturligt sprida sig från medarbetare till medarbetare genom att man har byggt ett bra verktyg. | Management support                    | Organization |
| 49 | IV | Så du menar att så länge det man har skapat håller hög kvalitet och ger värde så kommer det naturligt finnas stöd?   |                                       |              |
| 50 | R4 | Ja, 100%.  |                                       |              |
| 51 | IV | Okej. Så om du får betygsätta vikten av management support?  |                                       |              |
| 52 | R4 | Noll typ.  | Management support                    | Organization |
| 53 | IV | Intressant.  |                                       |              |
| 54 | R4 | Enda gångerna jag tänkte att, det är kanske lite kuriosa, men jag tänker själv på så alla grejer jag över åren har bett mina medarbetare att göra. Jag   | Hedonistic drives<br>Social influence | Individual   |

|    |    |  |                    |              |
|----|----|--|--------------------|--------------|
|    |    | <p>behöver bara tjata på mina medarbetare att göra sakerna de tycker det är tråkigt eller inte förstår varför. Sen om jag kan förklara varför detta är viktigt för franchisee Y eller varför är detta viktigt för organisationen, ja då kan jag få några med mig och sen så kan de sprida det till resten. "Ni måste göra detta, den här tråkiga tidrapporteringen, vi gör det vi ska kunna ta detta och lägga det rätt budget så att vi faktiskt ska rekrytera nya människor när vi behöver det". Men om det är saker som är liksom självklara, då behöver ju aldrig jag tjata om det då, och då börjat använda de här grejerna innan jag ens vet om det.</p> |                    |              |
| 55 | IV | Yes, storleken på företaget tror du det har någon påverkan på hur bra man adopterar RPA?   |                    |              |
| 56 | R4 | <p>Inte storlek på företaget tror jag inte spelar roll med storlek på team tror jag spelar roll. Ja du en liksom en IT service departement som är 50 medarbetare då kan det vara klurigt, men om du har samma departement där du har flera små mindre subteams som är mellan 6-åtta personer, så tror jag det du får mycket bättre chans att göra den här förändringen. Det måste liksom finnas mycket kommunikation och interaktion mellan medarbetare.</p>   | Size of enterprise | Organization |
| 57 | IV | Så vikten av företagens storlek?   |                    |              |
| 58 | R4 | <p>Företagens storlekar tror jag inte spelar någon roll över huvud taget. Det är noll, det är</p>  | Size of enterprise | Organization |

|    |    |  |                       |              |
|----|----|--|-----------------------|--------------|
|    |    | hur du strukturerar dig internt inom det företaget.  |                       |              |
| 59 | IV | Och då kanske lite samma fråga men, "företagsomfattningen" alltså då "scoopet", hur tänker du kring det?   |                       |              |
| 60 | R4 | Nej men jag tror inte det är så viktigt heller inte, om vi fortfarande är i en värld där vi pratar om servicedesken. Då tror jag inte att skåpet för företaget spelar någon roll. Då är det en nolla också.  | Scope of the business | Organization |
| 61 | IV | Vad tänker du när du hör "communication", det är viktigt?  |                       |              |
| 62 | R4 | Det är oerhört viktigt. Jag tror det är det absolut bästa och mest effektiva sättet att, dels bevisa sitt business case. Du kan sitta som en produktägare för den här RPA processen, och har världens bästa business case, men om du inte lyckas kommunicera det till dina framtida användare av den här processen så kommer ingen bry sig. Då kommer ingen adoptera detta. Så det är superviktigt att redan från början involvera dem i skapandet av den här businessen, prata om vad det är för intentioner och ambitioner man har kring detta, och vad det är man vill göra och sen. Att man är tydlig i hela change management processen. Att man kommunicerar hur utvecklandet av den här processen. Också att man samlar på sig input och feedback, "är det någon annan process ni vill att vi tittar på?". Och liksom "så här långt har vi kommit till implementationen". | Communication         | Organization |

|    |    |   |                               |              |
|----|----|---|-------------------------------|--------------|
|    |    | Kommunikationen är extremt viktigt, och detta tror jag är inte specifikt för på RPA på något sätt. Jag tror detta är generiskt detta liksom när man pratar om förändring. Så visst, en femma.   |                               |              |
| 63 | IV | Okej, det sista inom organisation context är “active stakeholder management”, då att ha en aktiv hantering av intressenter, hur skulle du säga att det kan påverka?   |                               |              |
| 64 | R4 | Det beror på hur man väljer att lägga upp det. Jag tror att det är väldigt viktigt att den som försöker liksom driva det här business caset eller den här förändringen att de har någon typ av stakeholder mapping och titta på liksom, vilka är mina konsumenter av den här processen? Vad behöver jag göra redan nu för att de ska få nya information och för att det ska liksom skapa någon typ av buzz kring det här? Så jo det ja, detta är nog i liksom i paritet med kommunikation tror jag, om man gör det på rätt sätt. Det kanske inte precis lika viktigt, för på ett sätt ska också liksom RPA-scripten eller RPA-roboten som man skapar, de ska ju också kunna tala för sig själv. Men det säger att det är en fyra, det är nog snäppet under kommunikation. | Active stakeholder management | Organization |
| 65 | IV | Yes, vi går vidare. Vi går in i "environmental context", när det gäller miljön runt införandet och adoptionen, finns det några faktorer som du tror kan påverka?  |                               |              |
| 66 | R4 | Pratar vi arbetsmiljö? Pratar vi infrastruktur?   |                               |              |

|    |    |  |                                     |                             |
|----|----|--|-------------------------------------|-----------------------------|
| 67 | IV | Ja, vi pratar om påtryckningar utifrån. Vi kan till exempel gå in på en critical success factor som handlar om normativa påtryckningar. Det vill säga kunder, lagar, regeringen och sådana påtryckningar.  |                                     |                             |
| 68 | R4 | Jag försöker gräva lite om jag har en liksom någon egen erfarenhet om när vi har pratat om de här grejerna.  |                                     |                             |
| 69 | IV | Och sen om du inte har det så är det också helt okej, det är också värdefull info och säga att det kanske inte är vanligt.   |                                     |                             |
| 70 | R4 | Alltså vi har ju varit i en hel del scenario kring liksom lagar och regler, så klart att det har haft en impact i hur snabbt vi har fått upp en viss adoption rate. Jag tänker på, liksom för några år sedan när GDPR kom, till exempel. Då var det ju väldigt viktigt för oss att liksom, vi var rätt snabba med att skapa och skapa olika typer av script, för att hantera GDPR och request. Och då påverkas nog vara adoption rate av att vi förstod allvaret av den innebörden liksom. Vad händer om vi hanterar ett ärende kopplat till GDPR fel, vad kan det innebära för franchisee Y? Och då tror jag att användarna kring det här scriptet, de kände nog på uttryckningen någonstans, i att "jag vill ju absolut inte göra detta fel liksom". Så på så sätt så blev det en sån där grej som alla bara defaultar till. Då låter vi den processen göra jobbet åt oss så behöver vi inte hänga ut oss själva liksom eller ta risken att ett misstag kan göras, hur litet det än skulle vara. Men | Normative pressure<br>Communication | Environment<br>Organization |



|    |    |  |                    |             |
|----|----|--|--------------------|-------------|
|    |    | återigen, då måste man ju liksom ha en transparens och kommunikation som funkar kring detta. Varför gör vi det där “jo vet ni killar och tjejer, ni är superduktiga på att göra den här processen, men en gång av tusen går det fel”. Det räcker ju för att det ska gå åt skogen när det kommer till GDPR. Låt oss inte ta den risken, använd detta scriptet istället eller, använd denna RPA:n istället till exempel. |                    |             |
| 71 | IV | Och vikten?  |                    |             |
| 72 | R4 | Säg en trea då.  | Normative pressure | Environment |
| 73 | IV | När det kommer till mimetiska påtryckningar, och med det menar vi då om andra organisationer väljer att införa RPA, om det på något sätt påverkar folk inom ens egen verksamhet till att vilja adoptera eller införa RPA?  |                    |             |
| 74 | R4 | Jag tror detta är oerhört viktigt, då hade du gått och fråga upper management där hade de sagt “ja superviktigt”. Hade du frågat medarbetare och de individuella användarna hade de sagt “noll, jag skiter väl i vad andra gör”.   | Mimetic pressure   | Environment |
| 75 | IV | Så vikten av det?  |                    |             |
| 76 | R4 | Ja alltså tänker man på slutanvändaren, för det är de som ska adoptera detta i slutändan. Så är det nog noll, de bryr sig inte om vad man gör på andra företag, de tittar bara på sin egen verksamhet, och det de gör här och nu och hur den processen kan hjälpa dem.   | Mimetic pressure   | Environment |

|    |    |   |                  |            |
|----|----|---|------------------|------------|
| 77 | IV | En intressant aspekt är det, att liksom mer högre upp kanske det har en påverkan.   |                  |            |
| 78 | R4 | Ja definitivt.  |                  |            |
| 79 | IV | Nästa kontext är "individual context" om du bara får tänka fritt, hur tror du att människor inom din organisation påverkar varandra när det gäller adopteringen av RPA?   |                  |            |
| 80 | R4 | Jätteviktigt, och speciellt om man tittar på vad man har för typ karaktärer och hur de vanligtvis hanterar förändringar i ett team. Och det var därför jag sa att det är så viktigt att ha ganska små team när man gör såna här grejer, eller att man har mycket större fördel. Du har ju liksom traditionella människor som alltid är super på allting och "titta här kommer nya grejer vad roligt det här vill jag kasta mig in i". De är liksom early adopters alltid, men resten av tiden lär ju också känna dem som att de här personerna som alltid hoppar på de nya grejerna, så för dem betyder inte det så mycket, det är bara liksom normalt beteende. Däremot har du en som är traditionellt sett väldigt skeptisk till förändringar, och du kan få en sån person som en liksom ambassadör RPA lösning, en traditionell resistor. De kommer ju hela tiden bara "kolla på Bosse", liksom han tycker detta är en bra idé, och han tycker inte att några nya idéer är bra idéer. Men han tycker att det är bra, "då är det riktigt bra!". Då kommer ju hela teamet att hoppa på det direkt. | Social influence | Individual |

|    |    |   |                                       |            |
|----|----|---|---------------------------------------|------------|
| 81 | IV | Det här är faktiskt en critical success factor som vi har hittat, och det är då socialt inflytande. Så det var det som du tog upp nu, om du får säga vad det har för vikt i skalan?   |                                       |            |
| 82 | R4 | Fem definitivt.   | Social influence                      | Individual |
| 83 | IV | Nästa critical success factor är känslomässiga drivkrafter. Till exempel hur kul folk tycker att det är att använda RPA inom jobbet och hur spännande det är. Om det liksom ger ett nöje till den anställde.  |                                       |            |
| 84 | R4 | Jo men det tror jag definitivt det finns aspekter kring liksom. Sen hur man gör de här sakerna kul det är rätt tråkiga grejer egentligen, det ju ingenting liksom men man kan ju executea ett skript eller man kan liksom visualisera var en RPA robot gör på olika sätt och på så sätt få någon typ av visuell pleasure från att "kolla jag tryckte på den där knappen jag matade in ett användarnamn och tryckte på den där knappen och så händer en massa grejer", det är ju gött liksom sånt gillar ju vi som jobbar med IT. Sen så klart det är inte det absolut viktigaste men, men det vi är nog faktiskt lite löjliga, vi tycker sånt där är coolt. När det händer saker på skärmen och gärna automatiseringar. Kan man visserligen visualisera det på ett bra sätt så att man får en god känsla så kan det definitivt vara en bidragande faktor. Speciellt eftersom så mycket det är liksom det här word of mouth, mycket är just den här sociala grejen liksom om "Bosse kommer och visar det | Hedonistic drives<br>Social influence | Individual |

|    |    |   |                            |            |
|----|----|---|----------------------------|------------|
|    |    | här och det är dessutom hände coola saker på skärmen” Ja, det är klart man vill testa det själv också.  |                            |            |
| 85 | IV | Betygssättningen?   |                            |            |
| 86 | R4 | Ja, det kan nog vara en fyra.   | Hedonistic drives          | Individual |
| 87 | IV | Ja, nu har vi sista kontextet som vi nog hinner med när jag kollar på klockan. Om det är då “task context” och handlar då om själva då processerna och uppgifterna som ska automatiseras. Skulle du säga att det finns några karaktärsdrag bland de här processerna som har en positiv påverkan på RPA-adopteringen?  |                            |            |
| 88 | R4 | Ja, att de är repetitiva, det tror jag är den absolut viktigaste. Jag gör liksom samma sak hundra gånger om dagen och det tar så här många key clicks, sju key clicks varje gång jag gör den här processen liksom. Kan jag få ner det till två via RPA process istället så tror jag det är jätte viktigt. En annan grej värde, tror jag. Alltså varför man har processer är det för att jag faktiskt bidrar med någonting där jag löser ett problem, eller är det för att min egen organisation ska samla på sig data eller statistik kring vad det var som var fel. Det är en traditionellt tråkig grej. Jag känner att jag är ju här för att hjälpa andra liksom hjälpa kunder. Jag struntar väl i om mitt företag får rätt statistik liksom. Det är en klassisk sån grej tror jag, det klart att sen använder man den statistiken för att liksom ha ett problem management arbete, men det | New CSF<br>Perceived value | Technology |

|    |    |  |                 |      |
|----|----|--|-----------------|------|
|    |    | <p>ser jag liksom inte, det är för långt bort. Eller så det är liksom två snurrer till på det innan man ser resultatet av det arbetet. Det är nog också en typisk sån grej där RPA processer kan hjälpa till jättemycket tror jag. Alltså just det här att man inte ser värdet av den processen idag, men okej då kan jag väl tänka mig att göra det om jag spenderar två key clicks på den istället för att göra 17 liksom.</p>   |                 |      |
| 89 | IV | <p>Vi har då hittat två critical success factors inom "task kontext", det första är uppgiftens komplexitet om du tror det påverkar?</p>  |                 |      |
| 90 | R4 | <p>Jag tror det påverkar men jag tror inte det påverkar så jättemycket och det kommer lite tillbaka till den här yrkesstoltheten jag pratade om tidigare. Det handlar ju jättemycket såklart om vad du har för typ av liksom medarbetare och jobbar med. Och i en servicedesk kontext så kan du ju ha medarbetare som är anställda för att de är väldigt duktiga på att kommunicera och prata många språk exempelvis. Men du kan också ha liksom systemadministratör och komplexitet, det är ju det de tycker är roligt. Alltså om de bara sitter och klickar på knappen för att utföra deras jobb det tycker de är skittråkigt de vill ju liksom gräva ner och göra grejer själv, att hitta lösningar och designa lösningar on the fly så för de tror jag inte att komplexiteten alls viktig.</p> | Task complexity | Task |
| 91 | IV | <p>Ok.</p>   |                 |      |

|    |    |  |                 |      |
|----|----|--|-----------------|------|
| 92 | R4 | <p>Utan de anställda vill ju ha bort det repetitiva för att kunna lägga mer tid på sånt där som de tycker är roligt. Jag har jobbat traditionellt i organisationer där vi har velat vi har velat lösa så mycket som möjligt på vår IT servicedesk det som ni kallar för first line. Vi har egentligen försökt koppla bort allting som har med second line och backline och sånt att göra. Så för oss var det ju klassiskt att ta bort allt det repetitiva men komplexitet det var ju det vi ville ha liksom. Vi anställde ju också människor som tyckte det var roligt att dyka ner på djupet liksom i de här grejerna. Hade vi plockat bort det komplexa från dem, då det är ju de, då hade inte de velat jobba kvar. Men det blir ju också en organisatorisk fråga vad du vill ha för typ av medarbetare, hur du vill strukturera din IT support eller vad det nu är för typ av support i din servicedesk.</p> | Task complexity | Task |
| 93 | IV | Om du snabbt får betygsätta vikten av komplexiteten?   |                 |      |
| 94 | R4 | <p>Det är noll om jag inte kan sätta den på minus. Jag kan ta liksom ifrån värdet, vi hade gjort det i min gamla organisation i servicedesk i liksom de teamen som jag skapar och jag tog bort komplexiteten så det blivit sura på mig? Liksom det är ju ändå detta är ju det enda jag tycker är roligt.</p>   | Task Complexity | Task |
| 95 | IV | Fattar. Ja okej, sista då. Om du tror att beroendet mellan processer påverkar adoptionen   |                 |      |

|     |    |  |                      |      |
|-----|----|--|----------------------|------|
|     |    | av RPA när man ska automatisera en uppgift?  |                      |      |
| 96  | R4 | Beroendet av processen?  |                      |      |
| 97  | IV | Alltså man kan säga om själva tasken som ska bli automatiserad genom RPA är väldigt beroende av andra uppgifter, blir det enklare eller svårare att införa och adoptera RPA för den tasken då?   |                      |      |
| 98  | R4 | Du menar liksom att det finns någon typ sekventiella task så de måste utföras i en viss ordning eller de har dependencies på varandra?   |                      |      |
| 99  | IV | Exakt, task interdependence.   |                      |      |
| 100 | R4 | Okej, jag tror ju det är betydligt lättare att isolera en hel process. Det är nog väldigt svårt att ha en process som är flera independent tasks, så att du försöker isolera liksom den sista, den sista tredjedelen och bara automatisera den, så tror jag att det blir väldigt svårt. Då måste vi ju ta hela flödet liksom. Eller får du inte titta på andra flöden som är enklare, som du kan isolera. Knasigt att börja på ett ställe, sedan köra automation och sen avsluta manuellt i en dator. Det tror jag inte är så uppskattat, det kommer många ifrågasätta och bara "kom tillbaka när ni är färdiga har gjort allt". | Task interdependence | Task |
| 101 | IV | Om du får betygsätta?  |                      |      |
| 102 | R4 | Ja, om man tänker på exemplet jag drog där så skulle det är nog väldigt viktigt, tror jag det är nog fyra åtminstone.  | Task interdependence | Task |
| 103 | IV | Yes super, det var allt alla våra frågor. Känner du att du har   |                      |      |



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|     |    | någonting du vill lägga till innan vi stoppar inspelningen?  |  |  |
|-----|----|--|--|--|
| 104 | R4 | Nej men det tror jag inte jag tyckte ni tyckte det bra speciellt när man får mycket liksom kontext frågorna så blir det ju oerhört mycket lättare och att det flyter in i någon typ av dialog istället för att man bara ratade liksom. |  |  |
| 105 | IV | Precis super men då avslutar jag, så perfekt.  |  |  |

## Appendix 5 - Interview Guide

| No | Context    | Question  | Critical Success Factors | Articles  |
|----|------------|---|--------------------------|---|
| 1  | Technology | <p><b>Q1:</b><br/>When adopting RPA within IT service desks, what are some key technological factors necessary for a successful adoption?</p>   |                          |   |
|    |            | <p><b>Q2a:</b><br/>When we say “perceived simplicity” in the context of adopting RPA within IT service desks, what comes to mind?</p> <ul style="list-style-type: none"> <li>• Could you rate the importance of “perceived simplicity” from 0-5, in the context of adopting RPA within IT service desks?</li> </ul>                   | Perceived Simplicity     | <i>Integrated T-O-E Framework for Technology Adoption</i> (Awa, Ojiabo, & Orokor, 2017) |
|    |            | <p><b>Q2b:</b><br/>What do you think of when you hear the term “perceived compatibility” in the context of adopting RPA within IT service desks?</p> <ul style="list-style-type: none"> <li>• Could you rate the importance of “perceived compatibility” from 0-5, in the context of adopting RPA within IT service desks?</li> </ul> | Perceived Compatibility  | <i>Integrated T-O-E Framework for Technology Adoption</i> (Awa, Ojiabo, & Orokor, 2017) |
|    |            | <p><b>Q2c:</b><br/>In your opinion, how does the perceived value of adopting RPA affect its adoption within IT service desks?</p> <ul style="list-style-type: none"> <li>• Could you rate the importance of</li> </ul>  | Perceived Values         | <i>Integrated T-O-E Framework for Technology Adoption</i> (Awa, Ojiabo, & Orokor, 2017) |

|  |  |   |  |   |
|--|--|---|--|---|
|  |  | “perceived values” from 0-5, in the context of adopting RPA within IT service desks?  |  |   |
|  |  | <p><b>Q2d:</b><br/>When we say “development of adequate skills” in the context of adopting RPA within IT service desks, what comes to mind?</p> <ul style="list-style-type: none"> <li>• Could you rate the importance of “development of adequate skills” from 0-5, in the context of adopting RPA within IT service desks?</li> </ul>         | Development of Adequate Skills         | (Plattfaut et al., 2022), (Kinkel, Baumgartner & Cherubini, 2022), (Rieth & Hagemann, 2022) |
|  |  | <p><b>Q2e:</b><br/>How do you feel that “system safety and reliability” in the context of adopting RPA within IT service desks affects the adoption?</p> <ul style="list-style-type: none"> <li>• Could you rate the importance of “system safety and reliability” from 0-5, in the context of adopting RPA within IT service desks?</li> </ul> | System safety and reliability          | (Rieth & Hagemann, 2022), (Zhu & Kanjanamekanant, 2022), (Syed & Wynn, 2020)                |
|  |  | <p><b>Q2f:</b><br/>In your opinion, how does “system transparency and explainability” affect the adoption of RPA within IT service desks?</p> <ul style="list-style-type: none"> <li>• Could you rate the importance of “system transparency and explainability” from 0-5, in the context of adopting RPA within IT service desks?</li> </ul>   | System transparency and explainability | (Rieth & Hagemann, 2022), Zhu & Kanjanamekanant (2022), Syed & Wynn (2020)                  |
|  |  | <p><b>Q2g:</b></p>  | Consider human needs                   | (Rieth & Hagemann, 2022),   |

|   |              |   |                    |  |
|---|--------------|---|--------------------|--|
|   |              | <p>How do you feel that the adoption of RPA within IT service desks is affected by the system considering and accommodating human (employee) needs?</p> <ul style="list-style-type: none"> <li>• Could you rate the importance of “considering human needs” from 0-5, in the context of adopting RPA within IT service desks?</li> </ul>  |                    | (Zhu & Kanjanamekanant, 2022), Syed & Wynn (2020)  |
| 2 | Organization | <p><b>Q3:</b><br/>Are there any organizational conditions that you feel could affect the adoption success of RPA within IT service desks?</p>   |                    |  |
|   |              | <p><b>Q4a:</b><br/>When it comes to “management support” in the context of adopting RPA within IT service desks, in what way does it affect the adoption?</p> <ul style="list-style-type: none"> <li>• Could you rate the importance of “management support” from 0-5, in the context of adopting RPA within IT service desks?</li> </ul> | Management Support | <i>Integrated T-O-E Framework for Technology Adoption</i> (Awa, Ojiabo, & Orokor, 2017), |
|   |              | <p><b>Q4b:</b><br/>When we say “size of enterprise” in the context of adopting RPA within IT service desks, what comes to mind?</p> <ul style="list-style-type: none"> <li>• Could you rate the importance of “size of enterprise” from 0-5, in the context of adopting RPA within IT service desks?</li> </ul>                           | Size of Enterprise | <i>Integrated T-O-E Framework for Technology Adoption</i> (Awa, Ojiabo, & Orokor, 2017), |
|   |              | <p><b>Q4c:</b></p>  | Scope of Business  | <i>Integrated T-O-E Framework for</i>  |

|   |             |   |                               |   |
|---|-------------|---|-------------------------------|---|
|   |             | <p>How do you think the “the scope of the business” in the context of adopting RPA within IT service desks, affects the adoption?</p> <ul style="list-style-type: none"> <li>• Could you rate the importance of “scope of business” from 0-5, in the context of adopting RPA within IT service desks?</li> </ul>  |                               | <i>Technology Adoption</i> (Awa, Ojiabo, & Orokor, 2017),                       |
|   |             | <p><b>Q4d:</b><br/>What do you think of when you hear “communication” in the context of adopting RPA within IT service desks?</p> <ul style="list-style-type: none"> <li>• Could you rate the importance of “communication” from 0-5, in the context of adopting RPA within IT service desks?</li> </ul>  | Communication                 | (Plattfaut et al., 2022), (Aditya, 2023), (Costa, Mamede & Miranda Silva, 2022) |
|   |             | <p><b>Q4e:</b><br/>In your opinion, what impact does an “active stakeholder management” in the context of adopting RPA within IT service desks have on the adoption?</p> <ul style="list-style-type: none"> <li>• Could you rate the importance of “active stakeholder management” from 0-5, in the context of adopting RPA within IT service desks?</li> </ul> | Active Stakeholder Management | (Plattfaut et al., 2022)  |
| 3 | Environment | <p><b>Q5:</b><br/>Regarding the environment surrounding the adoption, are there any factors that you feel could affect the adoption of RPA?</p>   |                               |   |
|   |             | <p><b>Q6a:</b><br/>How do you feel that the adoption of RPA within IT service desks is affected by</p>  | Normative Pressures           | <i>Integrated T-O-E Framework for Technology Adoption</i> (Awa,                 |

|   |            |  |                   |   |
|---|------------|--|-------------------|---|
|   |            | <p>normative pressures? These pressures can come from various sources, including customers, governments, and legal institutions.</p> <ul style="list-style-type: none"> <li>• Could you rate the importance of “normative pressures” from 0-5, in the context of adopting RPA within IT service desks?</li> </ul>  |                   | Ojiabo, & Orokor, 2017)   |
|   |            | <p><b>Q6b:</b><br/>How do you feel that the adoption of RPA within IT service desks is affected by mimetic pressures? These pressures can include other organization’s actions.</p> <ul style="list-style-type: none"> <li>• Could you rate the importance of “mimetic pressures” from 0-5, in the context of adopting RPA within IT service desks?</li> </ul> | Mimetic Pressures | <i>Integrated T-O-E Framework for Technology Adoption</i> (Awa, Ojiabo, & Orokor, 2017) |
| 4 | Individual | <p><b>Q7:</b><br/>How do you think people within your organization influence each other when it comes to the adoption of RPA?</p>  |                   |   |
|   |            | <p><b>Q8a:</b><br/>In what way do you think that the adoption of RPA within IT service desks is affected by social influence?</p> <ul style="list-style-type: none"> <li>• Could you rate the importance of “social influence” from 0-5, in the context of adopting RPA within IT service desks?</li> </ul>  | Social Influence  | <i>Integrated T-O-E Framework for Technology Adoption</i> (Awa, Ojiabo, & Orokor, 2017) |
|   |            | <p><b>Q8b:</b><br/>How do you feel that hedonistic drives impact the</p>   | Hedonistic Drives | <i>Integrated T-O-E Framework for Technology</i>  |

|   |      |   |                      |   |
|---|------|---|----------------------|---|
|   |      | <p>adoption of RPA within IT service desks? These drives may include excitement and pleasure towards the RPA implementation?</p> <ul style="list-style-type: none"> <li>• Could you rate the importance of “hedonistic drives” from 0-5, in the context of adopting RPA within IT service desks?</li> </ul> |                      | <i>Adoption</i> (Awa, Ojiabo, & Orokor, 2017)   |
| 5 | Task | <p><b>Q9:</b><br/>Looking at the tasks and processes that have the potential of being streamlined through RPA. Could you define any task characteristics that have a positive impact on RPA adoption?</p>   |                      |   |
|   |      | <p><b>Q10a:</b><br/>In what way is the adoption of RPA within IT service desks affected by task complexity?</p> <ul style="list-style-type: none"> <li>• Could you rate the importance of “task complexity” from 0-5, in the context of adopting RPA within IT service desks?</li> </ul>                    | Task Complexity      | <i>Integrated T-O-E Framework for Technology Adoption</i> (Awa, Ojiabo, & Orokor, 2017) |
|   |      | <p><b>Q10b:</b><br/>How do you feel that the “task interdependence” in the context of adopting RPA affects the adoption?</p> <ul style="list-style-type: none"> <li>• Could you rate the importance of “task interdependence” from 0-5, in the context of adopting RPA within IT service desks?</li> </ul>  | Task Interdependence | <i>Integrated T-O-E Framework for Technology Adoption</i> (Awa, Ojiabo, & Orokor, 2017) |

Table 3: Interview guide

## 7 References

- Aditya, Y. (2023). Significance of Artificial Intelligence to Deal with Stress during the Organisational Changes, 2023 IEEE 2nd International Conference on AI in Cybersecurity (ICAIC), February 2023, Available Online: <http://dx.doi.org/10.1109/icaic57335.2023.10044168> [Accessed April 12, 2023]
- Al-Hawari, F. & Barham, H. (2021). A Machine Learning Based Help Desk System for IT Service Management, *Journal of King Saud University - Computer and Information Sciences*, vol. 33, no. 6, pp.702–718, Available through: LUSEM Library website <http://www.lusem.lu.se/library> [Accessed 20 April 2023]
- Alvehus, J. (2023). *Skriva Uppsats Med Kvalitativ Metod - En Handbok*, 3rd edn, Stockholm: Liber
- Asatiani, A. & Penttinen, E. (2016). Turning Robotic Process Automation into Commercial Success – Case OpusCapita, *Journal of Information Technology Teaching Cases*, vol. 6, no. 2, pp.67–74, Available through: LUSEM Library website <http://www.lusem.lu.se/library> [Accessed 10 April 2023]
- Awa, H. O., Ojiabo, O. U. & Orokor, L. E. (2017). Integrated Technology-Organization-Environment (T-O-E) Taxonomies for Technology Adoption, *Journal of Enterprise Information Management*, vol. 30, no. 6, pp.893–921, Available through: LUSEM Library website <http://www.lusem.lu.se/library> [Accessed 10 April 2023]
- Berrahal, W. & Marghoubi, R. (2016). Lean Continuous Improvement to Information Technology Service Management Implementation: Projection of ITIL Framework, 2016 International Conference on Information Technology for Organizations Development (IT4OD), March 2016, Available Online: <http://dx.doi.org/10.1109/it4od.2016.7479279> [Accessed April 26, 2023]
- Bryman, A. (2011). *Samhällsvetenskapliga Metoder*, Translated by B. Nilsson, Malmö: Liber
- Casadei, A., Schlogl, S. & Bergmann, M. (2022). Chatbots for Robotic Process Automation: Investigating Perceived Trust and User Satisfaction, 2022 IEEE 3rd International Conference on Human-Machine Systems (ICHMS), November 2022, Available Online: <http://dx.doi.org/10.1109/ichms56717.2022.9980826> [Accessed April 12, 2023]
- Costa, D. A. da S., Mamede, H. S. & Mira da Silva, M. (2022). Robotic Process Automation (RPA) Adoption: A Systematic Literature Review, *Engineering Management in Production and Services*, vol. 14, no. 2, pp.1–12, Available through: LUSEM Library website <http://www.lusem.lu.se/library> [Accessed 10 April 2023]
- Dignum, V. (2019). *Responsible Artificial Intelligence: How to Develop and Use AI in a Responsible Way*, Cham: Springer
- Divanshu, Gupta, S., Gupta, R. & Gupta, D. (2021). An Implementation of Automated Service Request Desk for Hotel Industry, 2021 9th International Conference on Reliability, Infocom Technologies and Optimization (Trends and Future Directions) (ICRITO), September 2021, Available Online: <http://dx.doi.org/10.1109/icrito51393.2021.9596101> [Accessed April 12, 2023]
- Firmansyah, A. D. & Subriadi, A. P. (2022). IT Service Desk Model Literature Review: Benefits and Challenges, 2022 International Seminar on Application for Technology of Information and Communication (iSemantic), September 2022, Available Online: <http://dx.doi.org/10.1109/isemantic55962.2022.9920439> [Accessed April 12, 2023]
- Hofmann, P., Samp, C. & Urbach, N. (2020). Robotic Process Automation, *Electronic Markets*, vol. 30, no. 1, pp.99–106, Available through: LUSEM Library website <http://www.lusem.lu.se/library> [Accessed 10 April 2023]



- Iden, J. & Eikebrokk, T. R. (2013). Implementing IT Service Management: A Systematic Literature Review, *International Journal of Information Management*, vol. 33, no. 3, pp.512–523, Available through: LUSEM Library website <http://www.lusem.lu.se/library> [Accessed 15 April 2023]
- Jacobsen, D. I. (2002). Vad, Hur Och Varför?: Om Metodval i Företagsekonomi Och Andra Samhällsvetenskapliga Ämnen: Studentlitteratur
- Kinkel, S., Baumgartner, M. & Cherubini, E. (2022). Prerequisites for the Adoption of AI Technologies in Manufacturing – Evidence from a Worldwide Sample of Manufacturing Companies, *Technovation*, vol. 110, no.102375, Available through: LUSEM Library website <http://www.lusem.lu.se/library> [Accessed 14 April 2023]
- Lacity, M. C. & Willcocks, L. P. (2016). Robotic Process Automation at Telefónica O, *MIS Quarterly Executive*, vol. 15, no. 1, pp.21–35, Available through: LUSEM Library website <http://www.lusem.lu.se/library> [Accessed 5 April 2023]
- MacLean, D. & Titah, R. (2023). Implementation and Impacts of IT Service Management in the IT Function, *International Journal of Information Management*, vol. 70, no. 102628, Available through: LUSEM Library website <http://www.lusem.lu.se/library> [Accessed 10 April 2023]
- Madakam, S., Holmukhe, R. M. & Kumar Jaiswal, D. (2019). The Future Digital Work Force: Robotic Process Automation (RPA), *Journal of Information Systems and Technology Management*, vol. 16, pp.1–17, Available through: LUSEM Library website <http://www.lusem.lu.se/library> [Accessed 10 April 2023]
- Moreira, S., Mamede, H. S. & Santos, A. (2023). Process Automation Using RPA – a Literature Review, *Procedia Computer Science*, vol. 219, pp.244–254, Available through: LUSEM Library website <http://www.lusem.lu.se/library> [Accessed 5 April 2023]
- Oates, B. J. (2006). *Researching Information Systems and Computing*, London: SAGE
- Plattfaut, R., Borghoff, V., Godefroid, M., Koch, J., Trampler, M. & Coners, A. (2022). The Critical Success Factors for Robotic Process Automation, *Computers in Industry*, vol. 138, p.103646, Available through: LUSEM Library website <http://www.lusem.lu.se/library> [Accessed 5 April 2023]
- Pramod, D. (2021). Robotic Process Automation for Industry: Adoption Status, Benefits, Challenges and Research Agenda, *Benchmarking: An International Journal*, vol. 29, no. 5, pp.1562–1586, Available through: LUSEM Library website <http://www.lusem.lu.se/library> [Accessed 15 April 2023]
- Reungyu, N. & Waiyanet, P. (2022). An Exploratory Study on the Impact of RPA (Robotic Process Automation) Implementation on Behavioral Attitudes and Intentions within Organizations, 2022 7th International Conference on Business and Industrial Research (ICBIR), May 2022, Available Online: <http://dx.doi.org/10.1109/icbir54589.2022.9786504> [Accessed April 13, 2023]
- Rieth, M. & Hagemann, V. (2022). Automation as an Equal Team Player for Humans? – A View into the Field and Implications for Research and Practice, *Applied Ergonomics*, vol. 98, no.103552, Available through: LUSEM Library website <http://www.lusem.lu.se/library> [Accessed 15 April 2023]
- Sharma, R., Bharadwaj, S., Dutt, S. & Tomar, M. (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), December 2022, Available Online: <http://dx.doi.org/10.1109/smart55829.2022.10046772> [Accessed April 25, 2023]
- Syed, R., Suriadi, S., Adams, M., Bandara, W., Leemans, S. J. J., Ouyang, C., ter Hofstede, A. H. M., van de Weerd, I., Wynn, M. T. & Reijers, H. A. (2020). Robotic Process

- Automation: Contemporary Themes and Challenges, *Computers in Industry*, vol. 115, no. 103162, Available through: LUSEM Library website <http://www.lusem.lu.se/library> [Accessed 15 April 2023]
- Syed, R. & Wynn, M. T. (2020). How to Trust a Bot: An RPA User Perspective, in *Lecture Notes in Business Information Processing*, [e-book] Cham: Springer International Publishing, pp.147–160, Available Online: [http://dx.doi.org/10.1007/978-3-030-58779-6\\_10](http://dx.doi.org/10.1007/978-3-030-58779-6_10) [Accessed April 12, 2023]
- Zhu, Y.-Q. & Kanjanamekanant, K. (2022). Human–Bot Co-Working: Job Outcomes and Employee Responses, *Industrial Management & Data Systems*, vol. 123, no. 2, pp.515–533, LUSEM Library website <http://www.lusem.lu.se/library> [Accessed 15 April 2023]