universität wien

MASTERARBEIT / MASTER'S THESIS

Titel der Masterarbeit / Title of the Master's Thesis

"Robotic Process Automation (RPA) Scope in the Banking Industry"

verfasst von / submitted by

Nisha Agarwal

angestrebter akademischer Grad / in partial fulfilment of the requirements for the degree of

Master of Science (MSc)

Wien, 2021 / Vienna 2021

Studienkennzahl lt. Studienblatt / degree programme code as it appears on the student record sheet:	UA 066 914
Studienrichtung lt. Studienblatt /degree programme as it appears on the student record sheet:	Masterstudium Internationale Betriebswirtschaft UG2002
Betreut von / Supervisor:	Univ.-Prof. Mag. Dr. Rudolf Vetschera

Abstract

In this master's thesis, various approaches of automation in the Banking Industry are discussed with a special focus on Robotic Process Automation (RPA). The eligibility criteria for a process to be chosen for Automation through RPA and its advantages as well as disadvantages are highlighted. Case study on Raiffeisen Bank International and interviews with Internal RPA experts gave a holistic view on processes that are most suitable for RPA, discussing its real-life benefits and challenges. Future of RPA in its hybrid form has been discussed, giving way to future research possibilities.

Keywords: Robotic Process Automation, RPA, Automation in Banking sector, RPA and BPMS, RPA and AI.

Kurzfassung

In dieser Masterarbeit wurden die verschiedenen Automatisierungsansätze in der Bankenbranche unter besonderer Berücksichtigung der Robotic Process Automation (RPA) diskutiert. Die Zulassungskriterien für einen Prozess, der für die Automatisierung durch RPA ausgewählt werden soll, sowie seine Vor- und Nachteile wurden hervorgehoben. Mithilfe einer Fallstudie über die Raiffeisen Bank International gibt das Interview mit internen RPA-Experten einen ganzheitlichen Überblick über Prozesse, die für RPA am besten geeignet sind, und erörtert deren reale Vorteile und Herausforderungen. Eine Zukunft von RPA in seiner hybriden Form wurde beleuchtet und weicht zukünftigen Forschungspunkten.

Special thanks

- I would like to thank my supervisor Univ.-Prof. Mag. Dr. Rudolf Vetschera for all his time, knowledge and experience, which was of great help to me.
- I would like to thank all the team experts of the RPA team in Raiffeisen Bank International for being supportive and answering my queries, especially my colleague Alexander Hollmann & Leo ALAPPAT, who patiently answered all my questions; their experience enriched my knowledge enabling me to share more in this paper.
- I would also to thank my colleagues, friends and family who trusted my abilities and supported me emotionally and with patience.

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1. Introduction

1.1. Background

Since the first computing machine - Abacus, there has been a continuous evolution in the computing/information technology - home PCs, laptops, and smartphones. To manage /optimize their business processes, organizations have moved for example from attendance in registers to employee card or paper-based/manual data management and calculations to ERP software. But with continuous evolution, automation of processes and tasks are becoming the norm. The use of various automation techniques such as – Business Process Management Systems (BPMS), Robotic Process Automation (RPA) and Artificial Intelligence (AI) have gained significant importance. The cause of this change is the digital revolution which is continuously changing the way we communicate or work. The banking industry has also adapted to digital ways of operations for back office as well as customer facing processes. Queueing in the Bank to deposit or withdraw cash is a thing of the past due to ever gaining popularity of online banking. Banks are leaving behind their manual systems to adapt to the demands of the customers for more digitized products and services (Valgaeren, 2019, p. 4). Convenience banking for customers is very vital for banks to stay ahead of the competition. *"Digitalization of the banking sector is in full capacity, with the fact that this process also includes other component parts of the Industry 4.0, such as blockchain networks, artificial intelligence, IoT, biometrics, cooperation of banks with FinTech companies, preparation of the platform and other services for the Generation Z and other."* (Mekinjić B, 2019, P.7). With digitization taking over many tasks, it is vital to choose the right tool/approach for the processes. There are various approaches to process optimization/digitization as mentioned above, that help to optimize the processes and make them time efficient by using their individual competences (discussed in the paper). For e.g.: Where Business Process Management Services helps optimize the internal process **end-to-end**, making every step more time and resource efficient; Artificial Intelligence automates the processes making it **cognitively** smarter. RPA on the other hand concentrates on only the

repetitive/standardized tasks in a process and automates them to make them faster, leading to an overall process efficiency. But before being able to differentiate between them it is important to understand how these approaches work. BPMS and Artificial Intelligence are popular approaches within organization with lot of literature available. On the other hand, RPA, even though present for quite some time has not gained popularity as the other two approaches. (Ghobakhloo, 2019, p. 2)

This Master thesis discusses the above mentioned three digitization approaches, keeping the focus on RPA, the sub-section below specifies the research questions followed by research design and methods. Section 2 provides various definitions followed by Types of RPA, benefits and challenges and the stages of RPA implementation, this paper's main focus lies in the process suitability for RPA, concluding the section with a comparison between the top three RPA tools, providing the readers with a more comprehensive overview on RPA. In Section 3 the paper extends to present two other automation approaches and a comparison with RPA to answer whether RPA can act as a standalone automation tool for all automation requirements or not. The Section 4 presents a case study with a renowned Bank in order to enable readers to understand RPA in a practical environment, concluding with a discussion on the findings and its future scope in section 5 & 6 respectively.

1.2. Research Questions

Main Question:

- What are the process suitability criteria for a process to be automated through Robotic Process Automation (RPA)?

Additional Questions:

- What are Benefits and Challenges of RPA?
- Can RPA be used as a standalone approach for all end-to-end automation needs of an organization as compared to other digitization approaches (BPMS & AI)?

1.3. Research Design & Methods

The paper uses literature research and a case study, where the literature research is used in provide theoretical information on the research questions, and the case study, answers the research questions with practical example of Raiffeisen Bank International that is present across the CEE Region.

Literature research

To find the best possible information about the topic in a manner that is best understood by the readers, various sources such as U Search online library of University of Vienna, ScienceDirect, Google Scholar have been used. The content has been taken from academic/scholarly journals, conference articles, and research papers, where the main search criteria were the following:

- Digitization in the financial Sector
- Implementation criteria for RPA
- Process management
- Smart automation
- Automation in Banking sector

The search engine from Google was also used in order to search for information from the RPA software developing firms. The literature search also helped to describe various terms required for the master's thesis.

Case study

A case study uses a real-world example to compare results between theory and practical. A case study can be based on Quantitative (statistical modeling or surveys) or Qualitative (Content analysis or interviews) methods as data collection. (Baxter & Jack, 2008, p. 550)

This case study based on Qualitative data collection via expert interviews helps to compare the knowledge gathered in the literature research with a practical example based on Raiffeisen Bank

International, Vienna, Austria. The following sources have been used that help provide concrete answers to the research questions:

- Website of the Organization
- Publicly communicated documents
- The RPA Cookbook- An internal document with detailed description of various automation approaches, with focus on RPA, process lifecycle, eligibility criteria, impact of the process as followed by the Organization.

Expert Interviews

In this paragraph the author presents the methodology of the qualitative data analysis used to derive the results that are presented in section 4.5

Expert Interviews: 6 Experts from the RPA Team (1-Lead, 1-Adviser, 4-Developer), 2 Business Analysts/Controllers as well as 2 Users of RPA robots that have been already implemented in processes, to get a good overview on the impact of RPA. (A list of interviewees is provided in the Results section 4.5). The interviews were taken and recorded on MS Teams Telepresence due to the pandemic and took approximately one hour each. The main purpose of the interviews was to receive expert insights on the research questions and therefore a questionnaire was prepared (attached in the Appendix) in advance to make sure all areas of research questions are covered, At the same time the interview was kept open ended to allow any extra information provided by the Expert interviewee to be presented in this thesis.

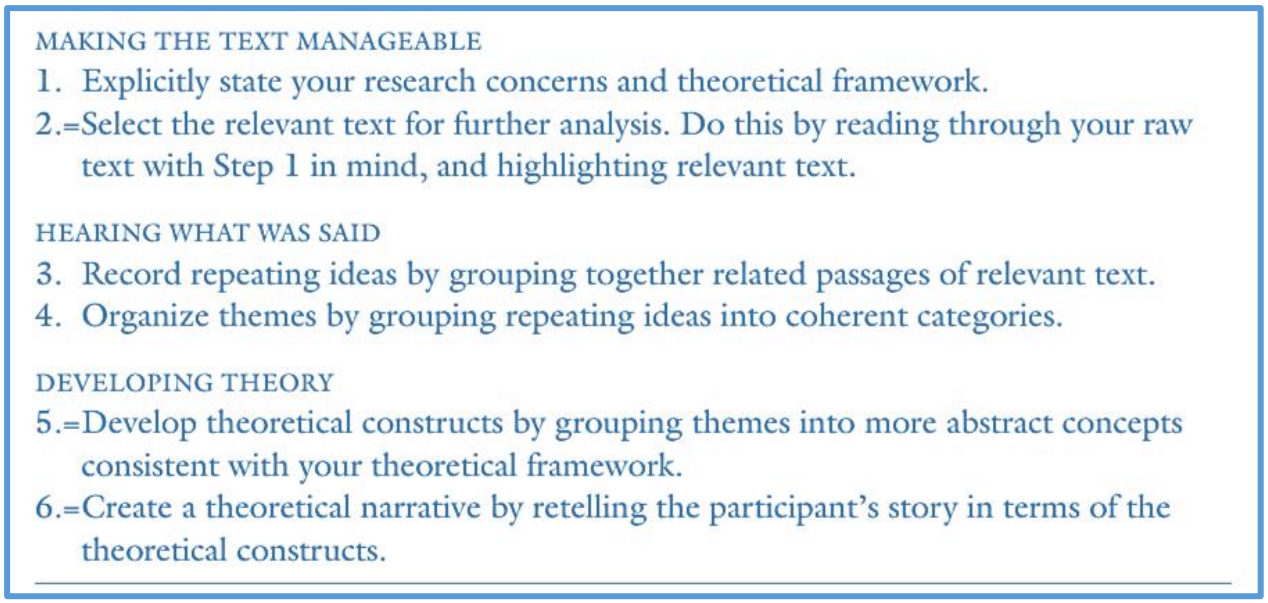
The Qualitative data Analysis

For the purpose of analysis of the expert interviews, they were transcribed & assigned colour codes following the six stages of (Auerbach & Silverstein, 2003, p. 43). This approach of Qualitative data analysis is provided in part III ‘The Mechanics, Phase 1: Making the Text Manageable of the book ‘Qualitative Data : An Introduction to Coding and Analysis’ by Carl

Auerbach and Louise B. Silverstein. The following figure 1 explains the 3 phase/6 steps of managing a qualitative to derive a theory /hypothesis. The author follows the same approach.

The section 2.4 provides the theoretical background of process suitability for RPA, based on which the 'Key criteria List' is created.

The section 4.3 provides a background on process suitability of RPA as practiced internally by RPA team in RBI, the interviews are then decoded-explained below in details, as per the below figure by (Auerbach & Silverstein, 2003, p. 43) and results are presented in section 4.5


MAKING THE TEXT MANAGEABLE

1. Explicitly state your research concerns and theoretical framework.
2. Select the relevant text for further analysis. Do this by reading through your raw text with Step 1 in mind, and highlighting relevant text.

HEARING WHAT WAS SAID

3. Record repeating ideas by grouping together related passages of relevant text.
4. Organize themes by grouping repeating ideas into coherent categories.

DEVELOPING THEORY

5. Develop theoretical constructs by grouping themes into more abstract concepts consistent with your theoretical framework.
6. Create a theoretical narrative by retelling the participant's story in terms of the theoretical constructs.

***FIGURE 1: SIX STEPS FOR CONSTRUCTING A THEORETICAL NARRATIVE FROM TEXT* (AUERBACH & SILVERSTEIN, 2003, P. 43)**

Phase 1: Making the text manageable

The interviews were structured and transcribed in a form of a questionnaire (as attached in the Appendix), thus making the further analysis and colour-coding of the text more manageable. The relevant texts are highlighted and mentioned under each research question with a colour index alongside explaining what it denotes.

Phase 2: Hearing what was said

The frequency of a relevant text being mentioned is noted, further grouping them in a broader category: Key criteria list and sub criteria list was prepared to identify how many times a criteria was mentioned in the 10 interviews and based on the frequency they were assigned primary or secondary criteria label.

Labelling: As 10 interviews took place the author defined that **a score of 5 and above for "Key Criteria" and 3 and above for" Sub Criteria"** as Primary Criteria and any score below that as Secondary Criteria.

Phase 3: Developing Theory

According to (Auerbach & Silverstein, 2003, p. 43), in this phase, a theoretical construct followed by a theoretical narrative is created. For the author of this thesis its means to present the analysis on the research question and its results to the readers. Therefore, the section 4.5 provides this information.

2. Robotic Process Automation (RPA)

This chapter provides an elaborate explanation on RPA. Section 2.1 provides the definition of RPA and explanation of some important terms, Section 2.2 focuses on the benefits and challenges of RPA and Section 2.3 explains the lifecycle of an RPA process followed by the eligibility criteria that a process needs to essentially be checked for, concluding with a summary on the top three RPA tools/vendors.

2.1. What is RPA?

According to (Isaac, Muni, & Desai, 2018, p. 1), process automation is to automatically control manual or logical processes. As we know that process automation is now popular in all industries and sectors, but it is broadly classified into two parts – Hard Automation and Soft Automation. Hard Automation, as the name suggests, is based on machine-based or physical robots that are designed to fulfil a tangible task at a place. Whereas, Soft automation is based on programming of software robots (also called Software bots) for specific tasks as and when needed (Isaac, Muni, & Desai, 2018, p. 1). For e.g.: to automate the various repetitive tasks, that are time taking, such as, searching for the latest version of a file, make automatic report exports and sending it to a certain group of people. As RPA uses Software bots it falls under Soft Automation. There are some definitions and explanations to RPA which the paper discusses in the section below.

2.1.1. Definition

a. *"The ever-expanding RPA concept is built upon three main ideas: Robot, process, and automation [2]. While robot means whatever software machine can be programmed to execute a specific job, the process is about a succession of steps to reach a particular objective or result. Lastly, automation means a transformation of a manual operation with the purpose of enabling it to be performed in an autonomous way"* (Chacón-Montero et. al. 2019, P.43)

Focus: Software robots used to reduce manual operation with the help of software automation for tasks that have a standard set of steps to follow to achieve the result.

b. *"According to the Institute for Robotic Process Automation & Artificial Intelligence ([1]): RPA is the application of technology to configure software robots that capture and interpret existing applications for processing transactions, manipulating data and communicating with other software systems".* (Bourgouin et.al. 2018, P.46)

Focus: Software robots that interpret existing applications and communicates with other systems for processing transactions.

c. *"Robotic process automation (RPA) is the use of software with artificial intelligence (AI) and machine learning capabilities to handle high-volume, repeatable tasks that previously required only humans to perform"* (Romão, M., et al., 2019, P.1).

Focus: A software using AI and machine learning capabilities to perform high-volume and repetitive tasks that were performed by humans.

The common point in all the three definitions is that RPA is an automation approach that uses software robots for processing transactions or automating tasks. But there are some differences as well. These differences can primarily be divided into Pure RPA and Intelligent Automation (IA).

Though there is no concrete definition of Pure RPA, but is understood as the pure/traditional form of RPA without use of any other technologies or capabilities such as Artificial Intelligence (AI), which imply the automation approach for rule-based and standardized processes (Valgaeren, 2019, p. 20). Whereas, the Intelligent Automation synonymously also named as Cognitive RPA/Cognitive Automation focuses more on training the robot with data so that the robot can interpret/predict results, this is possible when Pure RPA joins hands with Artificial Intelligence capabilities and learn next moves in the future (Syed, et al., 2020, p. 3) (Kaarnijoki, 2019, p. 16). For the purpose of this master's thesis, the author differentiates the above two

forms of RPA and **defines Pure RPA** as *"a Process automation approach that uses software robots that can communicate with existing applications and other software systems with ease and can automate standardized and repetitive tasks hereby reducing manual and mundane tasks from the job role of a human employee enabling him/her to focus on more strategic and valuable tasks"*. Thus, the main characteristics of Pure RPA are as follows:

- Used to automate standardized tasks - processes that have defined steps to achieve a certain result
- Repetitive tasks - tasks that are performed over and over again
- Interaction with other systems - can easily communicate with existing applications or other software systems without having to change its format or configuration

Whereas **Intelligent automation can be defined as** *"an advanced form of RPA that combines technologies like machine-learning or Artificial Intelligence (AI) in order to widen the scope of Pure RPA and also perform non-standardized tasks that involve exceptions"*.

As the paper is focused on RPA, the author refers to RPA as Pure RPA and Intelligent Automation will be separately discussed again in section 3.3 of this paper

2.1.2. Types of RPA

Other than the Pure RPA and Intelligent Automation, there are primarily two other types of RPA: Attended and unattended RPA

Attended RPA: Also known as *Robotic Desktop Automation-RDA*, is an RPA automation with a human attending, intervening or controlling the process. A robot might automate a part of the process and await a decision by the human user , following the decision the robot can act further, thus assisting the user with part-automation. Attended robots can be good for processes which need active monitoring by individuals. (Syed, et al., 2020, P. 9) (Tarquini, 2018, p. 233) (Amini, 2019, p. 18). For e.g.: the robot makes all standardized checks for credit limit allocation to a client, after which the human employee can finally make a decision based on the automated

checks, depending on this decision the robot can act further by either allocating the credit to the respective client in the systems or declining it. Figure 2 helps understand the attended automation.

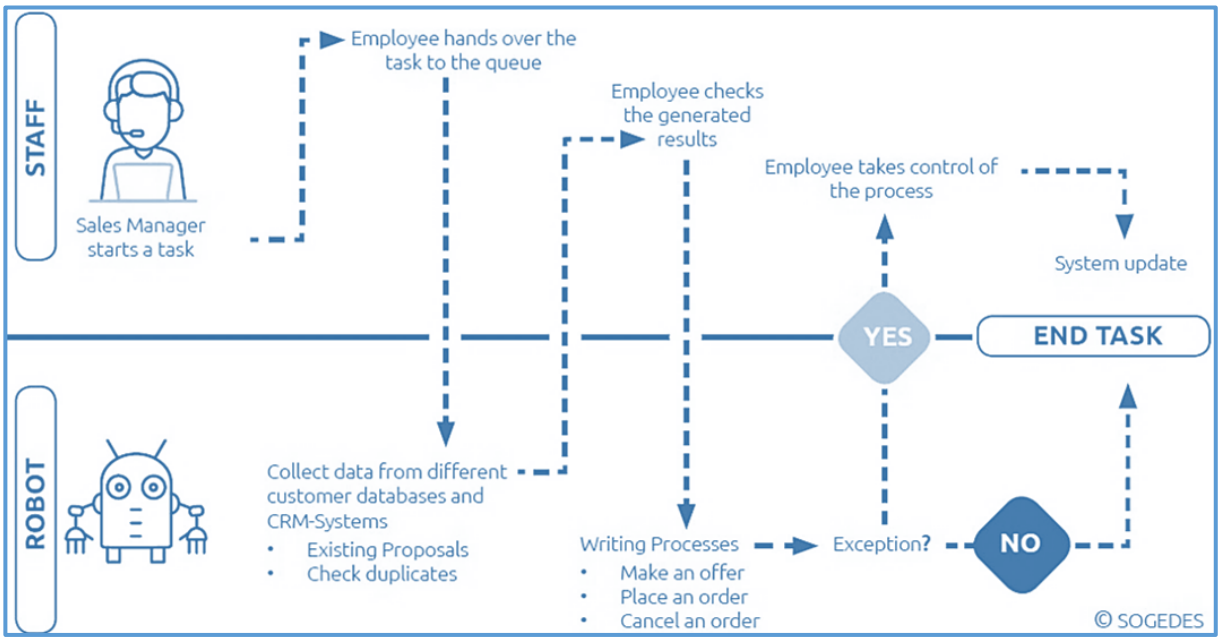


***FIGURE 2: ATTENDED RPA AS AN ASSISITANT* (AMINI, 2019, P. 19)**

Unattended RPA: means complete automation of the process without any human intervention or human intervention only incase of exceptions, replicating all the steps of a process. This might ensure a substantial improvement in time taken to do a job as the robot is much faster and eliminates human error. The robot is instructed with steps, which is a mimic of the human employee. As depicted in Figure 3, an autonomous or simple process with standardized steps is best suited for unattended automation, where instead of the sales manager, the robot initiates the process as defined and either the process without any intervention or if certain defined validations are not met, then it reaches the sales manager for analysis. (Syed, et al., 2020, P. 9) (Tarquini, 2018, p. 233) (Amini, 2019, p. 20)

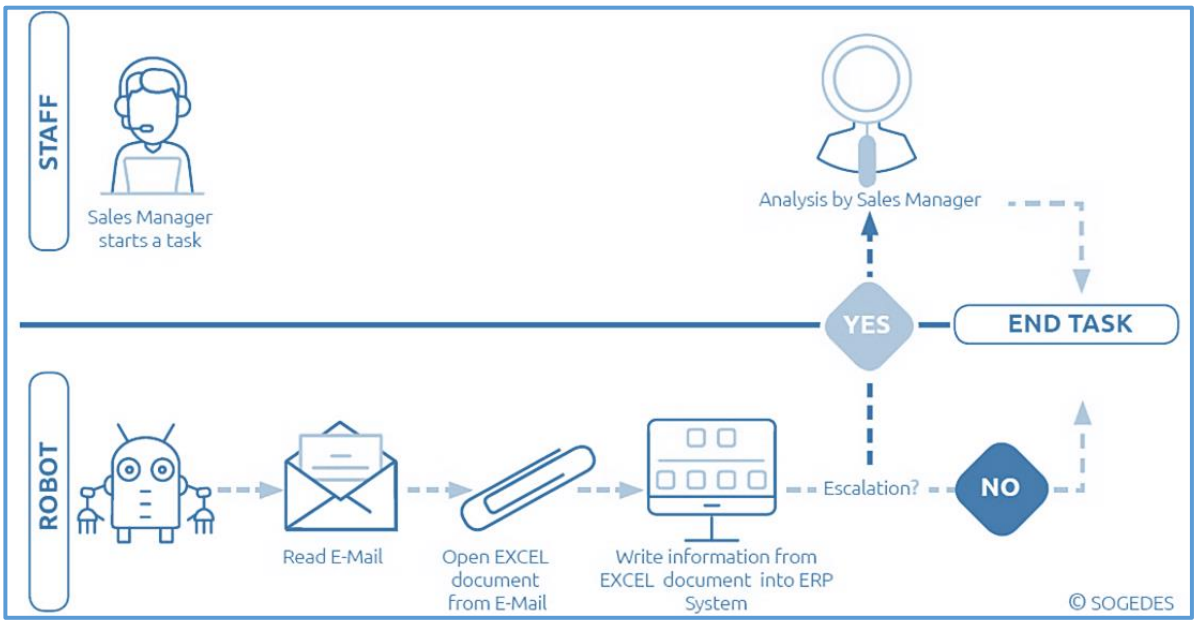


***FIGURE 3:UNATTENDED ROBOT* (AMINI, 2019, P. 20)**

Thus, the type of RPA automation to be implemented is based on the automation requirement of the Organization or on the need for human intervention in the process. For e.g.: if an organization wishes to automate the registration process on the company website with the help of a standard format, it can be done with the help of unattended RPA whereas, the process loan approval to a person might involve a lot of compliance checks and also a decision from a human employee, before the loan gets disbursed to the respective account and hence requiring attended RPA.

To understand more about RPA the next section dives into the Benefits and Challenges of RPA.

2.2. Benefits and Challenges of RPA

The very words ‘robots’ & ‘automation’ are perceived with unease i.e. as a change / losing jobs, that’s why it is important to communicate the benefits & challenges of RPA among all its stakeholders enabling to provide objective information about RPA. Listed below are some benefits of RPA.

Benefits of RPA

- It takes away most of the mundane tasks from a business process enabling better and quicker results. RPA processes can make process 30% - 70% faster as compared to humans (Hofmann, Samp, & Urbach, 2019, p. 101) (Siguroardottir, 2018, p. 21) (Kaarnijoki, 2019, p. 13)
- Increases the productivity of employees as they get an opportunity to work on strategic tasks. (Hofmann, Samp, & Urbach, 2019, p. 101) (Kaarnijoki, 2019, p. 14)
- On the technical front, it does not alter the existing Software infrastructure making the integration between the software easier, can also interact with other automation tools using Application Programming Interface (APIs) unlike most traditional IT systems. (Asatian & Penttinen, 2016, p. 68) (Kaarnijoki, 2019, p. 14)
- The RPA implementation is short, meaning, depending on the complexity of a process (Explained in section 2.3), the RPA implementation can be much quicker than a traditional programming process as it does not involve writing codes but is a much more programmer friendly solution with a drag and drop-flowchart like instruction system (section 2.5) (Siguroardottir, 2018, p. 25) (Kaarnijoki, 2019, p. 14)
- RPA is cost effective, as the robots can work around the clock without taking any breaks or rest, it can work at any time of the day (Hofmann, Samp, & Urbach, 2019, p. 101) (Asatian & Penttinen, 2016, p. 68)
- Just like most IT automation approaches RPA development can be done various RPA tools discussed in the next section (2.5), but the benefit of RPA is that most RPA tools have an automated robot instruction program, where the requirement of technical knowledge is between low and negligible (Clair, The 15 Providers That Matter Most and How They Stack Up, 2018, S. 2)

Though RPA has many advantages, but as any other system it also has its limitations:

Challenges of RPA

- This might need the process to have a very clear and planned workflow, helping the designing and deployment of the Robot, as there is either no possibility for the unattended RPA robot to make judgement or decision on its own or limited possibility for the attended RPA robot where judgement can be provided by the human user, but the more often this is done, the more time taking the process can be, waiting for the human user to provide his/her judgement. (Asatian & Penttinen, 2016, p. 68)
- This also means that the clear input to be provided must be in digital format i.e. is structured, without which RPA cannot be implemented. (Syed, et al., 2020, p. 9)
- Although RPA can mostly communicate with legacy systems, the compatibility to some virtual desktops like is mostly not available, which might lead to no RPA automation. (Syed, et al., 2020, p. 9)
- RPA automates repetitive steps reducing the chances of human error such as 'copy-paste' error or changing the format of cells to 'percentage', but it cannot avoid errors that are unique. E.g.: an incorrect figure of gross income will not be detected by RPA as it just follows a certain set of steps to provide the result that is calculated as a result of these steps. For e.g.: a source attachment missing in an email, in such situation the robot will stop. (Kopec, W., et. al., 2018, P.2)
- During the RPA implementation cycle, a person (analyst) is required to shadow each step performed by the current human employee in order to be able to automate these steps. (Chacón-Montero, Jiménez-Ramírez, & Enríquez, 2019, p. 42)

In the next section we discuss the RPA implementation stages.

2.3. Stages of RPA Implementation

This section explains the end-to-end process cycle of RPA implementation stages, which is similar to any other planning & implementation process.

According to (Chacón-Montero, Jiménez-Ramírez, & Enríquez, 2019, P.42-43). there are 6 steps involved in the implementation of RPA namely, Analysis, Design, Development, Deployment, Testing and Monitoring as explained below:

Firstly, the process in question should be thoroughly **analyzed** whether it is suitable for RPA or not. This is done by asking some standard questions about the process, which are discussed in the next section. If the process fulfils the basic criteria for an automation through RPA, a **design** document is created in order to ascertain step-by-step structure for the robot to execute, meanwhile also examining if any unnecessary steps can be removed in order to optimize the process. After the design document is agreed upon by the process owners, the **development** steps start where the developers instruct the robot to replicate the steps defined in the design document, thus automating the process fully or partly as planned in the design document. After the completion of development, the robot is **deployed** into the process, i.e., it must execute the given instruction in the environment as decided. For an RPA bot-this environment means a computer or a system where it must execute the process. After deployment, the robot is closely supervised by process owners as well as developers (also called **testing**), to make sure that it runs all steps as designed and completes the steps in the ascertained time without facing a technical error or stoppage. The last stage is **monitoring**, i.e., maintenance and operation, which goes in parallel with the functioning of the robot, meaning a reboot or update of the robot at certain intervals or with the change in the process requirement. For e.g.: if the robot searches a webpage for some data in the process and the User design of the webpage changes, then the changes must be updated in the instruction of the robot. (Chacón-Montero, Jiménez-Ramírez, & Enríquez, 2019, p. 42).

(Amini, 2019, p. 13) also gives an overview of the RPA implementation stages in his paper, which include 9 different stages for the implementation as described below:

The first stage starts with the **use case identification** to identify which department / division could have processes eligible for RPA, followed by stage 2-where a certain **process is**

analyzed for its potential for RPA i.e. how suitable the process is for RPA automation. The stage 3 involves **process definition** by carefully defining each step followed by the human employee, as the robot would be an exact mimic of the employee. This is followed by stage 4, where **solution design** is created with a view to optimize the process by eliminating unnecessary steps, if any. This might reduce the time taken to complete the process. Once the design is finalized, the **robot is developed** as per the design in stage 5. In Stage 6 the robot is put through the **User Acceptance Test (UAT)**, i.e. as the name suggests, users are given access to test the robot and give feedback on the functioning of the robot. After passing the stage 6 the **Infrastructure setup** is completed in stage 7-as the robot mimics the Human employee, it needs a computer to work on. In stage 8 the robot is finally **deployed** in the process to perform the specified tasks. Stage 9 is the after-deployment stage of **monitoring and administration** of the robot to ensure regular and timely functioning of the RPA automation robot. (Amini, 2019, p. 13)

Summary

The above-mentioned lifecycle from Chacón Montero et.al. 2019 & Amini, 2019 respectively have a lot in common as they mostly name the same stages one after the other but there are some differences as well.

Where Chacón Montero et.al., 2019 mention six broad stages, Amini, 2019 mentions nine narrow stages. For e.g.: Analysis phase in Chacón Montero et.al., 2019 is the same as Use case Identification and Process Analysis together in the explanation of Amini, 2019. The same happens for all other stages except Monitoring.

Another important difference is in the Testing stage - As per Chacón Montero et.al., 2019 Testing takes place after deployment and as per Amini, 2019 Testing is done (UAT-User Acceptance Test) before deployment of the robot in the process. In a practical example if the robot is deployed to the process first and then tested for accuracy, it might not only create a lot of uncertainty about the functioning of robots but it might also result in robot not providing expected

results, which might render all efforts of deployment useless or may need a lot of additional efforts to correct the errors after its deployment.. Hence. in the opinion of the author, Testing should be stage before deployment to the process owners in order to circumvent any chaos or uncertainty in functioning or achievement of desired results from the robot.

In Figure 4 the author presents her opinion on how the ideal RPA Automation stages could look like.

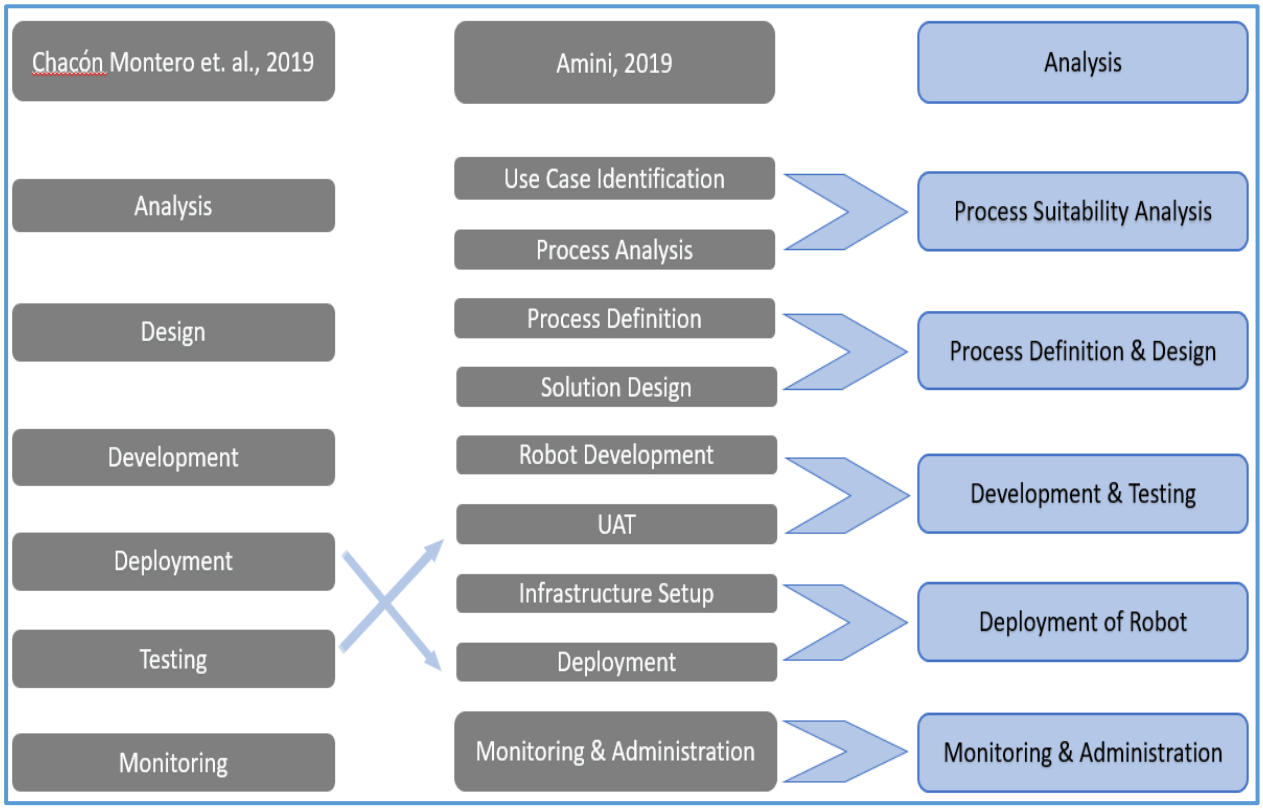


FIGURE 4:COMPARISON OF RPA IMPLEMENTATION STAGES

The next section presents the criteria for RPA suitability. The eligibility check is done in the very first-Analysis phase of the RPA lifecycle and therefore this phase is discussed below in details.

2.4. Process suitability for RPA

As mentioned in the previous section, focus in this section is on understanding which processes are suitable for RPA based on the literature research on this topic, followed by opinion of the author on the process suitability that is presented in a form of a criteria catalogue.

According to Bourgouin et. al. 2018, (P.48), whether a process is suitable for RPA or not, is decided based on its **eligibility** (validation of whether a process can be automated through RPA at all), **potential** (does the process have a potential for attended/unattended automation) and **relevance** (how much effort would be required to automate a certain process and whether it is worth), and, he provides a detailed yet consolidated four-step approach helps to analyze & validate whether a process is suitable for RPA. Each step highlights certain criteria which makes a process more/less eligible for RPA, this section discusses these criteria, followed by an inclusive list of questions that is asked to the process owners to reflect whether these criteria are being fulfilled:

Step 1: Validate Process Eligibility: Whether a Process is at all suitable for RPA or not.

According to Bourgouin et.al., 2018, Maturity and Standardization are two most important criteria to choose whether a process is suitable for RPA implementation

Maturity: Processes that are established and have been used for a while, so that employees have a good understanding about these tasks. This makes it simpler for employees to explain how to replicate these steps during automation. *Standardization*: How consistently the process follows a predefined path. More standardization faster RPA automation (Bourgouin, Leshob, & Renard, 2018, S. 48) (Syed, et al., 2020, S. 5). As already mentioned in the definition, RPA automation is most useful on established processes that are rule-based and consists of repetitive tasks

Step 2: Evaluate RPA Potential of a Business Process: What kind of RPA is suitable for the said process (attended /unattended).

As per (Bourgouin, Leshob, & Renard, 2018, S. 48) Manual Interaction is an important criterion to evaluate the type of RPA to be implemented.

Manual interaction: Whether the process can be run by the robot end-to-end or would it require a human action/decision in between. As per both (Bourgouin, Leshob, & Renard, 2018, S. 48) & (Syed, et al., 2020, S. 5) Less human intervention-unattended automation, means a smoother and more automatic follow of each step within the process increasing its RPA potential because of the simple reason that the more often the robot has to wait for a human decision-making (attended automation), the more time taking it can be to provide the result.

Step 3: Evaluate RPA Relevance of a Business Process: Impact of RPA on the process.

Both (Bourgouin, Leshob, & Renard, 2018, S. 48) & (Syed, et al., 2020, S. 5) highlight that the following criteria shows the impact of RPA on a process and to evaluate the effort required to implement RPA.

a. *Volume of transactions*: The more the frequency of the transaction, better is the return on investment of an RPA process (economies of scale).
b. *Degree of complexity*: This criterion is wide and includes a few sub-criteria-

i. *Interaction with other systems*: Does the process need interaction with other software systems or legacy systems to perform some tasks?

One special characteristic about RPA is that it can communicate with any kind of software systems, legacy systems or external systems without changing its configuration. (Bourgouin, Leshob, & Renard, 2018, S. 48) (Syed, et al., 2020, S. 5). This makes it very simple for process to be automated through RPA, but there are some RPA tools/software (section 2.5) that have limitations here. For e.g.: Blue prism RPA software cannot interact with Virtual desktop system Citrix. Thus, if an organization uses Blue

Prism as the RPA tool, it might face higher complexity in automating processes that need communication with Citrix.

ii. *Digitized input*: Whether the organization uses digital and structured sources of input. In case of Pure RPA where AI cannot be used for text recognition etc. it is an important criterion to have digital sources of input, as a process cannot be automated via RPA unless the input is digitally available. This means, an additional step to digitize the input required for this automation has to be implemented, after which the RPA automation can be implemented which not only increases complexity but also the time taken to implement automation in the process. In the opinion of the author, it is also important to analyze whether it is worth the time and investment that would go into digitizing the input for the purpose of using these inputs for RPA automation. (Bourgouin, Leshob, & Renard, 2018, S. 48) (Syed, et al., 2020, S. 5)

iii. *Exception handling*: As the name suggests a process cannot always have 100% rule-based steps, there might be exceptions need to be taken care of. For e.g.: Since the robot follows a set of replicating instructions, if the source of a certain file changes bot may stop in the middle of the process, therefore the RPA team has to be informed to change the instruction as per the new source, putting the bot back to work. Similarly, while ascertaining the impact of a RPA automated process to that of a manually managed process, this can be important as handling exceptions will be more time taking than a rule based process, decreasing the impact of automation on the process.

Thus, higher volume transactions with less complications are more relevant of RPA. (Bourgouin, Leshob, & Renard, 2018, S. 48) (Syed, et al., 2020, S. 5)

Step 4: RPA Classification of a Business Process: As the Figure 5 suggests, the classification (Automation process priority) of a business is then based on the Step 2 – Evaluate RPA Potential of a Business Process and Step 3 – Evaluate RPA Relevance of a Business Process. Step 2 & Step 3 together

Step 1 has not been considered by (Bourgouin, Leshob, & Renard, 2018, S. 48) here, because Step 1 entails the most basic and decision making criteria to decide whether to automate a process through RPA or not and if the answer is 'No', there are no further steps to it. Only if the answer to step 1 is 'Yes', the next steps come into consideration. Step 2 and Step 3 help us understand how suitable the process for RPA and what its impact would be, enabling the process owners to decide whether an RPA implementation be useful in the end or not.

For e.g. A process is classified in quadrant C, with high RPA relevance- meaning it might be a process with high volume of low complexity transactions but Low RPA Potential- i.e. might include a lot of manual interaction (attended automation) bringing priority Classification for the automation of this process to low as attended automation might be more time-taking to implement than a process in Quadrant A where both RPA relevance as well as the RPA potential of the process is high. (Bourgouin, Leshob, & Renard, 2018, S. 48).

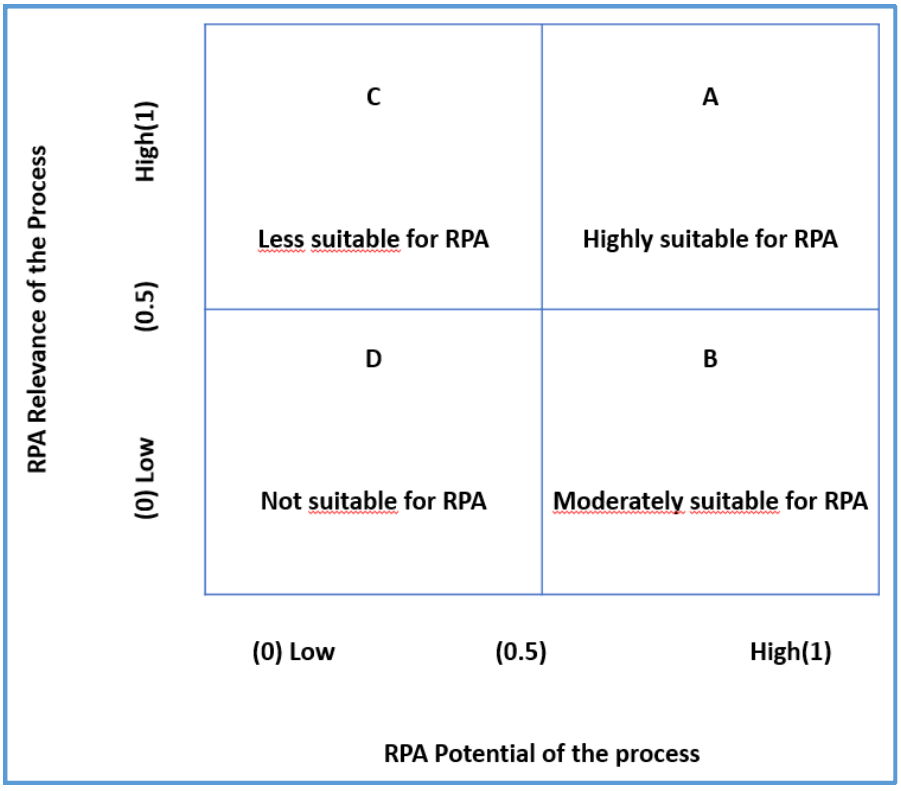


***FIGURE 5:RPA CLASSIFICATION QUADRANT* (BOURGOUIN, LESHOB, & RENARD, 2018, P. 49)**

The above presented stepwise analysis helps with a comprehensive understanding of the eligibility criteria of RPA process. This will be further elaborated in the Case study Section, to get a deeper understanding. *"Several authors have acknowledged that the best candidates to conduct a successful RPA project are the processes within the back offices of a company [7], [20] since they (1) are highly frequent, (2) lack excessive exception control, (3) require limited cognitive effort, and (4) are prone to human errors*" (Chacón-Montero et. al. 2019, P.42)

Summary

In author's opinion, all the above-mentioned criteria are important and vital to check the entire suitability of RPA (Eligibility, Potential and Relevance). Therefore, it's worthwhile to highlight the following points that is then followed by a criteria catalogue that presents a comprehensive understanding on the list of criteria. As mentioned earlier, these criteria are then evaluated based on the interviews and presented in section 4.5

Step 2: Manual interaction- This criterion evaluates a process's potential in the sense that if the human interaction (unattended) is low, the process can be automated quicker as compared to the one with higher human intervention (attended). But it does not rule out the possibility of automating processes with human intervention, moreover it is not necessary that all processes with more human interaction will be more time taking. It can also be the case that the unattended automation may involve highly complex steps to perform tasks like searching not just from one source for a certain value, but multiple sources and make complex defined checks to approve a request without human interaction, which might be equally time taking. The type of RPA automation required doesn't provide the correct prioritization for RPA automation of a process and thus this criterion can be treated as a part of Maturity and not as a standalone criteria for prioritization as this should be decided in the very first step, whether an RPA automation is possible and if yes, what type of Automation.

Step 3: Volume of transactions- From the perspective of economies of scale, it is completely right to say – higher the volume of transactions, greater the RPA Potential of the process. But the transactions can also be complex and involve high degree of human intervention.

Step 3: Digitized Input- The author believes that the criteria of' Digitized input' should be placed in Step 1 as the RPA process implementation would mandatorily need inputs in digitized forms.

Step 3: Exception Handling-in my view 'exception handling' not only measure the impact of RPA on a process but also measure the potential of a process for RPA. More the exception handling, the longer it takes to automate the process.

Step 4: RPA relevance can be different for different organization depending on what RPA tool/software they use.

Thus, in author's view the following list of **Key criteria** are vital to be considered to enable a decision on whether a process should be automated through RPA or not, further, to evaluate how suitable a process is RPA. The below list of criteria is again presented in section 4.5, in light of qualitative data analysis, to see how these can be scored and categorized into primary and secondary criteria. To ascertain whether a process I suitable for RPA, the process owners are asked some questions at the beginning and the author presents an inclusive list of these questions below:

Maturity:

- How long has the current process been going on?
- Are there unnecessary steps that have to first reduced and optimized?

Manual Interaction:

- Is it a process which needs a human to make intermediate decisions?
- How often is human intervention required in between the process?

Standardization:

- How well can each step be defined?
- Is it a predictable process, with clearly defined steps one after the other?

Volume of Transactions:

- How many instances /transactions take place in a given time period (day, week, month etc.)?
- How much time does a human employee invest on this process, will be substantially different than the time a robot would take?

Digitized input:

- What is the source of input: paper/email/scanned documents/webpage?

Degree of complexity-

Interaction with other systems:

- How many other systems/interfaces does the process pass through?
- Are there any interaction with legacy systems or virtual desktops?

Exception Handling:

- Does the process deal with frequent exceptions? For e.g.: if the source changes often or if time to run the robot must be often adjusted due to the data availability for the process.

The above questions and similar other question give a clear view on whether the process is suitable for RPA or not. Once the process is found suitable, it can move to the next stages of implementation from designing to implementation to monitoring, enabling some employees to discard mundane tasks in exchange of something more valuable and strategic. These questions though not exhaustive, helps a lot in understanding from the process owners about the current process in order to ascertain the RPA possibility for the process.

The automation through RPA is possible with help of a tool/software where the robots can be created, programmed and mapped to the process that requires the automation. There are various tools available from different software development companies. The next section compares the Top three RPA tools.

2.5. Top three RPA Tools

As RPA has become popular, so have the RPA software with different features offered by various vendors. Though all these tools concentrate on making RPA a smoother experience for developers as well as users, there are some specialties each tool possesses. The Forrester Wave is a research and advisory firm that provides objective information about the various RPA software available in the market and makes an extensive comparison between them based on certain criteria set as *cited* below:

"the strength of its current offering. Key criteria for these solutions include bot development/core UI/desktop functions; attended and unattended robot support; management/insight and deployment efficiency; RPA analytics; scale factors; and governance, SaaS, and community.

Strategy. Placement on the horizontal axis indicates the strength of the vendors' strategies. We evaluated partnership, marketplace, community, innovation/market approach/access to capital, and product roadmap and differentiation.

Market presence. Represented by the size of the markers on the graphic, our market presence scores reflect the number of each vendor's enterprise RPA customers and enterprise customers and its product revenue" (Clair, The 15 Providers That Matter Most and How They Stack Up, 2018, S. 16).

This section gives a quick overview of top three RPA software - Automation Anywhere, Blue Prism & UiPath as per the Forrester WaveTM: Robotic Process Automation, Q4 2019, (Figure 6), followed by a comparison between them.

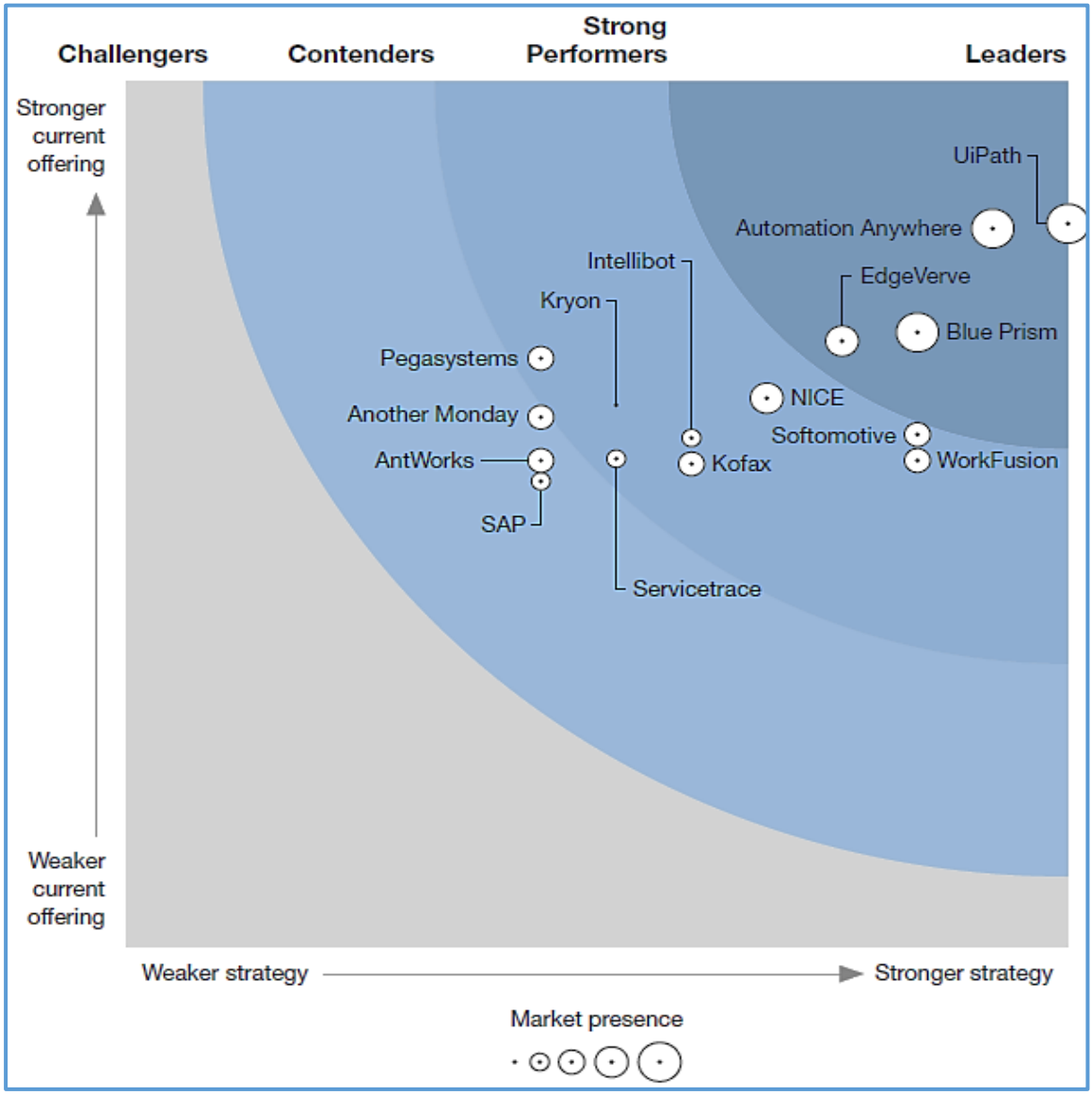


FIGURE 6: VENDORS SCORES, FORRESTER WAVETM, Q4 2019, P.4

Automation Anywhere

The company named Tethys Solutions was re-branded to Automation Anywhere in 2010. Its products have an ability to execute automation process across multiple machines irrespective of their system's dissimilarities, internet speed. As per the Forrester Wave™ (2018), the highest revenue of Automation Anywhere comes from Banking and Capital markets vertical, followed by High-tech and telecom. The Automation Anywhere develops 80% back office (unattended) robots as compared to 20% front end (attended) development. The main features of this tool are that it can read unstructured data as well as understand natural language. (Clair, The 15

Providers That Matter Most and How They Stack Up, 2018) (Isaac, Muni, & Desai, 2018, p. 2) (www.automationanywhere.com/)

UiPath

Originally a Romanian outsourcing company created in 2005, that realized the increasing demand of RPA earlier than most others. In a decade's time they not only launched the UiPath enterprise automation Platform but also launched free courses for UiPath Academy and where they successfully produced over 35000 certified developers. By 2020 it was the only RPA provider named to Forbes AI50 in 2020. The main feature if this tool is its simple drag and drop functionality (instead of writing instructions through coding, a drag & drop of instructions like a flow chart is possible) and its predefined activity sets-which cover basic automation requirements making it simpler to start with RPA implementation even without having knowledge of programming. (Isaac et. al. 2018, P.1) (Forrester Wave™, 2018) (https://www.uipath.com/)

Blue Prism

Blue Prism a UK multinational software corporation was founded in 2001 started by focusing mostly on back-office operation (unattended) automations enabling improvement in the efficiency and effectiveness of organizations. In Nov 2020 it also launch Blue Prism Automation Lifecycle Management (ALM) which makes it easier for developers to create bots with even lesser technical knowledge than before, as the design document created manually by process owners and developers during the design phase can have some pre-defined formats now (Blue Prism Website). The main feature of this tool is that the Blue Prism robots offer intelligent responses for different types of environments and that the software is balanced to handle various types of data, also an activity log of the robot is automatically created that can be referred back to, at any point of time. (Isaac et. al. 2018, P.1) (Forrester Wave™, 2018) (https://www.blueprism.com/)

Parameters	Automation Anywhere	Blue Prism	UiPath
Developer friendly	Requires programming knowhow	No programming knowhow	No programming knowhow
Visual design	Less user friendly	Simple drag and drop dashboards	Simple drag and drop dashboards
Accessibility	Through app	Through app	Through mobile & browser as well
Unattended Automation	Yes	Yes	Yes
Attended Automation	Yes	Yes	Yes
Non-commercial tutorials available	No	No	Yes

***FIGURE 7: COMPARISON BETWEEN THE THREE TOOLS* (GUPTA, RANI, & DIXIT, 2019, P. 160) (ISAAC, MUNI, & DESAI, 2018, P. 2)**

The above figure 7 provides a comprehensive comparison between the 3 tools based on certain parameters. Developer friendly – means that the tool offers an interface which a developer can easily work on without have to go too technical, like in the case of Blue Prism and UiPath, where they have a simple developer interface and no programming skills are required. The UiPath also has many pre-defined activity sets, which have suggestion and samples of common processes, making it even less technical than Blue Prism. Visual design on the hand means implies user friendliness of the tool. UiPath and Blue Prism have a special drag and drop function like an attractive looking reporting dashboard, which helps customized as per individual preference. Accessibility of Automation anywhere and Blue Prism is possible through its software which can be downloaded easily, whereas UiPath is also accessible through browser as well as a mobile phone. Unattended and attended automation features have already been explained in section 2.1, from a comparison perspective all the three tools have attended as well as unattended automation features. Some tools have free tutorials on their website to understand how to use the application. In the above comparison only UiPath offers this feature.

It is clear that, UiPath has the most advanced features, doesn't need coding expertise and makes tutorials very easily available for anyone, making it the most popular choice among the three. (Isaac, Muni, & Desai, 2018, p. 2). As per Forrester Wave™ Report Q4-2019 (Figure 6) UiPath Leads the Market followed by Automation Anywhere and Blue Prism is the last of the top three RPA Vendors.

3. Two other digitization approaches

This section discusses about two other automation approaches that are commonly used by organizations. In Section 3.1, the Business Process Management Systems (BPMS) is discussed along with a comparison with RPA, in order to understand whether RPA complements or substitutes BPMS. In section 3.2 similar discussion is represented between Artificial Intelligence (AI) and RPA. In Section 3.3 Intelligent Automation (IA) is presented as an emerging new approach that is an extension of Pure RPA with cognitive capabilities of AI enabling RPA to overcome some of its challenges.

3.1. Business Process Management Systems (BPMS)

The BPMS is a process management that focuses on end-to-end process reengineering and the digitization or automation are mostly done with traditional programming by the IT department. (Harmon, 2014, p. 453)

"The business process management (BPM) discipline aims at managing and improving the business processes of an organization to achieve, among others, long-term sustained competitive advantage and compliance for organizations" (Looy & Van den Bergh, 2017, p. 479)

"generic software systems that are driven by explicit process designs to enact and manage operational business processes" (Osman 2019, P.67), thus resulting in some degree of automation of tasks (e.g.: record-keeping activities) with the help of various technological usage, mostly traditional programming, which gives a stable & long lasting solution for automation needs. (Kaarnijoki, 2019, p. 8)

Important Points –

- Concentrates on optimizing a business process by revisiting the steps and using traditional programming for automation wherever possible.

- Using traditional programming skills also means high technical/programming skills are required.
- as BPMS focuses on end-to-end process optimization, it needs long-term commitment

The main emphasis of BPMS is on process improvement by completely redesigning the processes. In other words, it helps manage and coordinate tasks to be performed in order to realize organizational goals with the help of different techniques or software solutions in a more efficient manner. Some examples of important questions to be answered while re-engineering the process are-what task to execute, which unnecessary steps to exclude, how much time would it take to implement this optimization and who is responsible for the completion of the task. (Romão, M., et al., 2019, P.1). This enables optimization and adds to the overall development of the organization but takes good amount of time to be implemented end-to-end. In this dynamic environment where a solution that worked in the past may not work today or in the future, it is quite a challenge to complete a BPMS project with all demands and modern techniques not getting obsolete before the implementation is finished. This paper highlights some points of comparison between BPMS and RPA.

In Figure 8, the author of this thesis provides a a comparison between BPM and RPA.

Points	Robotic Process Automation	Business Process Management System
Main Goal	Automate existing processes	Reengineering processes
Technical development skills required	Can be done without high technical knowledge requirement	Requires thorough knowledge in the relevant programming language
Reusability	Functions are reusable when developing robots	Very customized to individual processes, relatively expensive to develop
Purpose for Automation	Reduction of manual, repetitive tasks, which have less human interference	End-to-end process Automation and overall optimization of processes
Impact on Business	Quick and immediate: Returns are quick but may not always address underlying inefficiencies	Significant and transformational: achieves overall productivity

FIGURE 8:COMPARISON BETWEEN RPA AND BPMS

BPMS and/or RPA

- The Benefits of BPMS is that it targets end-to-end process optimization, which helps an organization with stability of processes, whereas RPA focuses on software automation of only those processes that are time consuming but repetitive (Siguroardottir, 2018, p. 14)
- IT department is responsible for digitization of processes in BPMS Projects, where RPA Projects are outside of IT, because the technical expertise needed to fulfil the request of RPA projects is not as substantial as in the case of BPMS. (The procurement of RPA licenses or maintaining the RPA software is all done by the RPA Team without involvement of IT). (Harmon, 2014, p. 453)
- Reusability of solutions is another important unique point where RPA robot instructions are created with ease and quickly and can be easily reused in another similar process. BPMS on the other hand, even though can reuse some of its program, but the high

customization makes it difficult, which in turn also attaches higher cost to it. (Kaarnijoki, 2019, p. 8)

- Whereas BPMS can reengineer an entire process to make it efficient, robust and long lasting. RPA can only automate the repetitive and mundane tasks from a process.

Thus, as Figure 9 shows which areas are most suitable for BPM and RPA respectively, RPA cannot surpass the substitute BPMS but rather complement it in different ways. For Example, the BPMS Project might not need to program each task technically. As RPA can integrate with various systems, repetitive task of the BPMS project can be easily automated with the help of RPA, thus leaving BPMS to use its high expertise in IT for developing ERP systems that might be inevitable for the process. (Enriquez, Jimenez-Ramirez, Dominguez-Mayo, & Garcia-Garcia, 2020, p. 39115)

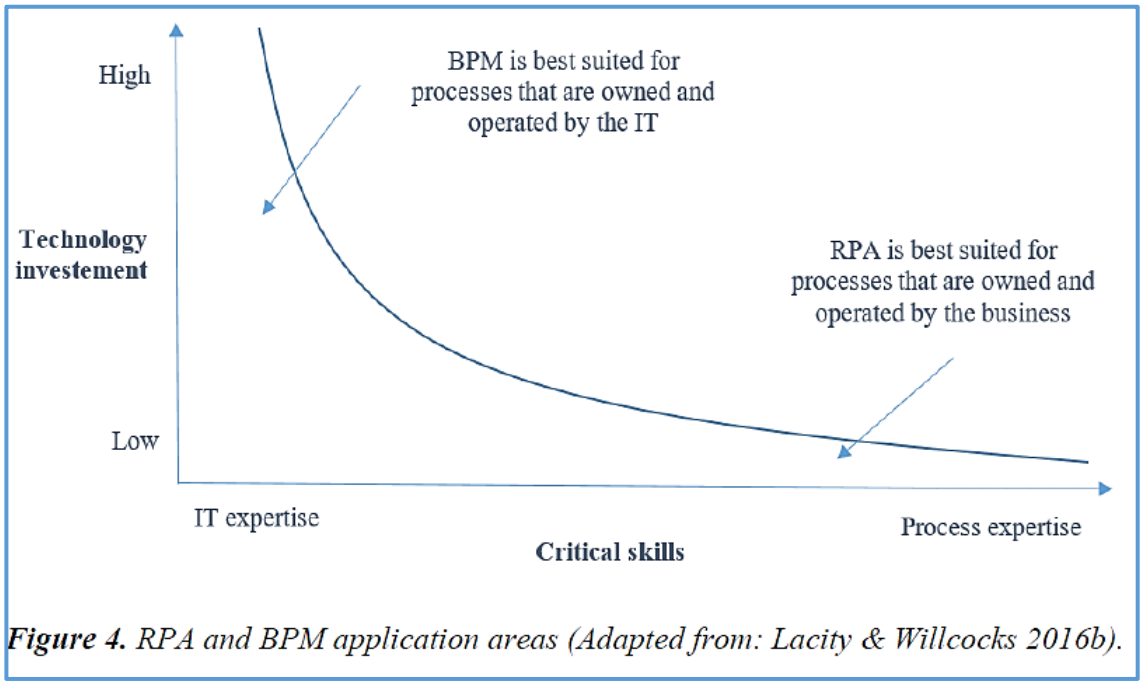


Figure 4. RPA and BPM application areas (Adapted from: Lacity & Willcocks 2016b).

***FIGURE 9:RPA AND BPM APPLICATION AREAS* (KAARNIJOKI, 2019, P. 10)**

3.2. Artificial Intelligence (AI)

This section discusses another approach of automation which includes cognitive automation and machine learning abilities-Artificial Intelligence (AI).

"capability of a computer program to perform tasks or reasoning processes that we usually associate to intelligence in a human being". (Kaarnijoki, 2019, p. 19).

According to the Institute for Robotic Process Automation & Artificial Intelligence:

Artificial Intelligence (AI): "The combination of cognitive automation, machine learning, reasoning, hypothesis generation and analysis, natural language processing and intentional algorithm mutation producing insights and analytics at or above human capability". (Website: Automation., I. F. (2019). Institute for Robotic Process Automation and Artificial Intelligence. Retrieved 12 01, 2020, from IRPAAI: https://irpaai.com/definition-and-benefits/)

Important Points –

- Using AI for automation requirements of the organizations will result in predictive & decision-making capability of the robots
- The AI bots follow the concept of 'Learning by doing' i.e. they have learning capabilities like human
- Creating an AI bot requires skilled staff for computation instruction to robots

Some examples of AI related automation are speech recognition, image recognition, natural language understanding (NLU), prediction based on certain data trends. These capabilities make AI much advanced than just simple programming or automation of standard and repetitive tasks. AI is an expensive technology as it needs technical skills and infrastructure (e.g.: Cloud database) and can best be used when huge/complicated data sets need to be worked on to justify economies of scale. (Syed, et al., 2020, p. 10)

AI and/or RPA

Increase in digitization has simultaneously increased the need for AI, and the need for digitization comes from the need for data management. In the data-rich Banking sector, the internal data and information processing capacity from digital platform will be much faster than paper-based documents. This makes it easier to connect different systems (be it cloud, and/or any legacy systems) making it further simpler to program robot on digital data to produce results based on cognitive computation. For e.g.: providing chat bots for customers or make client verification checks. Artificial Intelligence has therefore become very popular and many organizations are either planning to introduce AI in the near future or are already heavily using AI for many functions, like Human Resources (HR) Chatbots in organizations or predict your next purchase based on your last purchase and search results. Artificial intelligence is also known to be replacing human from many jobs due to its learning capabilities. But RPA on the other hand is much simpler focusing on repetitive tasks that can be done without having any cognitive capabilities.

AI can solve complicated automation problems whereas RPA focuses on standard and repetitive once, therefore AI automation which needs computing and learning might need more time to be implemented than RPA. *“The amount of data AI can work on is much higher than RPA”.* (Kaarnijoki, 2019, p. 19)

Artificial Intelligence which is an automation processes is based on learning skills of the robots, the programming of these robots and providing them cognitive abilities is also a job of a human which again calls for high technical expertise, more time and money to be invested. RPA emphasizes on creating a virtual workforce for all the tedious human-labour by making it faster with the help of software robots, it acts as an interface between various processes by easily accessing various systems without having to change them.

Summary

"The key criteria for choosing an automation system are functionality, the complexity of configuration, scalability, infrastructure, and ease of use by the end user" (Alakbarli. O, 2019, p.9).

The above comparison lead us to say that the choice of RPA is very suitable for Front end and Back end Processes of an Organizations where Human interference is minimum and has a great deal of repetitive human labour involved but it can also be said that RPA cannot be a standalone tool for all the automation needs of an Organization as it focusses only on the repetitive processes and not on processes that need cognitive computing skills etc., but rather a very efficient complementary tool for some processes that need an interface to connect old and new systems, automate repetitive steps that occur multiple times a day, etc. which means the important process of having a holistic overview from all aspects of a process can be fulfilled by BPMS and its traditional IT programming. The repetitive tasks within that process can be automated by RPA and merging cognitive capabilities of AI can help with some complicated calculation or prediction needed to move to the next step in the process instead of waiting for a human to respond. This complementary conjunction of technology might be the future of an efficient business process management. (Kaarnijoki, 2019, p. 13)

3.3. Intelligent Automation (IA)

As section 2 already discussed 'Intelligent Automation (IA) in short, The definition is re-presented below:

Intelligent automation can be defined as *"an advanced form of RPA that combines technologies like machine-learning or Artificial Intelligence (AI) in order to widen the scope of Pure RPA and also perform non-standardized tasks that involve exceptions" (Author).*

Intelligent Automation is not Artificial intelligence but a type of RPA that uses AI to become smart in terms of learning some next moves or using cognitive intelligence, but keep its characteristics

of RPA still intact and hence Intelligent automation is called synonymously called ‘smart automation’

“RPA needs to become ‘smarter’ to achieve wider adoption, so that support can be offered for more complex and less well-defined tasks” (Syed, et al., 2020, p. 10)

As already mentioned, that pure RPA is ideal for activities and tasks that are rule-based and easily predictable. It is important to understand the other type of RPA which is named as cognitive RPA or Intelligent Automation, or Smart Automation used synonymously. It basically combines pure RPA with machine learning or other artificial Intelligence capabilities such as image recognition or Natural Language Understanding (NLU). This provides the robots the capability to handles exceptions better, and to handle varying process scenarios as well. (Kaarnijoki, 2019, p. 17) (Syed, et al., 2020, p. 10). With the help of these technologies RPA can overcome most of the challenges that pure RPA.

“It combines AI technologies with RPA to enable wider automation potential by enabling handling of unstructured source data and handling of varying process scenarios. AI capabilities therefore fill in the gaps in the processes where RPA can’t handle the job. Intelligent automation is therefore a set of AI technologies and capabilities combined with RPA, whereas talking about RPA means RPA technology on its own”. (Kaarnijoki, 2019, p. 17)

Thus, the future direction of RPA can be this integration of cognitive and deep learning capabilities of Artificial intelligence. This will help pure RPA to overcome the mentioned challenges (section 2.2), such as working with unstructured and huge data, more exception handling, learning by doing capabilities, image or handwriting recognition capabilities, and many more. (Syed, et al., 2020, p. 10)

4. Case study

This section of the paper provides a case study of a leading bank in Austria as a practical example of RPA implementation, process suitability, benefits as well as challenges faced. This helps in formulating the answers to the research not only based on theoretical background but also backs the answers with the practical example presented here, this also provides the readers with a detailed understanding on this topic. For the analysis, the results of ten expert interviews are presented from the of the RPA Team members as well as the user, apart from the interviews various publicly available and internal documents have been referred to, which give a very good insight of how RPA is practiced in the Bank.

Thus, this section is divided in various sub-sections. Section 4.1 describes Raiffeisen Bank International and gives a short summary of its RPA Practice and team, section 4.2 provides a background on RPA as practiced in the Bank including its stages of implementation & processes suitable for RPA. It further presents some processes within RBI and the impact of RPA on these processes, concluding with results.

4.1. Raiffeisen Bank International (RBI)

A Leading Corporate and Investment Bank, listed on Austrian Stock Exchange since 2005, that covers 13 Markets in the CEE region, catering to around 16.8 million corporates, institutional, retail as well as private clients. RBI has around 1.958 business outlets and have won more than 1000 awards from financial magazines.

RBI has taken innovation very seriously and participates in various innovation initiatives. It is among the top 40 companies to join hands with Accenture and Blue Prism (one of the top three RPA Tools in the world) for new RPA initiative and has internally automated many processes with the help of RPA. As Internal guiding document-The RPA cookbook- lists the strategic and administrative characteristics of a Center of Excellence (CoE) and the local Robotics Competence Teams (RCT) and provides direction on operational implementation of RPA. This

case study shares information from 'The RPA Cookbook' to the extent permitted by the RPA Team members in RBI.

Figure 10 shows the Organizational structure of the Center of Excellence (CoE), which is a virtual Organization determined by the head office, the CoE provides Expert advice and support for the local RCTs. CoE is also the final decision maker of whether the process will be automated through RPA or not based on eligibility criteria and on the business priority of tasks. RCT on the other works on the execution of the tasks.

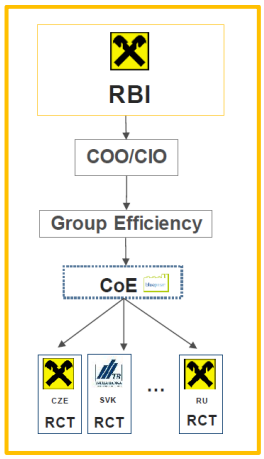


FIGURE 10:COE ORGANIZATIONAL STRUCTURE AND GOVERNANCE, RPA COOKBOOK V1.2, 2016, P.20

The Robotic Competence Team (RCT), are teams catering to local automation needs of the Countries where RBI has its operations. The RCT is set up as team of following members:

- Robotics Leader: The Leader of the Lean/Process team is also leading the RCT during the implementation phase
- Advisor & Analyst: Process Expert with Blue Prism Analyst training is acting as an advisor and an analyst at the same time
- Developer & Application Manager: Process Expert with Blue Prism Developer Training acts as Developer during implementation phase and as Application Manager during the production phase
- Controller: Process Leader is also acting as Process Controller

- Infrastructure Support: IT-Expert is setting-up and maintaining the Blue Prism environments

4.2. RPA in RBI

This section provides details of how RPA works in RBI, the expert interviews as well the documents/literature provided by RBI are the main sources of the information provided. With this section readers can compare the theory in section 2 with a practical example here. Repetition of information (if any) only proves further that these are the standard characteristics and features of RPA not only in theory but also in practice. Striking deviations from the theory in section 2 (if any) will be highlighted here.

RPA

An automation approach that helps eliminate standardized, repetitive and mundane tasks from the employee's job role, making him/her available for more valuable tasks.

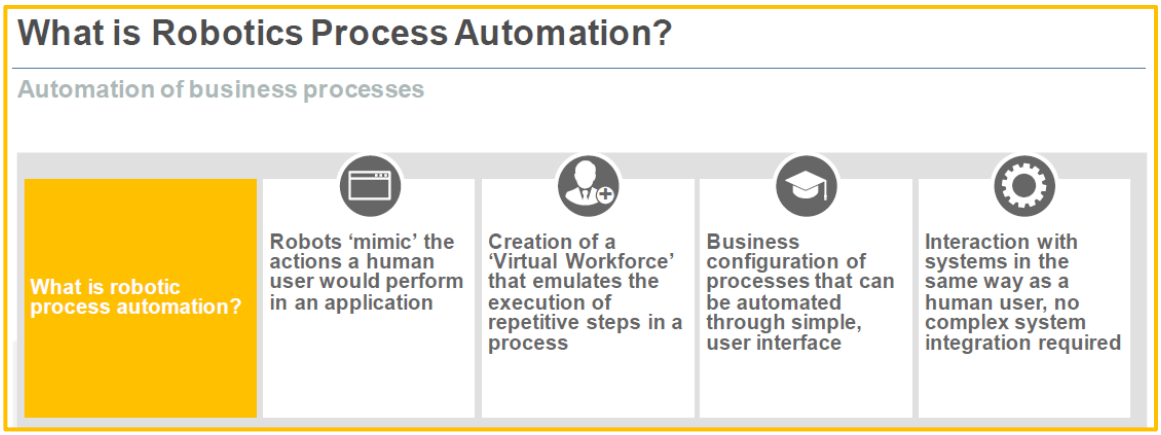


FIGURE 11:WHAT IS RPA, RPA COOKBOOK V1.2, 2016, P.7

Lifecycle

As the Figure 12 explains the Process cycle of RPA implementation is divided in six steps. Step1-deals with the feasibility analysis of the to-be-automated process. Whether the process has potential for RPA Automation. This can be done based on some questions and a complexity check, which is elaborated in the next section. Once the process is found eligible for RPA

solution, as Step 2, the business analyst follows the user on the process on click-by-click level to make a Product definition document (PDD), here each click by the user is taken as a screenshot to copy each step of the process. As Step 3, with the help of this document the developers can follow each step to implement and map the robot to the Blue Prism RPA tool in the same sequence, keeping in mind to eliminate any unnecessary steps and optimize the process if possible. As Step 4, a test run of the Robot is done to search for any failures or errors in implementation. The test phase also helps estimate the time a robot would take complete the task. In Step 5 the Robot is deployed to the process and it runs as scheduled, helping the users to get equipped with the robot doing the automated job and to get a feedback from them. As the last Step 6, the robot is maintained and run by the team, to keep a check. If something in the process changes, the robot needs to be updated with such step changes etc. Other than the mentioned 6 steps, there are a few other steps involved in the governance of the Team and distribution of responsibility with the team, which is not the focus of the thesis and thus not mentioned.

The above-mentioned step-by-step RPA implementation cycle was also confirmed in the **expert interviews** (transcriptions attached in Appendix) thus backing up the theory with their responses.

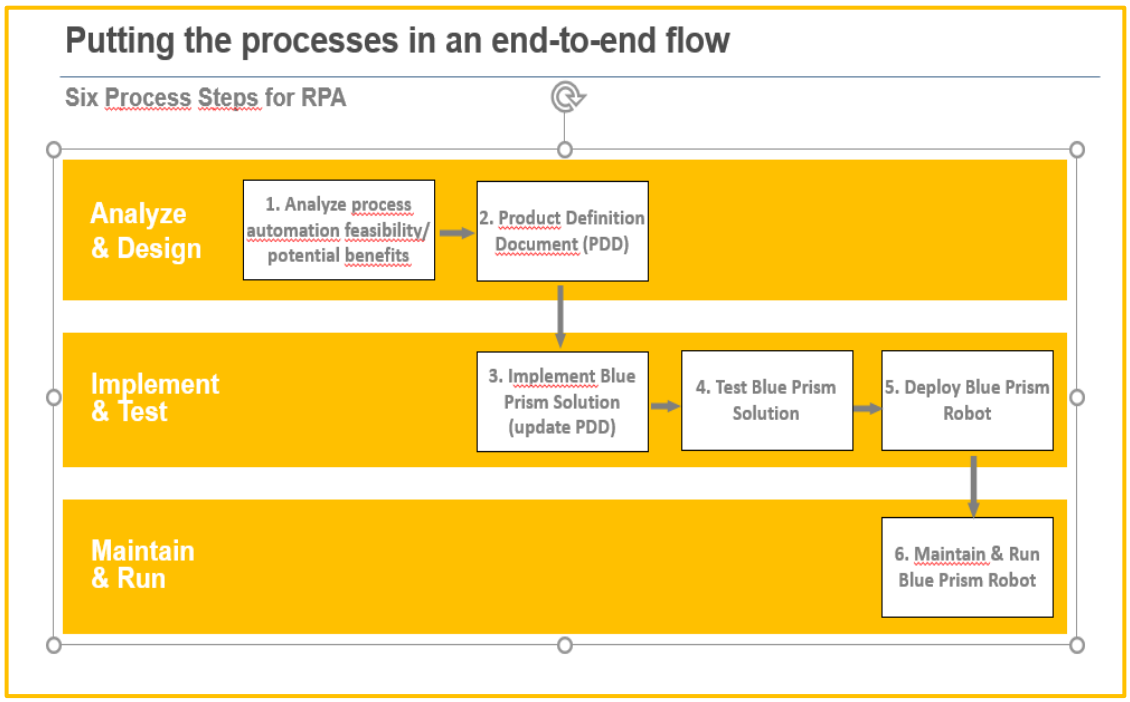


FIGURE 12:SIX STEP RPA LIFECYCLE, RPA COOKBOOK V1.2, 2016, P.52

4.3. Process suitability for RPA in RBI

The RPA cookbook cites four criteria which is also mentioned and explained in section 2, thus meaning these are the most standardized characteristics of eligibility check, namely:

- Repetitive Process of High volume
- Rule based without much human interference (Maturity)
- Standardized processes without many exceptions
- Digital input

The above-mentioned set of criteria according to RBI determines whether a process is at all suitable for RPA or not, i.e. if a process is not repetitive or rule based, without digital input Setup or with higher exceptions, the RPA automation for such a process is not recommended. But in order to ascertain the potential/impact of an RPA automation for a process, there is one more important criterion that has taken a special place the RPA cookbook, i.e. “the complexity". Though there is no definition on complexity, as per the RPA Cookbook and the expert interviews, Complexity of a process can be ascertained based on multiple other factors like high volume,

human interference exception handling, and integration with other legacy systems/interfaces/virtual desktops.

Thus, it can be said that apart from the above for criteria, complexity is the only one other criterion that is considered in RPA team of RBI. Below the Figure 13 explains the four levels of complexity with the help of these sub-criteria. For e.g.: In the 'COMPLEX' automation requirement / (profile as named in the figure) the following sub-criteria have been considered:

- *High Volume*: 45-70 Process steps / frequency of occurrence of a process.
- *High Human interference*: Complex validations
- *High Exception Handling*: Multiple exceptions
- *More Systems/interfaces*: Different regional systems or rules
- *Integration with Virtual desktop*: Citrix

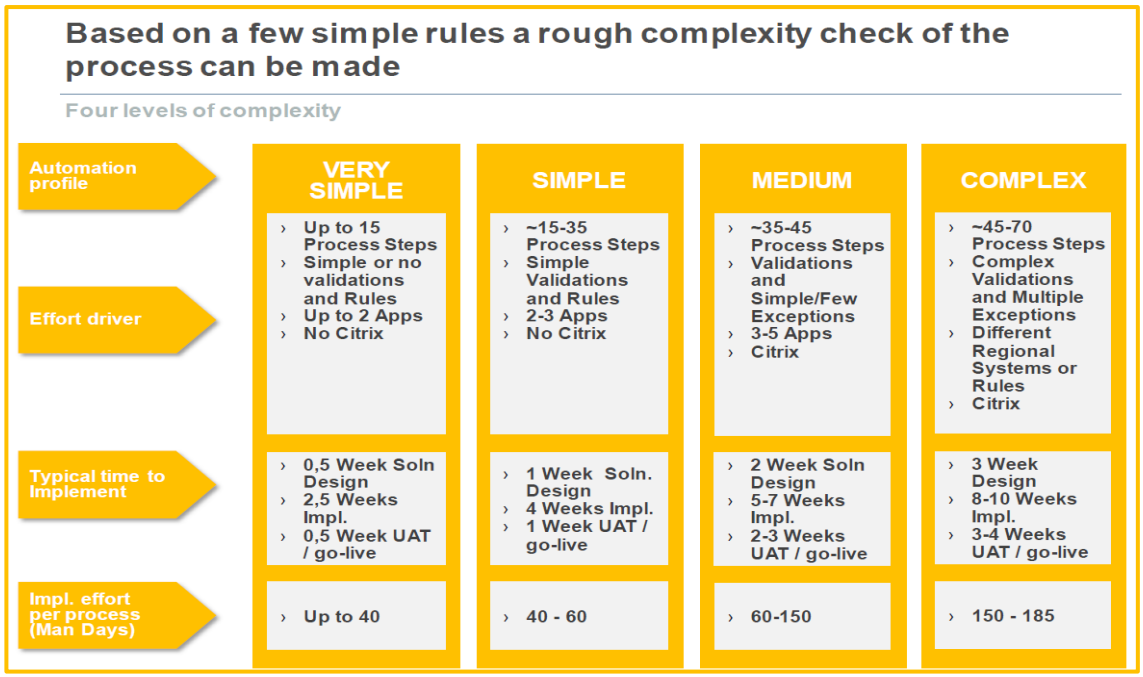


FIGURE 13: COMPLEXITY DEFINED, RPA COOKBOOK V1.2, 2016, P.48

The time frame for RPA process is shown based on complexity. The 'VERY SIMPLE' and 'SIMPLE' process from Figure 13 are considered under low process complexity. Similarly, 'MEDIUM' and 'COMPLEX' automation profile are considered under medium and high process complexity respectively and thus take longer for the process to automate.

The RPA Cookbook specifies some questions that help in checking the RPA suitability of a process:

- *"Rule based processes with logical order of steps: Is the process rule based and the steps are so sequential that no "thinking" is necessary while doing them?*
- *Repetitive processes without much process alternatives: Is it a standardized process during which the same steps are done repeatedly?*
- *Process with high volume: How often is the process executed per month? A hundred or a thousand times?*
- *Processes without many manual intervention/estimations: How often does an employee make a decision? How often does employee make phone calls or writes something in handwriting?*
- *Processes with digital inputs or digital triggers: Is the used data accessible digital or in format that is digitize able (structured, scan able form)?"* (cited from RPA Cookbook v1.2, 2016, P.14)

Thus, as per figure 14, it can be said that RPA is most suitable for process with medium complexity, as that is where extra on programming might become an unnecessary effort while RPA can execute the medium complexity automation request easily.

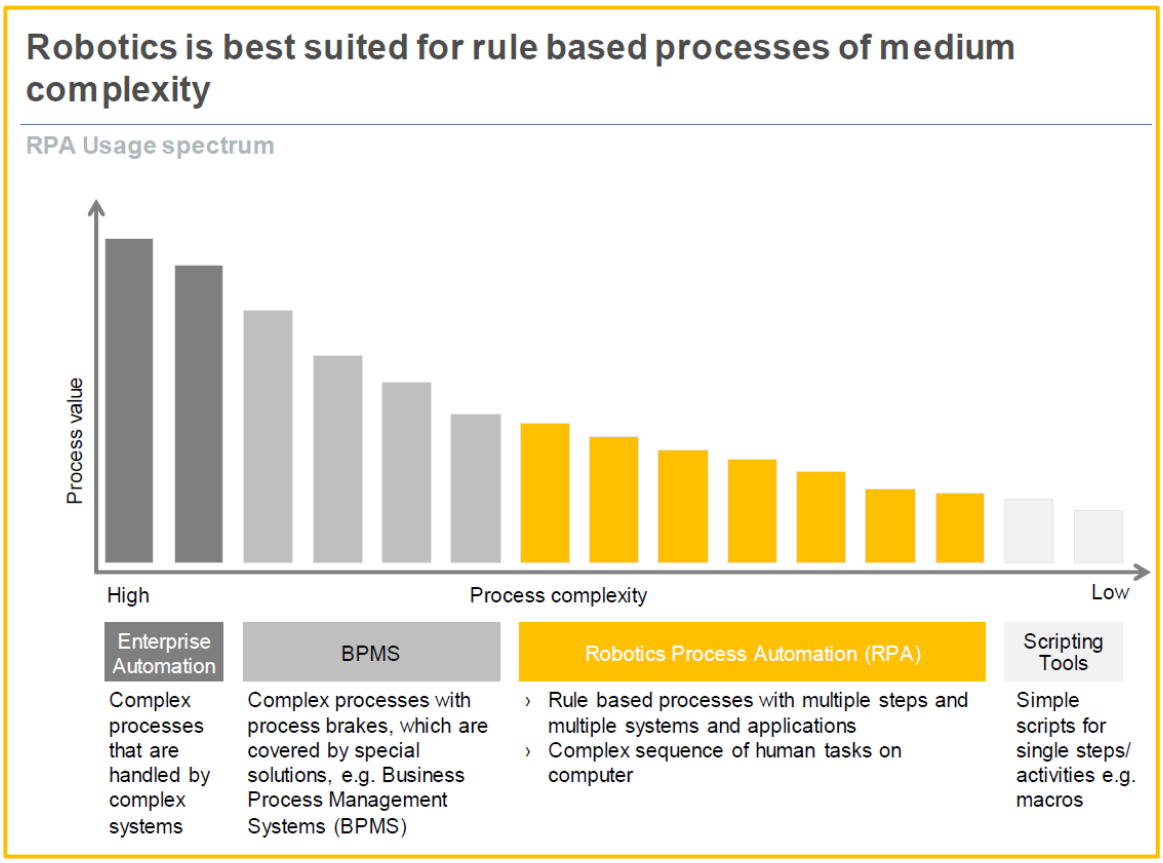


FIGURE 14: RPA SUITABILITY BASED ON COMPLEXITY, RPA COOKBOOK V1.2, 2016, P.8

4.4. Processes & Impact

Many processes in Raiffeisen Bank International have been automated through RPA, there has been a substantial reduction on the time taken to carry out a process that was automated as mentioned in the **expert interviews** and is highlighted in this section, Figure 15 shows a glimpse of few of the processes and its impact.

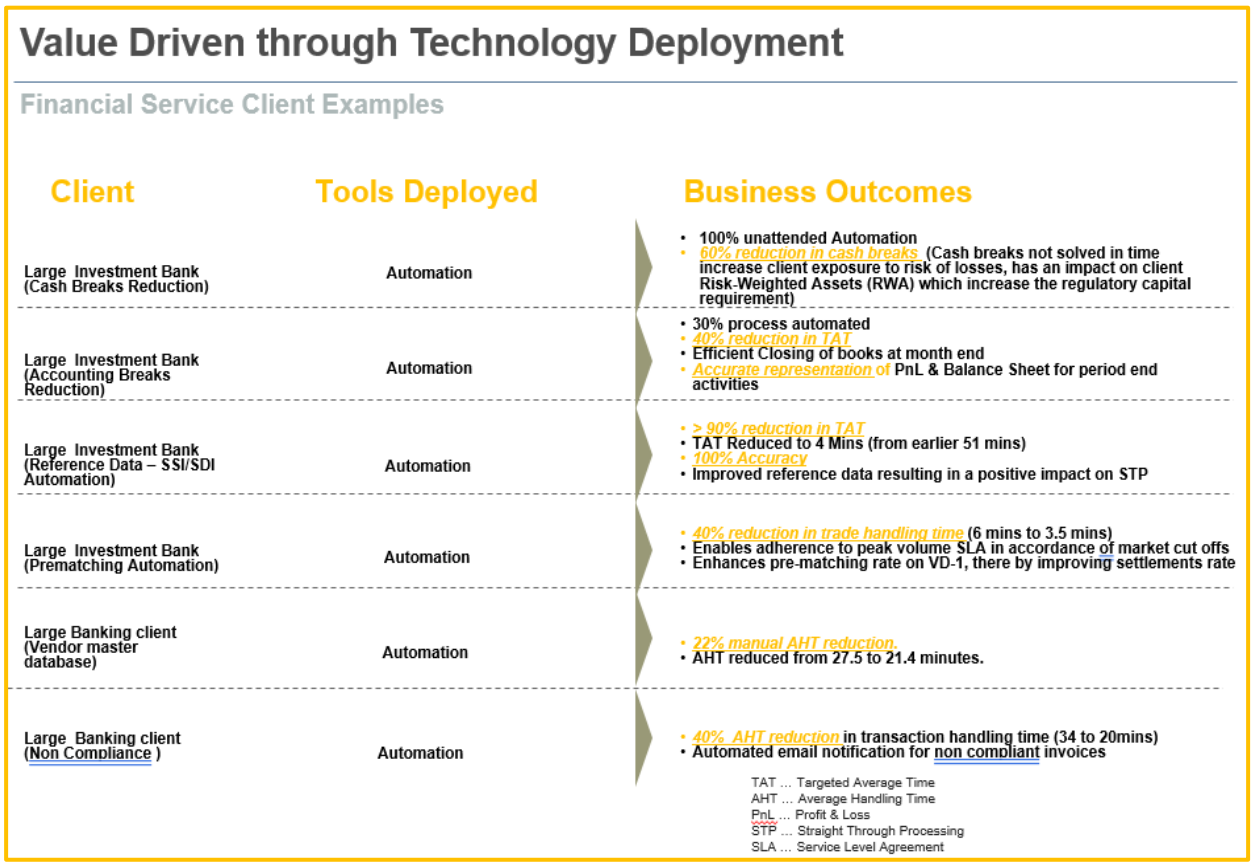


FIGURE 15: IMPACT ON PROCESS DUE TO RPA, RPA COOKBOOK V1.2, 2016, P.12

Apart from the processes mentioned in the figure 15, there were multiple other successful projects mentioned in the **10 Expert Interviews** taken for the purpose of this master's thesis. Some of these processes are highlighted below:

- Customer Management System (CMS): in this high complexity process an automated system was required for about 400 customers per month to login and/or register online. The complexity here was not to create the CMS tool, but rather to link the identification number from the Austrian National Bank's system to the RBI Customer Management System, along with a digital signature. Thus, there were multiple sub processes to this process. The process was at last successful but was time-taking due to its complexity.
- Credit Limit Management (CLM): in this process the robot had to flag the limit excesses and inform the responsible person via an email trigger. This process of a rather low complexity as it had mostly standardized instructions and a few systems to be integrated,

also without many exceptions or human interference. In the end, it reduced around 30% of the workload from the human colleague providing her more time for valuable tasks.

- Financial Sanctions (FISA): in this process a robot was required to identify false positive sanction in which around 12 FTES (Full-Time Equivalent/ Full-Time Employees) were involved before automation as there were various checks involved. Around 30% (part of the process that had comparatively less human intervention and more rule-based instructions) of the process was automated and was a big help for the process owners.
- Travel Management: A very simple process was to scan all Travel reimbursement pdf documents from email and enter the details in the SAP database. It was a low complexity process and was implemented in a short period of time helping the FTE to get away from this mundane task.

In a nutshell up to 30% of time is saved on an average with RPA automation of processes as most of it depends on the complexity of the process.

These interviews also led to answering the supporting questions, here the author presents what additional benefits and challenges were mentioned in the interview apart from what has already been mentioned in section 2.

For the ease of reference, the benefits and challenges have also been highlighted in the interview transcriptions (attached in Appendix):

It's not expensive: in an interview with Leo Alappat, it was mentioned that a license of an RPA robot costs much less than the average salary of a Full-Time Equivalent (FTE) in Austria and the same bot can be used for various processes. Thus, optimizing costs of each license purchased. Speed: Robot being machines in general are faster as they do not need a break or leave. Further the automated instruction also spares the time of thinking before performing each step manually.

RPA cannot work with paper-based documents, or with oral communication. Its lack of cognitive skills results in having no judgement of its own, requiring more manual interaction in case of situational decisions. But these barriers can be overcome by using advanced technologies like AI with RPA.

Summary:

Benefits

- Takes away mundane activities
- Increase productivity
- Interaction with other systems (legacy systems, APIs)
- Quick implementation- based on complexity of the process.
- Programmer friendly with low/no code development environment.
- Cost effective: costs much less than a Full time Equivalent (FTE) and can also be reused for multiple processes
- Speed: as the robot can work 24/7 without breaks.

Challenges

- Only for Rule-based and repetitive processes
- Incompatible with virtual desktops
- Lack of cognitive abilities results in no judgement skills of its own
- Lack of cognitive skills for speech or handwriting recognitive resulting on a huge dependence on only digital form of input.
- Repetitive steps also mean if there is an error in any one step, that is repeated as well.

- A Full time Equivalent (FTE) is needed to shadow the current process in order to automate it later, using up quite some resources in this phase.

4.5. Results

In this section, a comparison of the theoretical section 2 with the case study (section 4) and all the expert interviews (transcriptions attached in the Appendix) is presented in order to answer the main research question.

- **What are the eligibility criteria for a process to be automated through Robotic Process Automation (RPA)?**

Section 2.4 presented a list of criteria (Bourgouin, Leshob, & Renard, 2018, S. 48) & (Syed, et al., 2020, S. 5), with the help of which it can decided whether or not a process is suitable for RPA implementation

- Maturity
- Standardization
- Manual Interaction
- Volume of Transaction
- Digitized Input
- Degree of Complexity
    - Interaction with other systems
    - Exception handling

Where Maturity & Standardization help decide whether a process in at all eligible for a RPA implementation based on how established and stable the current process is and whether the steps are rule-based or not.

Manual Interaction was presented as a criterion to measure the potential of a business process for RPA (what type of RPA automation is the process in question suitable for?) because this criteria enables the RPA Team to understand how much manual intervention with the robot will be required after automation. The author of this thesis is of the view that it is a very important criterion and should be a part of step 1 under 'Maturity' because then the RPA team can decide whether the process is stable and contains to rule-based human intervention or does it keep changing based on the results of each process steps that occurs in the current process.

Volume of Transaction and Degree of Complexity were presented as criteria to assess the RPA relevance of a process (the impact of RPA automation), where Digitized Input was a part of assessing complexity. Here as well, the author of this thesis opined that Digital input should be one of the main criteria instead of being a part of complexity. Because without digital input RPA implementation is not possible at all, whereas complexity means the challenges that needs to be faced in the RPA implementation and decide whether that effort is worth.

Section 4.3 then presented the main criteria of RPA implementation in RBI

- Repetitive Process of High volume
- Rule based without much human interference (Maturity)
- Standardized processes without many exceptions

- Digital input
- Complexity

This is very similar to section 2.4, except that digital input has already been put up as a separate criterion which the author of this thesis agrees to., as already explained in the previous paragraph and therefore was able to create a key criteria list for the qualitative data analysis.

Expert Interviews: The qualitative data analysis was then done by the author of this thesis as explained in section 1.3. and the results confirmed the above opinion of the author of this paper as shown below.

Figure 16 presents the list of interviewees for a better reference to this section:

No.	Name	Position
Smart Automation		
1	Claus Mitterlehner	Robotics Lead
2	Leo Alappat	RPA Advisor
3	Alexander Hollmann	RPA Developer
4	Aleksandrs Sirotinskis	RPA Developer
5	Christian Maslo	RPA Developer
6	Mario Passweg	RPA Developer
7	Julia Breitsching	Robotics Analyst
8	Cvijeta Kojic	Robotics Analyst
Customer Data Management		
9	Kamil Brychta	RPA-User
Credit Limit Managment		
10	Susanne Novotny	RPA-User

FIGURE 16:LIST OF INTERVIEWEES

The criteria were first highlighted with colours and were then assigned a score based the frequency with which these criteria appeared in the interviews and finally assigned a primary or

secondary criteria category. Figure 17 below shows the criteria list with scores assigned, followed by the results that only confirm the author's opinion of the Key criteria enabling her to further categorize them as **primary and secondary criteria.**

Analysis methodology:

Assigning Key Categories to Subcategories:

the subcategories were taken from the interviews and were assigned a key category based on its impact on the overall process. For e.g.: Rule based, no logical thinking and Structured process were put under Maturity as these criteria define whether a process is stable and established or a new process which might keep changing.

Similarly, Complexity is a Key category which rather explains whether a said process has some challenges that will make the implementation difficult or time-taking instead of explaining whether a process should be automated at all or not. Thus, the subcategories assigned to Complexity were: Complexity, exception handling, various systems involved.

Standardization: similar to the above Repetitive, high volume of tasks and standardized were the sub-categories assigned to here, because it defines how repetitive, how often the process takes place and volume of steps involved.

Digital input: was assigned as an independent criterion because this criterion was mentioned as one of the main criteria in the interviews and had no other sub criteria within itself.

The Result:

Score (S)	Key Criteria list	*score (s)*	Sub Criteria list	Cited from Interviews	Name of the Interviewee
10	Maturity	3	Rule based	*Rule based* *rule based* *just rules they apply*	Alexander Hollmann Aleksandrs Sirotinskis Julia Breitsching
		4	No logical thinking	*no logical thinking* *no brainwork* *no logical thinking* *decision should be simple*	Leo Alappat Julia Breitsching Susanne Novotny Aleksandrs Sirotinskis
		3	Structured process	*the Structuring* *simple structured rule based process without code or logic behind it* *isn't structured*	Claus Mitterlehner Cvijeta kojic Mario Passweg
4	Complexity	2	Complexity	*low complexity what means that they have not that many, many process steps* *low complexity*	Alexander Hollmann Cvijeta Kojic
		1	Exception Handling	*lots of exceptions …not be an optimal case for RPA*	Christian Maslo
		1	Various systems involved	*Which systems are involved*	Leo Alappat
9	Standardized	3	Repetitive	*Repetitive* *Mundane, repetitive task the ideal candidate* *very repetitive*	Alexander Hollmann Claus Mitterlehner Aleksandrs Sirotinskis
		3	high volume of tasks	*High Volume* *Amount of Volume* *high volume of tasks*	Alexander Hollmann Claus Mitterlehner Christian Maslo
		3	Standardized	*Standardized process* *Standardized* *Standardized process*	Claus Mitterlehner Christian Maslo Susanne Novotny
5	Digital input	5	Digital input	*how the input is machine readable input* *inputs should be digital* *it's all digital* *digitized input*	Leo Alappat Claus Mitterlehner Aleksandrs Sirotinskis Julia Breitsching Mario Passweg

FIGURE 17: INITAL LIST OF CRITERIA AND ASSIGNED SCORES

All the Key Criteria except ‘complexity’ achieved a score of 5 and above resulting as primary criteria and the complexity which achieved a score of 4 was put under secondary criteria (as already explained in section 1.3). The final list of Criteria is given below:

Final Criteria Categorization	*Score (S)*	Key Criteria list	Sub Criteria list
Primary Category of Criteria	10	Maturity	Rule based
			No logical thinking
			Structured process
	9	Standardized	Repetitive
			high volume of tasks
			Standardized
	5	Digital input	Digital input
Secondary Category of Criteria	4	Complexity	Complexity
			Exception Handling
			Various systems involved

FIGURE 18: FINAL LIST OF CRITERIA WITH PRIMARY AND SECONDARY CATEGORIES ASSIGNED

Which further proves that complexity of a process, though a very important criteria, is not a deciding factor in whether a process is eligible for RPA implementation at all. It rather answers an important question in the second step of suitability process of RPA : ‘ how much effort is required for a eligible process to be implemented and whether the effort is worth spending’ the worth can be decided in various ways: evaluating the time needed for the implementation, types of systems involved, whether the system interaction are complicated due to its obsoleteness etc’ and this should be done after one knows whether the process automation is possible through RPA or not.

The author would like to therefore point out that any question asked in the beginning of the process which answers the question *'Is the process suitable for RPA?'* should be categorized as Primary' and answer to question *'How much effort will this automation require and whether it is worth the effort?'* should be categorized as Secondary

Future of RPA

"RPA alone can only work in Rule based environments, RPA are the hands and of a virtual employee. An artificial intelligence is more like the brain" -Alexander Hollmann (excerpt from an interview).

As pointed out in the theoretical section 3, that RPA provides automation solution to repetitive and mundane activities of a process and that it does not replace either BPMS or AI but rather would work best when with either one or both of them to create an efficient business process. Even the same has been pointed out in the case study (RPA Cookbook of RBI) – figure 19, where the future path of RPA is shown as collaboration with various cognitive approaches. The Expert interviews also presented a similar view that alone RPA could only stick to a part of the process automation which are mostly the less important but cumbersome tasks. The interviewees further mentioned that overcome the challenges of RPA, a collaboration with cognitive approaches would be ideal. This does sound as intelligent automation that was explained in section 3, which in the RPA Team of RBI is called Hyper automation and has also come up in one of the expert interviews.

*"but I think the future is not RPA, but **hyper process automation**, which means the combination of RPA and Other technologies like machine learning I see are so intelligent, character recognition, OCR, etc. So, RPA will be for long, as a valid technology, but infused with other technologies"*-Christian Maslo (excerpt from an interview).

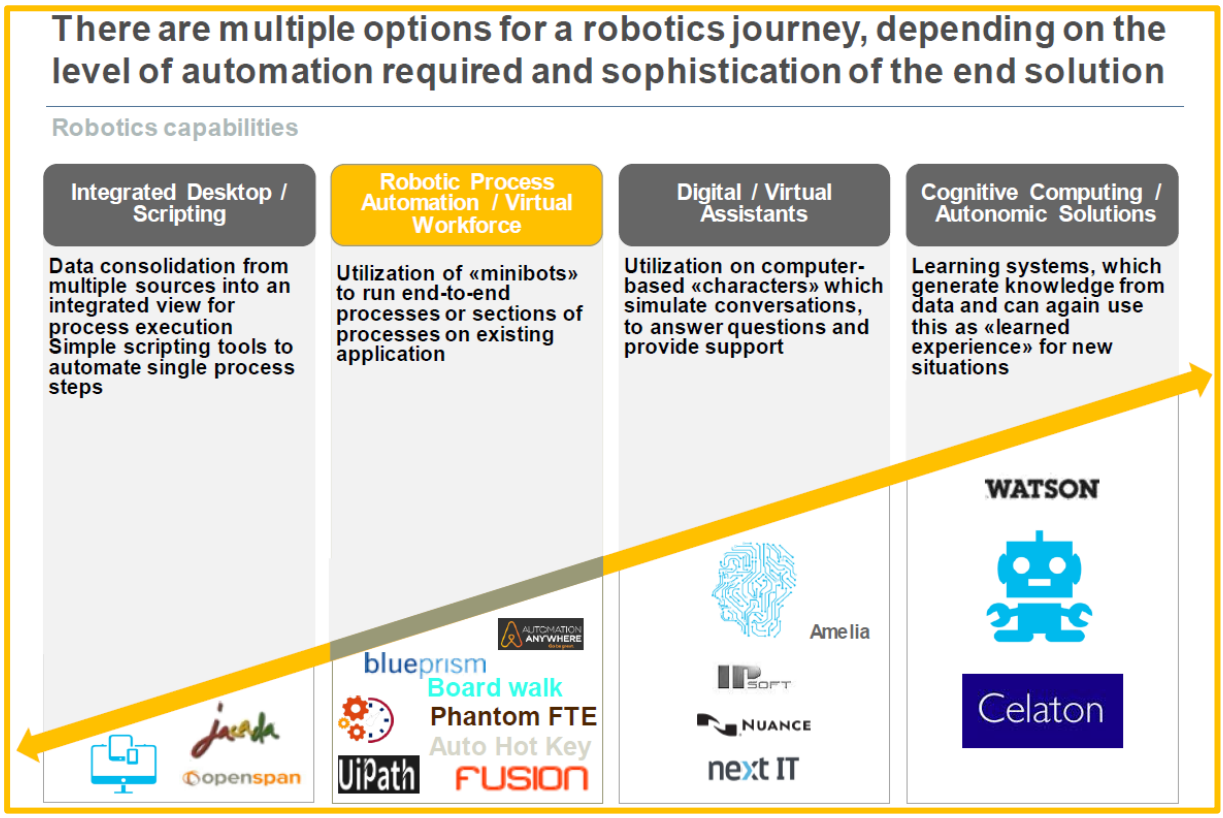


FIGURE 19: FUTURE OF AUTOMATION, RPA COOKBOOK V1.2, 2016, P.09

"So how the target picture should look like, Yeah, I say ideally, you've got some ERP enterprise solution like SAP or something like this in place, which or a BPMS Suite. Yeah. Which orchestrates all the tasks end to end. And then you always need specialized automation solutions. For example if you are reading in invoices of course you can pick a solution that's already provided by your BPMS as a provider, but probably it's not the best for your particular use case, so I think there will be always kind of a landscape of different tools. But it should all revolve around some centralized system, for example BPMS. ok, so that's what I would say and you know this kind of thing would trigger then robots would call AI services something like this, but at the end the highway should always be kind of a BPMS solution".-Leo Alappat. (excerpt from an interview).

5. Discussion & Conclusion

Business process improvements have always been a topic of prime importance in Organizations, especially with a globalized market where organization from all over the world can trade everywhere. Digitalization has, on one hand has made things much more easily available than earlier, but on the other hand has also induced fierce competition between Organizations. Thus, an Organization which can keep up with the updated innovation technique will stand out. But a lot depends on processes that need to be automated. For e.g., RPA tool cannot automate highly cognitive process, because the work model of RPA is apt for repetitive tasks with least or no human intervention. Similarly deploying an artificial Intelligence learning robot for task that is highly customized instead of using the traditional scripting/programming approach for the task is also not efficient enough.

In the new digital world of work, especially realized due to the Covid crisis, efficient digitization models have become extremely important. Working from home for almost one year was not normal until the last year (2019), The last year has brought the digital efficiency of organizations out in the open. For some it has been smooth, but for many it was a tough time struggling with digital ways of working and the IT departments were under huge pressure, trying to figure out quick solutions to all automation needs as not one solution fits all automation requirements. RPA is a very good automation tool for processes that fall in the criteria of eligibility but whether it is an end-to-end Process automation tool for an organization, is not true. In the expert interviews, there was a uniform view on the point- that the processes that best fit an RPA criterion (low/medium complexity) would achieve the best results, and as the complexity grows the results might start to vary. An end-to-end optimization of process is best handled by a Process Management tool like BPMS, where a combination of various automation techniques like Traditional IT Software development, RPA, artificial intelligence can be adopted on a ‘need-to Basis’, with the help of which an efficient process management can be created with optimization of time, resources and money used in the best way.

But the best solution is not always practically possible, there can be time and investment constraints or may be some other constraints due to which one or the other option is ruled-out.

In my opinion, a lot depends on automation requirements of an organization. The following characteristics of the requirements can be analyzed to find the best automation solution for an organization

- Complexity
- Timeline
    - Urgency and Priority
- Investment

For e.g.:

A complex process that needs to fetch data from multiple applications and legacy systems and involves human decision-making steps, is a priority but not urgent can use BPMS if the investment bucket for this purpose allows the same.

On the other hand, a process that can use high investment, is a priority, not urgent, has a very standardized set of steps but involves complex decision making, can use RPA and AI i.e. Intelligent Automation together.

So, in a nutshell, there is a wide range of options available for the organization to choose from and it is finally the organization that can make the best decisions based on its needs and available resources.

6. Future scope of research

Industry 4.0 or digital revolution is now a vital topic and has received a lot of attention is various articles, books and scientific papers. There are various techniques and tools, some of which are also discussed in this paper. This master thesis also tries to provide the readers with a comprehensive comparison on some of these automation approaches. It would very interesting to bring various techniques and tools together to understand which combination works the best. I am sure there can never be one best solution that fits all, but there could be a ranking based on the combination of various automation techniques that suits a certain type of process. It might be of interest for many process owners to know what kind of automation might suit their workflows the best and thus can be an interesting point for future research.

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8. Table of Figures

9. Questionnaire for Expert Interviews

- In what part of your role are you using RPA?
- What could be one example of a project involving RPA?
- Any specific benefits or problems of this project with respect to RPA?
- Apart from the project, what are the general benefits of RPA? Why RPA?
- Are there any Barriers? What are those? Which processes do you think cannot come under the purview of RPA enablement?
- What are the RPA eligibility criteria?
- How does the RPA cycle look like?
- Is it a time taking or a quick system? What is the end-to-end timeline of an RPA cycle?
- Which process in RBI use the traditional approaches (BPMS) & how many use advanced/automated approaches (RPA)? Why did RBI decide to start RPA enablement?
- How would you explain RPA, how does it differ from the traditional approaches (BPMS)?
- Do you see that RPA could act as a stand-alone system for all automation needs of an Organization?
    - If not, which other systems could complement RPA in the end-to-end process management of RBI?
- How do you think does this effect the manpower of a company? New job opportunities, new upskilling opportunities, could RPA lead to layoffs?
- How would you explain an efficient process management system? / what are the main characteristics of an efficient process management system?

10. Interview Transcriptions

Alexander Hollman

00:00:14.600 --> 00:00:32.567
Hello Alexander, Welcome one again and thanks for accepting the interview invite. For the questions I will share my screen so we both always have the questions in front of us. Now to start with my very first and simple question: what is your role in the RPA team?

00:00:34.110 --> 00:00:47.049
So, within RBI I'm an RPA developer and I'm mainly here for developing new processes. We've been working on many Projects actually, yeah.

00:00:48.850 --> 00:00:54.100
What kind of processes or projects have happened in the last few years?

00:00:55.230 --> 00:01:46.408
Actually, we did a lot and I was the first developer within RBI and so I saw actually every single project that we that we have done. We and I'm most proud of our financial sanctions process (FISA). Actually, where we try to screen or transactions and filter out false positives, where there this application in front that creates a lot of false positives and there are like 12 people involved to get rid of them. And now there is. There are also three robots and they automate like 30% of this whole process. So it's a huge benefit.

00:01:47.820 --> 00:01:58.927
So, when you say that it has been 30% less work for the employees. If I understand, yeah, right? How much in terms of time perspective have been saved here?

00:01:59.900 --> 00:02:30.753
Um, actually I cannot really tell you the time, but I we calculate always in FTE. So full time, yeah equivalent and we would then have saved there like 4 FTEs. So now for four people can actually do something different. So they are.

00:02:30.753 --> 00:02:42.157
They are doing something different and so much more, maybe strategic or valuable renovative or something like that so yeah, they actually did.

00:02:42.157 --> 00:02:48.930
They do not have only the transactions to screen and to screen those false positives, but they also have some sort of investigation in the back end where they have to follow up on cases and potential threats. And now those four people are included in this part.

00:02:50.110 --> 00:03:14.330
OK, that's good to know that there has not been less number of people in the team, but they have been rather used for better or more advanced Job or more valuable? Yeah OK. Is there any other project, for example a project which you think, Or you could not finish because of some barriers in RPA?

00:03:14.330 --> 00:04:06.831
Yeah, actually we that was actually my second project within RBI, because of that, the pure nature of RPA, it's screens or spies through every element within an application and we had this one project that involved an application that had like hundreds of thousands of elements on the screen. So there was a tree-view and from the technical point of view you just we encountered just some limitations of our RPA. In the end it worked actually, but instead of

the human task it would need like 30 minutes. The robot would take like several hours, and so the performance was really bad and we had to cancel the project actually.

00:04:07.590 --> 00:04:12.606
Could you also name the limitations? What does it mean? As I haven't heard of this limitation earlier.

00:04:18.380 --> 00:05:31.072
I mean it's I cannot. There's not really a name for it. It's just because the nature of RPA tries to identify each and single element of an application, and if the application for, for instance, has a lot of elements, then of course the RPA, the technology behind it takes longer to find the right element. And in this particular case. Is it was a website at the website was generated with or the content of this website was generated with JavaScript and there were like like 10,000 or above elements within this website? But for the human it was hidden with expandable elements. But for RPA had to search for all of those elements so therefore it took really long for each single. Element to identify, and instead of seconds it it took like minutes to identify single elements and so the whole process got dragged out over hours.

00:05:32.690 --> 00:05:42.244
OK, good yeah, good experience yeah. OK, So, what are the benefits of RPA? Why would somebody choose RPA as a process optimization?

00:05:44.010 --> 00:07:06.095
I would say that it's easy to answer because RPA is somewhere between a new application and somewhere between an existing one, because if you have an existing application and you want the new feature within it or you need to somehow extract data from it. Then you would have to adapt the existing application. That means that a lot of time and money will be invested because the IT infrastructure is built the way this way, that application lifecycle needs to test everything and check if everything stays stable. If you use RPA then actually the system you want to automize is not involved at all because. You don't have to change anything within the system, you can just add RP on top, extract data, manipulate the data, create. Fill oe send that data to somewhere else and. Yeah, you're basically using everything that's already here and you just have to create something on top, so I think that's a huge benefit

00:07:06.095 --> 00:07:30.010
yes. Sounds like it, but when I was speaking to a few colleagues from the RPA Department or team, I also understood that this RPA is taken as an intermediary solution between the existing app and the new app, yeah? OK, and how temporary or permanent is this then?

00:07:30.010 --> 00:08:15.927
I mean it's, I think like everywhere in the beginning you plan to get something new. And after several years you you realize then that it's still here. I mean, for RPA we just do it like like almost four years now with an RBI and even the first robot in financial sanctions that I mentioned is still active, so it's still there, but also, on the other hand, there were some robots that we created in the past that are already. Built within or the logic of the robots is built in within the application themselves, so no need for the robot itself.

00:08:15.927 --> 00:08:33.560
OK, so, which means you have also done projects where you started the project. It was successful and now there is no need any more so it stopped, do you think then how could the future be for RPA you think they'll be?

00:08:34.510 --> 00:09:27.780

Of course, that you think I think so. Yes, because in certain branches like for instance in the financial sector or in the Medical sector there are systems involved for ages, so the core systems most probably are some sort of legacy system that is only replaced by time by time. So actually, they stay for several decades. In the future, I think it will be the same basically and then there is the need for RPA to somehow extend those legacy systems without actually breaking them or to endanger something else.

00:09:27.780 --> 00:09:39.720
OK, but also what is another point here is that giving the advantage of having to even be able to connect to legacy systems easily without much changes. Is there also a complication attached to it?

00:09:40.980 --> 00:10:24.980
Sure, of course. I mean, even if they're legacy systems, sometimes they still change and sometimes there the infrastructure maybe changes, and if you just add something on top like RPA. It doesn't necessarily mean that RPA will still then work. After that the system you try to Automate is changed. So, for instance if the just some small changes within the UI of an application, can actually, create some issues for a robot so that the RPA robot has to be created. The new or adapted to the new user interface.

00:10:26.530 --> 00:10:32.393
how easy or difficult is it to either change or create a robot for RPA

00:10:32.393 --> 00:11:23.246
Actually, since already three years I'm doing regular trainings for other people for RPA. To get started, I would say. Because it's a really low code environment, you basically just draw what you want to do and defined stages and in the end, then you have really something that works. But it really depends on the things you want to achieve, because if you want to just do some simple tasks, then I guess you can do this quite fast. But if you want to do really, I would say more complex stuff than of course like for every other thing you need some experience and it takes more time.

00:11:26.249 --> 00:11:37.368
With your four years of experience in the team, do you think that in person from a business background can start in RPA without much difficulty?

00:11:37.368 --> 00:12:04.763
I would say so. So I mean, like I mentioned before, normally our trainings are like 5 days and after those five days there were a lot of people that actually really went on and automated a lot of different processes without much help. So it really depends how technical you are I guess, and how your personal experiences with the automation RPA in progress.

00:12:04.763 --> 00:12:23.830
Actually Yeah, but is there still a basic requirement for a person to be able to start even start the training? OK, the basic thing just like we say ok, in programming you need to have done bachelors in IT. But if there is there a requirement like that?

00:12:23.830 --> 00:13:02.836
I wouldn't say like really a requirement, but I think you should be somehow involved in technical things or just have a feeling for them. Because since you basically do some kind of programming, you also need to think like this so you have to be open to maybe change your way of thinking and or also already have it and if so then of course you're far off your easier started.

00:13:02.836 --> 00:13:08.420
Well, that said, what do you think is the eligibility criteria for any process to be eligible for RPA?

00:13:13.430 --> 00:14:34.488
Uh, I mean we have to there some basic rules more or less for processes that would be that they are rule based, so process that have defined rules behind it. Then most of the times it's said that for RPA they process. It should be of low complexity what means that they have not that many, many process steps. We define the number for that in the past it was like 10 process steps maximum. That they are repetitive and that the transaction load of the processes has a high volume. Regarding the low complexity, which means that e.g. 10 process steps max., are repetitive and the transactions load are high volume. I mean for RBI we already exceeded those boundaries and also created some sort of classification for processes with low, middle and high complexity. And I actually think that this also works even if it's not recommended for RPA. It's also it's just somehow you have to identify the possible issues and then just create some fall back scenarios within the robots and then also complex process processes can be done with RPA.

00:14:34.488 --> 00:14:41.440
Ok, so which means the Max 10 process step is then no more definition as such

00:14:42.766 --> 00:15:06.426
no. I mean it's actually, just some guideline we had in the beginning because starting with easy processes is more like you get more experienced by time and time but if you would just limit to 10 process steps per process, then I guess the RPA cannot be that much used within an organization.

00:15:09.010 --> 00:15:33.640
OK, so which means does it also happen that when you are about to start RPA for a process then the process that you itself is very not optimized, it has a lot of steps which can be eliminated or something. So do we also make sure that first it is optimized.

00:15:33.640 --> 00:16:23.320
Sadly not. I personally think we should optimize them, but actually the way it's set up we try to optimize it in the way when we can do, for instance, the original process is taking one case after another, then in our pay most. Probably we take all cases at once and try to somehow bucket and then process it is a bug if possible. That that are minor changes we do, but if if in the process there are some unnecessary steps, then most probably we even don't know that they are unnecessary, they will just get transferred to RPA.

00:16:25.060 --> 00:16:37.060
Yeah, OK, so to the next question. Um, what do you think an RPA cycle look like? And does it also to reflect in the cookbook that we have the RPA cookbook?

00:16:39.060 --> 00:18:11.658
Yeah, I think I mean, is it reflected in the cookbook? I'm not 100% sure about that but the cycle the RPA cycle would look like. If you mean from the beginning to the end, I would say it would start actually with discovery somehow. To find eligible processes. Then analysis, so is it really, really capable for RPA, capable to do to handle the process? Some sort of assessment? Then? There's also some sort of assessment on the technical side, we call it handshake, but I think it's just an RBI term we created where we try to use our PA with the applications that are involved in the process and check if the technology can. Can communicate with the applications. Then we would proceed to the development. Once development is done, we will start UAT. So some sort of testing with the customer or business. And once this is done and agreed on the success criteria, then we would release

the robot deployed in production and. Send this to the part where where operation would start where basically we we are monitoring the processes and and maintain them for the future.

00:18:13.440 --> 00:18:20.202
OK. And how long is a typical cycle? I'm sure it is dependent on the complexity or the process, but an average.

00:18:20.202 --> 00:19:45.585
Yeah, of course. I mean, in average would be like I would say about a month, I would say, The question here is the process that that are involved because here in RBI we because of our business strategies we mainly focus now on really complex processes which means that most probably we take like. I would say like two 2 ½ months to actually analyze them, develop them, deploy them. But in average in the in the past it was like one month for process it that were quite I would say simple or medium complexity. But, uh, once you already created something for a process, like for instance some sort of automation for a certain application, and this application is involved somewhere else, then you can limit this time to or reduce this time to maybe one or two weeks because. Some parts you already have created them in for another process and you can just reuse them and so you so you cut the corner somehow.

00:19:47.940 --> 00:19:59.101
OK, yes. So is that does this happen so often that you reuse the same technology or the same instructions for the process basically?

00:19:59.150 --> 00:20:27.632
I mean, yeah, some or there are some processes involved in the same application and we had now in the in the last half year a lot of projects actually where we could reuse certain parts. But sadly also there are some processes that are where we created something huge and it was never used again till now.

00:20:28.870 --> 00:20:33.358
OK. And why was that? Any specific reason?

00:20:35.610 --> 00:21:00.980
Since, the RPA team has no empowerment over the business. So if business decides to use RPA that's great, then we can start working, but if business don't doesn't like to Automate a particular thing then basically we can’t do anything about it.

00:21:01.620 --> 00:21:24.128
Yeah, OK, I understand. OK Yeah, but that's business, That's business. what do you think is the difference? Or so? Maybe I should rephrase it. Do you think RPA competes or complements the traditional approaches the programming approaches or even approaches like artificial intelligence?

00:21:26.050 --> 00:23:01.780
Um, so I think they are some sort of complementary because, the traditional programming. Techniques or technologies. They have mainly focus on individual needs of customers, so there is in my mind there is then there's a problem of a customer and then a new application will be created for that or a new feature whatsoever. And RPA is then therefore for the intermediate things, I would say if you have application an application B, then most probably you want to get data from A to B. But maybe those two applications cannot communicate for some given reasons. I don't know. Then there is RPA for this and also because you mentioned artificial intelligence, I think artificial intelligence is actually one of the. The. Best possible ways to extend RPA because RPA alone can only work in Rule based environments,

so it has no own knowledge somehow. And if you would add artificial intelligence to it and combine it with our PA then you can portray as RPA are the hands and of a virtual employee. An artificial intelligence is more like the brain than. So. OK, it's actually a great opportunity to use it.

00:23:03.210 --> 00:23:32.008
Good, very well explained with an example. Now the very another very important question for me in the thesis would be about employees. So how does our automation affect employees? Is it upskilling employees bring up employees from Monotonous task? Or is it more focused towards automation do and then layoffs?

00:23:32.008 --> 00:24:16.294
I mean there are two 2 sides where you can look at this so the one side is from the employee. Uh, side you can see RPA an enabler. I would say to somehow make processes more efficient to maybe also help the employees to somehow get faster to get better and also to create some opportunities so that employees can actually create some new skills within the RPA environment. If you would see it from the management perspective, most probably it would create some layoffs because RP is really a technology that is somehow

00:24:17.700 --> 00:25:01.060
Cost-Value driven I would say so. Robots are quite cheap, and if you can mimic employees with the order tasks. Actually, with some trivial work, then the first thing that comes to mind is why should I pay employees for twice or twice the amount of a robot when I can use or actually just one robot? Yeah, and also the robot will never have sick leave and the robot can also be upscaled like three or four times without any learning, learning cost yes so two sides yeah.

00:25:01.060 --> 00:25:28.648
But don't you think there is another point into it? That one? One side we would like to lay off people maybe so from the management side and on the other side. We also say that RPA is an intermediary solution which means still even if RP is running for a process, there are sometimes situations where we still want the specific traditional programming to be done for a process, which means the manpower is still being used.

00:25:30.690 --> 00:26:29.450
Yeah, but I think that if you if you can automate something with RPA then of course you can automate it with traditional programming, but it will take some time to do so I guess. And if you would use an RPA as an intermediate solution till it is done in the in the classical approach, then in any way you wouldn't need the manpower in between. So, you would maybe nominate 1 of your employees, to somehow to somehow look over the whole thing. So, to somehow be a superior to the virtual employees. But I guess you wouldn't need all the manpower in an ideal case. You would use all the employees for some more meaningful stuff and not so trivial work, but sadly most services are cost driven, so yeah.

00:26:31.100 --> 00:26:52.669
OK, and now just one last question for me would be. If you were allowed to, or if you could change something in the RPA from it, Processing perspective or whether the benefits or limitations if there could be something that could be avoided, what would it be?

00:26:53.870 --> 00:28:29.518
Within our RPA, yeah, I would say, uh, something you want to, or I would like to get rid of is that maintenance stability of RPA because like I said in the beginning, RPI is always in a connection with other applications. So that means if those applications the underlying applications are changing somehow, then RP is sometimes to be adapted and in a in an organization like in RBI that's has like more than several thousand employees, actually Yeah,

then there are a lot of changes and not all of them are communicated to us in this case to the RPA guys. Yeah, and so sometimes there is there. There are some Mondays where you come to work and you just check all the bots and then you see that like two or three of them are terminating over and over again and they do not work actually and then those Mondays are Mondays where you have to start coding immediately and try to test everything and to fix everything. Because of course if there are no humans anymore that can perform the task then and the robots are not working, then nobody is doing it and that's the worst case actually.

00:28:31.410 --> 00:28:56.700
Yeah OK, yeah, very good point. So yeah, that was it. Thanks an lot for your time. So yeah, in the end I would also like to mention here as we already spoke earlier that you already had a you've already done your master thesis in this particular topic, and if it's OK for you, I would like to use your quantitative analysis to be presented in the thesis.

00:28:56.700 --> 00:28:58.440
Yeah, sure, of course if you can use it then please use it.

00:28:58.440--> 00:29:03.650
Great, thanks a lot for your time and patience and also for sharing your thesis today. It is great to know that you also wrote the master thesis on the same topic. I will now stop recording the call.

Leo Alappat

00:00:02.610 --> 00:00:24.410
So, hello and welcome once again. As I already mentioned, I will share my
screen for the list of questions, ok, and the first question is what is your role in RPA Team?

00:00:26.270 --> 00:01:19.255
So as already mentioned, so it started as someone who enabled the whole topic within the bank, so from you doing the first proof of concepts being as a project lead there, evaluating the technology over to building up an actual team, performing RPA developments within the win head-office. And now I'm mainly or my last role together with RP or in the matter of RPA is basically as an advisor to umm act as an internal consultant. Um yeah develop, basically, ideas for RPA projects together with the clients.

00:01:21.380 --> 00:01:39.240
OK, um, so could you give us an example of a project that was treated as the most so positive or a very well done project and an example of the other way around something which you thought it would have been successful, but
it wasn't?

00:01:39.240 --> 00:04:47.622
I think a good example for a successful project, even though it had its ups and downs, I would still consider probably the first really big initiative within RBI, the FISA (Financial Sanctions) robot you probably heard of it from the one or the other. I, uh, personally liked it very well as. Um, it was. Um kind of. For me personally, it was the first bot um, that was not kind of already predicted by some papers from external consultants, or it was not a standard use case. It was a thing where a lot of people thought it wouldn't be possible to automate this task as it would need AI and so forth, but still we were able to deliver, significant impact overtime with this technology and it was basically the start of a good collaboration with the compliance area and also a big enabler to invest more into AI machine

learning in this particular area. And yeah, I liked it really well also to work there in this project. And I think the coolest thing about this is too that we were able to prove a lot of people, especially in the beginning, that this technology could be used in this. Yeah, very complex environment, so this is the good example. A bad example. I think they were probably one or two. But what they all had in common, kind of as a characteristic, was that. The projects already started as a failure as the management local management weren't able to communicate transparently what the task actually was. So basically, the experts on the business side wouldn't really know what's up on them. There was a lot of mistrust. And people were afraid that they would lose their jobs and everything and we as a smart automation RPA team weren't then able to build this trust within the initiatives. And when people already have a hostile attitude against you, it's quite hard for an initiative like RPA to succeed because you are heavily dependent on what your business counterparts are providing here, I would say it like this.

00:04:48.720 --> 00:04:58.714
OK yes so, this helps actually! My next question would be, what is the benefit of RPA? Sorry! What are the benefits of RPA?

00:05:00.460 --> 00:06:59.038
Um, I think that there are different Schools of thought. Um, for me personally, of course, you've got the obvious, you know you automate processes that were still manual for a long period of time where people were, for example, waiting for the big IT solution. Yeah, like end to end automation. BPMS something like this what? Actually never occurred. Yeah no one were able to invest that much of money or saw it fit to invest something in the process so it still had to be done manually and then you show up with RPA and suddenly you are able to deliver initiatives with a positive business case and all of that in a rather short period of time compared to big IT initiatives. For example, to switch a core banking system or something like this, Um, I think. Uh, apart from this obvious, you know benefits of or commercial benefits of implementing RPA. I think it changes your mindset, especially from a business perspective. It helps people to rethink the process is it is also, in my understanding, kind of the first steps into a bigger world of Industry 4.0 of digitalization. That's how I see it, because usually after such an initiative, people are less afraid of all these tasks. They understand that they have to re-evaluate their roles and the responsibilities, and I think this is something which is super important to enable this cultural change

00:07:02.180 --> 00:07:07.009
OK, yes, and what are the shortcomings on the other hand?

00:07:08.930 --> 00:08:36.008
Um? I think you spend time to fix something, where it probably in some cases would make more sense to just kill it off and to start completely new. For example. We as an RPA unit or me also in person, as someone who designs these processes with business together to do who drafts this concept of this project. Um, I'll do my best to not fall into this trap, but Still, it happens that you end up automating or automizing a process with which, which probably makes more sense to simply kill it off. Yeah, and if you have this opportunity to automate it somehow, yeah, because all the other initiatives failed in the past, and now you finally have a solution. You are tempted to automate the solution instead of, you know, completely rethink everything and move on. So this is something life extending measurement, something like this for approaches which in some cases may be ok, but in other cases not so much.

00:08:37.670 --> 00:09:02.408
OK, so how do you actually go around starting a process within RPA? When you say that use fall into a trap or whatever. So which means you go step by step and there's one point where

it's like no looking back. And you start automating that process because it's eligible and so, so how do you actually decide the eligibility of a process for RPA?

00:09:04.120 --> 00:10:32.979
There are of course this classic questions you always ask at the beginning, like you know how the input is. How is the data so the availability, the structuring, the which systems are involved? How much manual effort is required right now? How much creative thinking is required? All of this and yeah, you check these factors. For me it's always. It is always was always important to be on site to see the process in real life, Um and to discuss with the people actually performing the process and feel their pain and the struggle and Then you basically decide based on the hard facts and also based on the environment where this particular task process is settled, based on your impressions that you saw on site, based on interviews you had, based on workshops that it's you know it will, it will turn out to be a successful implementation or something where you better, don't touch it and leave it for someone else.

00:10:36.440 --> 00:10:39.690
OK, I did not understand you well here. So, what do you mean that this?

00:10:43.410 --> 00:10:49.780
So, if you want like hard criteria, or do you?

00:10:49.780 --> 00:11:02.869
know? I mean in general because of course they had criteria is also in the cookbook and also from other colleagues that did hear. So, in a general perspective, what you explain? Maybe I got a bit confused, sorry.

00:11:02.869 --> 00:11:19.014
Um? I mean, do you really also take let's put it in the other way around? When you check the eligibility criteria of a process for RPA, do you also take care of this process, there are unnecessary steps and it can be eliminated?

00:11:19.014 --> 00:13:29.752
Yeah ofcourse, So I think this also differentiates good, great and really bad processes that we automate with RPA. It's super important, and that's also probably. The big reason why almost all RPA units are settled within operations or process management, not within classical IT, and I fully support this, is because you have to check the everything from a process perspective, not from a system perspective and technology perspective, but mainly from a process perspective. And every initiative that were successful, also like the FISA that I mentioned earlier and for example, in FACTOR bank- where we also implemented something, it always started as a process review. We would look at the process as the end to end process. Would talk to the people in the units that are delivering us inputs. Would talk to the people who would receive outputs from us, Um, with the backend system and really tried to understand what the core function of the process are and move parts that are unnecessary. For example, there are cases where people insisted on having printouts. Yeah, to be signed off then manually to check if I don't know, booking was done right or something in these parts have been eliminated completely and we had to argue that it's not necessary. For example, removing things like this because it's for example not necessary anymore. If you have an automation there and so it's crucial to review the process and streamline it before investing even an hour of development effort.

00:13:32.650 --> 00:14:08.754
OK, yes, so this is quite understandable now. I would also want to know that from the other colleagues I got a view that RPA has always been seen as an intermediate solution. So, which means that there is a process and because it takes so much time to have a traditionally

programmed by an end to end automation, we take RPA as a mid-term solution, interim solution. So, what do you want to say about this? Is it good? Is it not good?

00:14:08.990 --> 00:20:36.036
I would disagree and I think Gartner also if you get their hyper automation concept right, it goes into the same direction, it's not a Patch solution. Yeah, I know, some of my colleagues think it is kind of a Patch solution even in the management, but I think they don't get the whole concept of it because for me, it's kind of the first module of a bigger world. Probably it's in five years. You won't be doing RPA as we did it three years ago. Obviously not, but you will integrate it with machine learning with cloud technologies and so forth. So for me this is kind of an essential step. There are of course ideally you have systems in your process. Is that do all the tricks, but this is simply a lab environment where we were talking about in real life in a company like RBI. You would have still a lot of legacy systems and you it will never make sense to invest that much money to up level these old tankers. To make them available for cloud processing and all of this and. Yeah, and therefore I see RPA in the one way or another makes sense, especially if you don't just use it as kind of interface solution, but rather to bridge, which is also kind of an interface. This more disruptive technologies like AI and all of this chat bots and so forth, together with our back-end systems. And therefore, I see RPA can be used as a Patch. I wouldn't focus on projects where you only have to aim to you know, Patch or to bridge something till the next big release of an end to end IT application, Um, so I would rather leave that out, but focus on those topics where there is no other solution and I think there are plenty of use cases out there.

00:16:47.800 --> 00:17:17.582
OK, and so when I talk about RPA here, I also heard different kind of RPA that was pure RPA and there is hybrid version as well. So, when we talk only about the pure RPA which means the process being automated only and only with RPA, Uh. Is it at all possible that there is an end to end automation of an entire process with the help of RPA, or is it? Does it even make sense that way?

00:17:19.070 --> 00:18:21.510
Um! I think there will be some situation where it would make sense. Um, but I think it shouldn't be the prime target in such a case, for example, if you would start with a completely new and then I've been in the situation where we were. I actually worked in close collaboration with colleagues from some IT colleagues where they had known system and they wanted support with RPA. And I insisted in implementing the features they wanted within their application. Invest a couple more days in development rather than having an interface between their core system, the robot and another system. So, if you would set up something completely new, you should ideally work without RPA.

00:18:22.070 --> 00:18:46.822
OK, what would you actually define as an efficient management process management? If we take for example. Business process management is an example, then RPA right now and there is this AI and maybe a lot of hybrid automation techniques.

00:18:46.822 --> 00:18:5.032
I think I didn't really get the question right, so, what do you mean like which process automation technology?

00:18:5.032 --> 00:19:16.390
So, when we talk about in process management in general. In the olden times they were everything was done manually. Then there was SAP or ERP. Then BPMS is coming into picture yeah?

00:19:17.550 --> 00:19:23.176

Um? So how the target picture should look like, Yeah, I say ideally, you've got um, some ERP enterprise solution like SAP or something like this in place. Um, which or a BPMS Suite. Yeah. Which orchestrates all the tasks and to end. And then you always need specialized automation solutions. For example if you are reading in invoices of course you can pick a solution that's already provided by your BPMS as a provider, but probably it's not the best for your particular use case, so I think there will be always kind of a landscape of different tools. But it should all revolve around some centralized system, for example BPMS. ok, so that's what I would say and you know this kind of thing would trigger then robots would call AI services something like this, but at the end the highway should always be kind of a BPMS solution.

00:20:36.036 --> 00:20:50.148
OK, so which means for an entire process management for example from end to end process management. It's always like something like a BPMS which would target the entire process efficiency and in between.

00:20:50.148 --> 00:22:09.034
Always yeah. And then when it comes to repetitive mundane tasks or something which is eligible, it's a criteria for RPA those particular processes can be then easily automated by RPA in sections

00:22:09.034 --> 00:22:10.598
exactly

00:22:10.922 --> 00:22:11.896
but RPA actually compatible with any/all kind of system in that sense?

00:22:11.896 --> 00:22:16.057
Absolutely I think this is the great benefit of this kind of technology that it's. Um, super compatible with all of this. Um, you could, and we already did this with AI integration and also with BPMS suites. A lot of the big vendors are partners, for example with Blue Prism. It it's the whole idea of an RPA tool is that it integrates interacts with other tools and from that perspective without having you know some APIs directly to these tools, even without you are capable of connecting to this tools just by the nature of RPA tools. So, um, yeah, I'd say this is the. This is the future.

00:22:16.440 --> 00:22:29.131
And what about legacy systems? So I would not be able to name a lot of them because I don't work with much, but maybe Oracle or Citrix does RPA actually is compatible with all of them.

00:22:29.840 --> 00:28:58.810
Um Citrix is, it depends, the question is. For example, if you if you talk about Citrix virtualization, virtualized environment for example the, as far as I understood it, the whole idea behind that was to reduce costs for licenses, software licenses and maintenance and so forth. If you have a big back office and at least in my understanding, you wouldn't probably need Citrix environments if you would eliminate the need for big back office centers where you know a lot of people are doing super mundane tasks and you want to reduce the cost there, I would rather eliminate the need for Citrix and remove the whole operations into a server environment. Where bunch of bots yeah, are basically working with this tools directly, way more efficient, of course. So for example with Citrix and with the legacy systems. It's hard to kill them. Yeah, in most cases super hard to kill them and to find the proper replacement. And here I think technologies like RPA can. Um, and also I think homegrown interfaces developed by IT people within the companies are capable to deliver here solutions to integrate this old fashioned, yeah, legacy systems to the new normal BPMS world.

00:24:20.540 --> 00:25:05.980
OK, yeah and one last question that I have right now is about manpower Now because whatever interviews I had until now, I never got a kind of a clear response into what does a robot cost in ratio or in comparison
to an FTE. Be a senior so I don't want to Obviously the figures, but in ratio or percentage of how much you know that what kind of a difference does it make, and does it mean that we would like to get rid of that employee? Or is it that we want to reuse the employee in a better task? Most strategic innovative task, so this is an important question here.

00:25:08.500 --> 00:27:44.533
For me, um, so first of all, regarding the ratio, yeah? An RPA license, at least in Austria, compared to the labor costs in Austria, is super cheap. Yeah. Especially with the conditions that we have as early adapter. But even if you're comparing it with the current prices, and please correct me if I'm wrong, but the average RPA license is somewhere between. Um yeah. 10K to 15K a year. Something like this I think, and I think the average salary in Austria is a bit higher. Yeah, not a bit exactly, so this is already a pretty plain. Calculation, yeah, so I think, um. Here you already have kind of a ratio and then you have to Take into consideration that one robot is way more productive than an average employee, so especially if it comes to this, this mundane tasks. So we've got. For example, process is or licenses of Bot. So basically one. But performing a multitude of process is within different, uh, units of the company and for example, in finance in text management or travel management, we've got bots that are just used for an hour a day. And it's not like that this licenses then only you know used one hour a day or one hour a week, but we are using the remaining time in completely different processes. So therefore I'd say there will be some process is where. The robot is, you know, where your laptop probably costs you more per month than this robot. And at the same time, um, achieving way more. So therefore I think. It's more a question of um, which process is you choose to be automated with robotics? That drives this thing

00:27:45.600 --> 00:27:55.927
OK, one maybe a very naive question here, but does a RPA license means exactly one RPA robot?

00:27: 55.927 --> 00:27:57.560
Yes.

00:27:57.560 --> 00:28:15.890
OK, and you mean to say that if, for example, today I have a process which needs only one hour of the robot time, then you can actually command the same robot for different processes and it can run on different processes.

00:28:15.890 --> 00:28:59.696
Yeah, we just have to make sure that it's scheduled right? So for example if you would need a robot for two hours, I don't know between 6:00 and 8:00 o'clock. Um, I of course don't want to, you know, buy a new license and infrastructure just for these two hours. Yeah, so I would have to make sure that I find a time spot. You know, with a different robot that's already running, which doesn't need to operate between 6:00 and 8:00, and this is how we manage it.

00:28:58.810 --> 00:29:22.996
and this can be irrespective of which team it is or whichever data it is?, and Ok, Yeah, that's actually pretty good. Next so I mean, yeah, that's actually it from the question perspective. Is there anything that you would like to highlight to me? Maybe the thing that I missed, or which you think is an important part?

00:29:28.310 --> 00:32:23.165
Let me think. Um, I think something that's also super important is, uh, if you talk about the whole automation, I think I, uh. It's probably, uh, an important thing and you mentioned it already, once or twice is what to do with the freed up capacities. Yeah, what you want to achieve with it? Is it just FTE reduction? Is this the right way? I'm not sure. Um? As managers, you should really think about, for example, you know after such an initiative I would go there, find some potentials. Let's assume I would visit your process and see that I can take out, I don't know two or 5FT's. Um, then you have two possibilities, either to remove these two or 5FT es and have the robot in place, which is not realistic because you still need some experts in evaluating re-calibrating the bot and so forth, but I think you always have to think about how you want to develop as an organization. What's the actual value of human labor force, human workforce? What are the strengths of having humans in the process? And if you as a unit don't have anything, yeah, that really makes use of the human creativity, ingenuity, and so forth. Even in some super structured things like I don't know, accounting or something like this, yeah? Or just booking payments then it should be a warning sign and you should really as a manager investor and as an organization invest resources to overcome this issue and I think this is always something that should also be done in parallel to all this automation initiatives because you don't grow with robots, they don't create new business models. It's reducing your costs. At the end of today, may probably making a giving you the opportunity to open new fields of work, but the big jump will only, at least in my understanding, unless we have super highly sophisticated AI, but I think we're still far away from that. Um, it's the creativity and ingenuity of human employees and this is something where we should invest more, I guess.

00:32:24.570 --> 00:32:38.932
But is there a project or any such projects where you were pretty satisfied seeing that once you had the robot in place, the current employees were being used for the right kind of work in the same or another team or whatever?

00:32:40.530 --> 00:35:08.537
Yeah, actually, yes. Because uh, what I saw in in more than one instance is that you know, after we went through the exercise, people learn to understand what the actual value they as humans can bring to the process is and Yeah, you can either focus on, you know, spending more time facing your customer. This would be the ideal scenario or to invest more time in in checking more complex cases instead of, you know doing the right checks for frauds doing the um? Yeah, doing some more sophisticated analysis without having this pressure of completing stupid tasks within you know your 38,5 working hours yeah. OK, and maybe one aspect that also jumped into my mind. Super important. Um, the people creating the bots. Super important. Um, I think. This is something where you should really think twice or more than twice. What kind of profiles you want to hire there if you should. Want to build some, uh? If you are planning to build such a unit? Um, where you locate these people? How you keep the people basically? Um, and if you're not doing it right and this happened, I think to a lot of Network banks of ours that people would simply leave the company. And you can have the best backlog and so forth. And if you can't make sure that the people stay with this capabilities because there is the war for talent and so forth, and you don't have that many good RPA developers and so forth, you shouldn't. You have to make sure that the people actually stay, and this is also, I think, a critical component.

00:35:08.537 --> 00:35:26.852
OK, but so as far as I read through or even spoke to different colleagues and people. I understood that RP development really doesn't need much special skills, even a person from a business background can work in an RP team.

00:35:26.852 --> 00:38:07.220

Yeah & no, I think the topic is you need to have a successful RPA team, and if you compare it to other organizations. If you compare it for example in Austria, you've got a lot of banks who tried or probably not failed, but who really struggle with having an RPA working, and The thing is, if you give it for example to a traditional programmer. He would fail to see the potential. Same goes for business analysts if he or she super IT oriented system oriented, they will fail to provide useful RPA solutions. And to get someone who is very process oriented, this could be, for example, someone from a business unit. Yeah, because they're probably more creative in understanding what their business actually requires. In combination with someone who really understands technology, and this is something if you don't understand how programming works, yeah, of course you can build some robots, but they're crappy ones and they produce a lot of maintenance effort. OK, and this will also eventually end up, and this is also my experience at the very beginning. We would end up in having the robot life for one week or till you know during testing it would probably work, but then if you put it live then it starts to fail. And then it causes errors and then it jeopardizes your whole initiative. So, this is something. Yeah, it's finding the right balance between um, programming skills, not this particular programming skill, just the understanding of how it works and understanding for efficient process is. And to be honest, I've been in the in the situation with my colleagues. Actually, we developer colleagues that some of them were so IT driven. Yet because they were hardcore programmers that they weren't able to see the actual issue behind a requirement provided by a business analyst. OK, yes, and you are so focused on providing the right technical solution that you are blind to easier modes to achieve the same results or better results, and this is something where it's hard to find the balance I think. Most people who fit this profile, that's my opinion. Don't want to do this till they go to pension. OK, obviously OK, and this is also something where you have to make sure that the people stay and Uh. I think I spent 1 1/2 years hiring people searching people for as RP developers and analysts. And believe me, I saw a lot of people and it was quite hard to find suitable people

00:38:07.220 --> 00:38:10.932
So what do you think would be the eligibility criteria for a developer or analyst, I don't know which role are you talking about exactly, but maybe.
00:38:10.932 --> 00:40:28.950
Actually both, I think the analyst is simply, because there are already analysts in this particular form available in traditional it, you can have people from business background and teach them to do this. Um, but if you want to create outstanding RPA solutions. Um, then you need people who are able to code. No, because with world RPA out of the box, all these vendors provide you isn't enough. And, um, you, for example, you would need probably a day yeah to create something within Blue prism. What you could also solve with. So, you know, with the process is and the boxes and everything where you would simply need 2 lines of code which you can then embed within Blue PRISM. So therefore, you know it's good to know both. And this is what I would say, and it's I think it's important to have pros and the people. Ok, And customer centric super important.

00:40:30.940 --> 00:41:10.041
OK yeah somehow, so basically being very honest I am a bit confused here because. I have always been reading the skilled requirements level of level of skill is not so it's always portrayed at least as an advantage in compared comparison to the classical IT solution that there you need typically very skilled employees, obviously because it's all about coding, programming and the technical details which in RP is comparatively less. Maybe if I could bend it wrong.

00:41:12.740 --> 00:41:16.960
This is a marketing lie because this was, you know when. When I started 2016. Yeah, the concept was let's leave out IT completely. OK, we don't need any programmers and even I started as someone without IT knowledge.

I'm a process person, to develop a Bot, and actually I was successful in creating a bot with UI path back then, yeah? But this bot had no chance to survive a single day in a production environment. It was nice to showcase my superiors. It was nice for a consultant to show his clients, you know, I clicked here. These three buttons and the Bot does magic. But um, and this is probably also the reason why a lot of initiatives fail. Also in Austrian banks and other companies, because they think you don't need any technical person at all. This is simply a lie, it's you need this kind of people. And people who aren't so stubborn focusing on the traditional IT solutions. If I have a developer who's always tells me that you know he could write some code and it would solve the same problem. He's not understanding the topic, so this kind of developers. We don't need them. I had interviews with this kind of people too. Because they would ignore all the concepts done from business and this is not productive. Uh and on the other side if someone doesn't understand how to think like a traditional developer how to find solutions. Um, how to program stuff you end up doing super dirty unsexy bots that are super instable and with this. This is something no one tells you if you talk to anyone who has been involved in vendor selection and overcome the stay actually overcome the stage Of a POC. Yeah and having industrialized our PA will tell you. You can't just put business people. And you know, push them through a training. Yeah, and RP a crash course training and expect from them to create solutions like what we had in RBI. OK, and this is something. Of course no. Of the vendors will tell you the BIG4 won't tell you, because with this you don't sell projects because with this you kind of admit that you need still some specialized people, Yeah, you have to build them up on your own in addition so, It's worth it, but it's not as sexy as a story as telling people you know, take someone from your process management someone from operations Um and it would work, yeah? Exactly. OK, all right it doesn't work.

00:44:41.220 --> 00:44:49.932
I believe you. An you said POC could you just tell me the full form of this?

00:44:50.235 --> 00:44:52.398
Yeah, Proof of Concept.

00:44:54.430 --> 00:45:12.240
Alright, so. Thank you, and yes, that was it. I have taken maybe additional few minutes of your time and keeping that in perspective I would say thank you so much and I will stop recording the call now.

Claus Mitterlehner

00:00:06.927 --> 00:00:24.494
Yeah, so hello and welcome Klaus, to the interview and thanks for your time once again. let's start with the very first question. As I already know you are heading the whole Department, but still to have a little more detail on what is your role in the entire RPA department?

00:00:26.280 --> 00:01:23.771
Yeah, my my role. I've to go back because, four years ago I was involved here in the in the evaluation of our RPA vendors and and then here, Finally, then we made a decision and assign the group contract and then I stepped out for a couple of years. Now it seems that I'm back in the game as we form the new unit now here, we call this smart automation and here RPA is one of the capabilities that we are working on. So that my current role, so in the smart automation team RPA is one of our major capabilities but we also have a couple of more capabilities.

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Could you give me some example for a project that involves RPA or that is going on right now?

00:01:38.360 --> 00:03:59.138
Yeah, for sure. So in the mean time you know we did exercises with RPA in different areas, but probably one of the most interesting area is the compliance area. So we started already 2017 broadly here in the compliance area. Indeed, do they have to do here what is called financial sanctions screening and anti-money laundering. And here we have the user system called Norcom and then they have to screen, you know all these incoming transactions and about 2% of these incoming transactions generate an alert and they have to be followed up. So there are some triage agents have to follow up on this transactions and here we are talking about in a couple of hundreds of thousands of transactions to be followed up on a yearly basis and here by applying RPA we could reduce the amount by one third to one third of these transactions is somehow followed up and closed by a robot and the remaining two thirds seem to be more complex, still have to be followed up by humans, so this is quite a good exercise where we could save a lot of effort here on the business side meantime we were still working on that and we could increase for screening. All these alerts, and in the here so the ratio slightly. We also tried to develop on top here kind of machine learning model, but this was difficult because rule base. It is quite clear there's a simple rule which makes a decision yes or no when it comes to machine learning. You have some just some probabilities that you would assess this as a real alert or the false positive and hear the compliance wants to be quite safe and sure and therefore somehow, we'll start here. But RPA works fine.

00:03:59.138 --> 00:04:10:102
OK, and when you say machine learning, so basically this project of with compliance, this is then clubbed with machine learning.

00:04:10:102 --> 00:04:56.870
So up to now it's just using the RPA, but we tried to go to increase the ratio of alerts with me and close automatically by applying on top, maybe a machine learning model, but this was then an internal initiative where we still are working on that which is not in production. So, with RPA I think we somehow are not able to reach a higher ratio and we live by defining rules and it gets more and more difficult to get an additional percentage, you know. So I think some we're now here at 35%.

00:04:56.870 --> 00:05:33.118
OK, so then when you describe this project, I do understand that RPA has the benefits, which means rule based exchange so basically rule based automation and it also has these kinds of typical problems for a completion of a project or maybe not completion, but maybe an advancement of a project in terms of automation when it comes to having a higher level of automation, so could you maybe describe a few specific benefits and problems for RPA?

00:05:33.118 --> 00:08:42.940
Naja, RPA, we see it here as is. I would say as a plaster, so, if process is broken or has not an interface yet, then we can bring in this technology. We would see it. Here is a short midterm resolution of a problem. In an ideal world, later on it would be fixed either by a proper interface or by proper process by proper systems support. What we see overtime that the RPA solutions stay longer as expected. So in some areas like here as I mentioned just in the FISA area. Now it's in place already for more than 3-4 years. So seems a RPA in some areas has come to stay. In other areas I would expect that then it will be decommissioned, may be replaced later on by proper interface, whatever, but RPA has, I would say has not only quantitative effects, so talking about shifting of mundane activities from humans to the machine, but has also some qualitative aspects. So qualitative, I mean

that we could also mitigate some risks. We could also improve, maybe customer experience that customers received data information for example faster, so it doesn't take that long day because the bots that can work you know 24/7 on weekends and whenever and so, it's not because people normally prefer to see the RPA as a technology which is replacing people which to some extent probably is right. But I would say it's augmenting people so they can, really get rid of some really cumbersome tasks, activities and can focus, concentrate on other activities, and then, RPA here steps in and supports them and augments them. So what we do here is we calculate for major cases we calculate also for some business cases to see if it makes sense to invest here to develop something, because RPA is sometimes you know, people also tend to automate very tiny pieces of a process, so then talking about 0,1 FTEs or even less and here it not all the time it makes sense we need to go for such an automation. But we have seen other processes where we could automate, you know, couple of FTEs by means that we could remove these efforts from the employees and then they could focus on other things. I hope this answers your question.

00:08:42.940 --> 00:09:01.012
Yes, it does, and thanks a lot. But here one thing that I did not really understand is when you say that RPA is a mid-term resolution and later stage it would be a proper interface if I understood it correctly. What does this really mean?

00:09:01.030 --> 00:10:11.248
No, not the RPA will be a proper interface, but then the RPA would be replaced there. For example, if you have a situation where you want to transfer data from a system A to a system B, yeah, and people have to do this manually because there is no proper it interface implemented yet so RPA would step in here to take out the information there, populate the system, be with the with the information. But this is solution because in the in an ideal world. IT guys would develop a proper interface from system A to system B and then then it is done. This interesting planning would really populate system B with the data as long as such an interface doesn't exist. Here is a is a proper solution as an interim solution, but in the long run I would expect decommissioned replaced by interface.

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and what would you guess would be that long run, so how long do you think in this run on RPA in such a manner?

00:10:20.750 --> 00:11:01.020
Oh!, that it depends on, you know on the availability of IT, on investment, are they willing to to invest in such an interface, maybe it's too expensive. Maybe they don't have resources. All of the station, so we stay here to provide this short term or the mid-term. But the discussion finally is with the business with the process owner. We have to make the disclaimer that RPA is somehow not the right to the best solution, but it can help as in as an interim solution.

00:11:01.020 --> 00:11:07.568
It means when you start, you already know or you kind of present it as an interim solution.

00:11:07.568 --> 00:12:11.987
Normally we do, so we tell the people you have to be aware that because RPA, is doing the same as a human would do, so have to you know log into the system, have carried out with later, maybe transforming the data slightly, then log into the other system and then entering the data there and every time when the system is changing or the user interface of the system, also the somehow has to be impacted so there is. Uh, when you would have proper interfaces probably you wouldn't have such an effort, because then you know, Interface A to B, is defined once and then it works and so maybe with the next release of system A, the

interface maybe has not to be changed, whereas if the user interface changes and then the robot is used and maybe you have to adapt robot so there are also some downsides.

00:12:11.987 --> 00:12:18.854
Yeah, so as you said, there are some downside, so are there any other barrier or a downside that you that comes to your mind.

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Yeah for sure so I wouldn't apply, you know robotics for process which is not stable because the process is again and again adapted. Yeah, so it's not stable enough because then all the time you also have to adapt the robot. Yes, so I would apply RPA for really processes which are quite standardized which have High volume. So this this is some kind of prerequisites of a process, then I would be careful to robotize critical processes which business critical, because if the robot fails, yeah you know, then if this is really a business critical process, then you're getting in trouble here and then you have to be aware that also running the robots also should be, should be kind of Business Continuity management compliance to be followed for critical processes. The process is there are there are downsides, so also you know if the data used this input is not in a structured format, then it also gets difficult because you cannot read with the robot data from unstructured sources. So there's some limit. The loop if you still have the paper-based input, things like that and then RPA is probably not the right tool. Work around when you, transfer the paper based in both for the non-machine-readable input to a machine-readable input and then you can again apply the RPA.

00:14:03.340 --> 00:14:29.786
Uh huh. OK, so I think half of the next question is somehow answered, but to have a clear understanding, what are the eligibility criteria of RPA? So how would you decide this process is eligible for RPA? Because and also this is a very important question for my thesis.

00:14:29.786 --> 00:16:45.511
Yeah, we have a cookbook, you've seen it, we defined here some basic criteria as mentioned. A standardized process. Certain amount of volume, stable process, machine readable input. Say This is the minimal criteria, then the underlying systems they should be usable for the RPA solutions. that we, can you know, connect to the systems that we can read from the user interfaces from the systems, Because sometimes also systems using some proprietary tools during the development of RPA then he's not able to get in contact or the read from the screen properly. So we've seen this as well in the past and we call these handshake. So we try to We can help take picture system and tick, then we can also use it here in the automation. Um, yeah then I would say also a minimum amount of savings so, for this year 0.01 FTEs savings and maybe it's not worth to have the effort because you in the development in the operations. Then maybe it costs you can save. The kind of priority is also a few cases. He's also having robots, amount of team members, so you need it is in the list. Appeared developers then maybe people who are able to monitor the Bots. Don't see enough cases, then probably it’s not a good idea to introduce RPA because you have to fill the pipeline. You have to fill the kind of a backlog. Otherwise, you have been one-time investment in the long run and not a positive business case.

00:16:46.570 --> 00:16:58.790
OK yeah. So basically then I can understand that the eligibility criteria is referred to in the cookbook is a complete understanding of what we follow in RBI.

00:16:58.790 --> 00:17:21.290
Yeah, so in general RPA is agnostic to any process or business area, so
RPA cannot be, you know, apply just only on as long as this minimum basic requirements fulfilled.

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Good, So what would you so? How does an RPA's cycle look like? How does it start? What? What is the cycle? How do you start and then finish?

00:17:31.175 --> 00:19:35.266
Normally you start with the kind of assessment because you have to identify this processes. Um, what we don't do is here full end to end process reengineering or redesigns of this has to be done. But as soon as we are involved here from an automation perspective, then we assume that this process is more or less stable one, can be automated
in and then we have the role of a business analyst, RPA business analysts and this role does. Still does some interviews and win monitoring to get another process, looks like currently and then the person will have to document the requirement in a document which is called PDD-process definition document. Has to align it with the business, then as when this is aligned then it's handed to hand it over to an handed over to an RPA developer, the RPA developer is still doing here some iterations with the business analyst then starts to develop the automated solution. Then this solution is handed over, no sorry first it has to be tested again by the business and then after the user acceptance tests (UAT) is handed over to production and when it is deployed then it has to be monitored afterwards. So this is the cycle really from analysis development testing handover. Be having it in in this monitoring. Yeah, that's the cycle.

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Then how fast or What is the timeline generally? So how? Because I kind of understood from the our colleague Leo, It doesn't take so much time. It is a bit faster than maybe another proper IT function or a process

00:19:57.990 --> 00:20:36.330
Yeah, so that's the promise. Now that the RPA can be developed in the introduced very quickly, so will talk here. Probably, depending on the complexity of what we do here, we assess him in three types, minimum, normal and high complexity, and low complexity problems, we can do the whole cycle in say in one month, medium probably takes away, then one to two months and the high complexity probably takes up to four months.

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OK, and do we also have a definition about how we measure complexity of a process.

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Yeah, so we have, so there's also in the cookbook probably will find some measure here, as you know, as you have the. Yes, you have more system involved in process. Talking about the legacy systems then the process gets more complex, that's clear. So if we're talking about more than two legacy systems involved in, it's already seen as a complex process. Also, I guess from a volume perspective and also the number of activities within the process. Yes, they have some input here on the assessment of the complexity, but overall our RPA is not here to automate end to end processes that has to be known as well. Yeah, RPA Just on some areas. Talking in ideal world. You would use the business process management system or workflow system and work on the end-to-end. Yeah, RPA is not intended to be used for end to end automation. We just focusing on smaller minor parts of the process.

00:22:10.720 --> 00:22:42.720
Yes, so from all that I heard, what I understand this for an example, if we have a financial institutions Department and there are a dedicated relationship managers, the data entry which would be repetitive and without much human intervention can be RPA and the rest the relationship managers then get more time actually to do their own feature.

00:22:42.720 --> 00:22:43.214
So, Mundane, repetitive Task the ideal candidates.

00:22:43.214 --> 00:23:12.980
Good, what do you think about so when you say about these mundane repetitive tasks, there has been some traditional approaches that we used earlier. For such things as well, like maybe the traditional approaches, the business process management system, or some other such approaches and how do you either compare it or complemented to RPA What should I understand from this?

00:23:14.090 --> 00:23:57.659
I'm not sure if I got your question right, so the first one was what was what was used before RPA traditional approaches

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yes. What was used before RP for a repetitive task because we know that earlier people had to do data entry by hand. But then there were things like SAP or ERP, all the data management systems, for example who were also then doing data entry, but it was to some extent programmed which needed skilled workers, skilled technicians from their end, but it was getting done and now we have our RPA

00:24:06.766 --> 00:25:17.753
Yeah, so in the past it had to be done manually or people started also to write some code or the use macros as far as you could get yeah. RPA allows more because with coding then you will end up, you know, somewhere where you don't get further because with coding is still then probably will have problems to access the system because you have to start the system. Then you need credentials to log in and this is. Is with RPA, so this probably the clear advantage of using RPA that you have kind of technical user who is really able to log in like a human to a system, walk around within the system, you know, have clicks on menus and buttons and extract data here, which probably is pure coding solution, is difficult with Macros, mmm I don't know, mm, maybe this works to some extent by recording something and then replaying this maybe works better, but RPA offers much more here.

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Yeah, and uh, the second question, which I could identify. Business process management systems, for me BPMS is really the orchestration of a process end-to-end? From start to the end And how does this fit together?

00:25:41.830 --> 00:27:09.824
It fits together because what you could do is within such an end to end orchestration of the process. You still have to interface with, maybe with legacy systems, with external systems. Maybe you still have humans in the loop, and here are RPA can be plugged in, can be embedded somehow in the process. For example, if you have two interfaces, the RPA could Fetch the data and provide it here also and then the human has to approve it for example. So, there is a kind of, how to say, coexistence and we've seen here by combining capabilities the automation potentially even gets higher so really plugging together RPA plus machine learning, RPA plus OCR ICR, RPA Plus Workflow or the other way around. Workflow using-calling RPA. This allows here to overcome some various, maybe which without RPA would need more involvement from IT colleagues, would need more development from IT colleagues and four. We would need more time and more investments.

00:27:09.900 --> 00:27:25.840
OK. Maybe could you give us some examples of different projects, or if I could get the info somewhere on what projects are is RBI involved in with regards to RPA. (In HO and maybe network units). Um?

00:27:26.940 --> 00:29:05.226
Yeah. I can list of projects in the different areas where we did, for example in head office already and some automation in RPA so is starting compliance area, than we did trade finance, we did in Tax area, within the risk area. We did here our back office center here in the payments area, markets area and many more. So just came to my mind, but we have one or two pages where we have an overview. What kind of case we did already done? On group level we do not really have an overview, but we know the number of bots probably yeah so, we have 100 plus bots group level. Means that you know one bot can run one process. At the specific time, but a bot can also run up a couple of processes in sequence. So meaning the license for one bot, this bot is just used by one process or could also be used by several processes so we don't know the exact figures here and then we don't have details for what areas the bots are used, but we know that in retail, in HR and in other areas. So as mentioned, RPA is really agnostic this area.

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OK, and how would you determine the cost is compared to maybe be BPMS?

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Yeah, I know. So be BPMS is an end to end in between somewhere RP could fit which I understood from your answer. But for something like in artificial intelligence or machine learning or BI, or maybe RPA, so how would you think about what is the cost perspective here? Is it cheap compared to an AI implementation?

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RPA is seen as Low Cost and quick win, RPA you need. You need a license. You need the development effort, and you have to run it on infrastructure, so this would say that these three components, the license, is quite cheap, infrastructure-you need to kind some servers where you run the software and the database in the application server. And then you have this effort for the development. So we're talking about here. Probably something between I don't know. 10k to 30-40K, automated process. When it comes to BPMS, it gets more complicated because BPMS is really a suite, using design workflow, and business ruling, and process the engine. Maybe some visualization about the performance, KPIs, and so on and so forth. It's really a complex suite a BPMS. BPMS systems are licensed. Both you pay a license per user, So you cannot compare RPA costs with BPMS costs, because it's clear that the PMS is not a local solution this you know also the introduction of a BPMS system and then designing and developing the process on a platform could take just a couple of days, but could also take a year. Depends here on the complexity. OK, yeah. A workflow is somewhere in between and then you could go for short workflows. Maybe you know words like JIRA, So you you could define their simple workflows. Integration with communicate with external systems or with legacy systems and one has to be put into. That's different, so it's not really comparable. OK. But in general, you could see low-cost quick win. See you then you have also business cases after three months, for example, you have already a positive return of investment.

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OK. The other question would be, you mentioned that RP is more Augmenting the colleagues and maybe not getting rid of colleagues, so to say,

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I suppose it’s both. So then if you're interested really in hardcore automation and you want to replace people, then for some cases for some areas you're putting in the RPA technology and then this activities these jobs are done by the bots, but you could apply RPA in augmenting people. Especially if you go for the attended automation, because you have to differentiate between unattended and attended automation. So the unattended means that

it can run somewhere on the server in the background you know the way of that can be triggered by some Time schedule where it handed is something which the user on his on his test of triggers directly. So he says OK. Either call now and then. That's the data I collected in our fill. You know different distance with this data and then then someone prepares here a small Bot and he could trigger here the data collected and populates the different systems for him, so this I would understand this an augmentation. He gets rid of this cumbersome activities to do, you know, to fill all the different systems? And still he he's in control of what is it has to be done because he sets the trigger. And in this this area is the so called attended. Maybe you will also find it here the not called RDA-robotic desktop automation. Yeah, it's in here. There was a couple of vendors in the market. Blue prism, which main focus is the unattended automation. For attended automation, there are different vendors in place, like UiPath supports both attended and unattended, yeah.

00:35:11.150 --> 00:35:51.090
OK. Good, um, that I think it we will wrap up with one last question for you. This is about a general process management system, so because RPA is also a process automation and it doesn't. Probably from your answers, I did understand it's not an end to end automation but rather an need to have basis automation. What would you describe as a maybe an efficient process management? Or maybe the main characteristics of an efficient process management?

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Ah, that’s a tough one! Um, efficient process management. yeah there are different types of process. They're simple process, there are complex processes, therefore you have estimate which capability the best one to support A simple process, and maybe it's sufficient that you just use a workflow system for the main… If you see that in the process there are still some general steps, then you have to think about do I need? I'm interested in this number steps to automate steps. And based on the outcome here, then you bring in. Maybe RPA in Action. If you have a quite a complex process like corporate lending origination, then. It makes for sure sense to go with the BPMS system with a system where you can support the application origination process. To define here the different steps the different stakeholders in the process of that interaction with other systems so that we can maintain here with the full life cycle of a product, refund origination to the maintenance. So, there is not a single answer to your question. Efficient process management really depends here on the size, on the complexity of a process and my recommendation would be here that you tried to combine the best capabilities you can apply, and I mentioned already that this could be rules engine,this could be business workflow engine, this could be processed engine, this could be RPA, this could be some cognitive or machine learning capabilities, Whatever helps also gets more efficient.

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Good, um yeah, this helps of course, because I do understand that it's very difficult to define an efficient process management in general, but just one more question that just suddenly came to my mind about manpower and so I have been reading about RP an. It says that one of the benefits of RP is also that you don't need skilled RPA developers or something like this, and so this could lead to also that, Yeah, they you don't need people who are really technically skilled. And also it could help. Probably in helping layoff from different departments being filled in here, but this is what I've read. Could you maybe give me some more understanding on this?

00:39:14.144 --> 00:39:52.628
Yeah, it is always here to mix again, it helps the colleague is from an IT affinity. This helps. If he did some coding then has a better understanding, but here for example, in my team I've also a colleague who was on the business side before he joined. He had no coding

experience at all and time because you know. Also depending on the vendor you select in blue prism offers here kind of visual programming. My screen. But with

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the integration part in, when you have to integrate it maybe or you have to integrate with some systems where no objects exist the probably, then you need some coding. But, uh, this colleague is able to, after some training and with the support of this without any IT experience
when it comes to the attended automation, so on the desktop we see here some other tools were probably even easier also by really using this visual type of development to plug together and also to have this parametrization and without almost any coding background or expertise, but it helps to have some experience. Vendors like for example UiPath, they also allow you to do a recording so that you do the process once on the screen, then the recorder directly generates the coding, for you more or less or the change in how they interact with each other and then you can use this already as the template and then you can continue here with some parameters. Be here in the market quite good tools which allow more and more. This is what we call the citizen developer approach so that you don't have this strong or pure coding, so that everyone can do that.

00:42:02.648 --> 00:42:51.953
Yeah, and very important when you say about the intermediary solution or a temporary solution as RPA, how long do you think are be able today? Or maybe maybe I can reframe it. So what happens to the employees after the work is done? I mean how is it taken? Or has it happened yet or no right now it's just a lot of work so. For the RP team, so if of course when when there are a lot of projects, of course the RPI team is needs more colleagues and then when. For example a process has The interface is created and they do not need RP anymore. What happens how? How are the colleagues? Or maybe the employees managed?

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So, until now, we have still inflow of it is for RPA, So we backlog, prioritize them. You mean if the pipeline then is empty, then yes, we have to think about deploy resources to another topic, that's clear. But I guess that the RPA still will be alive for the next 2 three years for sure as it now gets more and more enriched with additional capabilities, and the RPA is seen in the market as the worker and the machine learning is seen as the brain and you have to bring them together because it's fine that you have great ideas and concepts and models. But then someone needs to execute them and then the worker, that's the RPA.

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So you think it there's a bright future for RP and machine learning together.
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For the next 1-3 years yes!

00:44:02.986 --> 00:44:09.756
Yes, OK, good. thank you so much for your time. I will stop recording the call right now.

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OK also pleasure man you can reach out to me if you have done more of the other interviews so we can have the end, also if you want a final session to see also your findings and your summary.

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Yes, that would be really helpful and thanks for offering from your end itself. It really helps. Yeah, let's do that. OK, I have 5 minutes left to the round for lunch. Very quick exit now. Yes, sure, thank you. Thank you.

00:44:45.900 --> 00:44:47.187
Welcome bye bye.

Aleksandrs Sirotinskis

00:00:02.310 --> 00:00:26.576
Good morning once again Aleksandrs and welcome, thank you for taking out the time. I will share my screen, so we have the list of questions just in front of us. Now, my first question- what is your role in using RPA?

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Actually, so currently I'm working like I can doing multiple roles. So originally, I was doing rollout of the robotics technology as a developer is smaller and also like a consultant for network banks and then couple of years ago actually switched to work in Vienna head office. More like a developer and little bit as business analyst. This is my role. And also, I was performing also trainings, so I was training people, so we had the structured training course and I was doing this training together one more with one of my ex colleagues.

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OK, what kind of training is needed for RPA?

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So, what we have so we have developed a training program which is 5 days. It's called Foundation training for Blue Prism. So blue Prism is at all we are using. So, we speak standard training material. Uh, so we took standard training material. We extended it actually will help some consultants, so we prepared like a five-day course out of it. And so it's basically I would say hands on training. So, when you have until the theoretical materials you have some exercises and is able to train collection that is that after the five days you should be able to develop simple robots by yourself.

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OK, and is the training difficult or so because I understood that the training is basically from blue prism because we use blue prism in RBI, is it very technical or how is it ?

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If you would like to develop your own robots and then it's quite technical and we had some had some examples on people with more like a business background you coming and they cause actually they had to like draw this process. Then the develop automations by themselves and they're expecting more. Like I would say. Introductory PowerPoint type. But yeah, it's hands on it straight. It's quite technical and you. It's better than if you have at least some. A basic development skill before so you could, you know how the programming issue is is done. It's not mandatory, but it's really recommended.

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OK, So I read a lot about RPA and the classical approaches. Then basically, there are differences between classical programming and RPA and the main difference was that RPA does not need Technical knowhow whereas the classical Programming is very technical skills oriented, thus reducing complexity and cost. Is that true?

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Yes so you don't have to be like hardcore programmer to develop a automations but you have to understand how the programming is done so you have to understand concepts. So algorithms that basically structured thinking first of all. A person should understand technology. It helps a lot. OK, and then this learning curve is much faster, let's say. So we

had a couple of examples from people with. for example, legal background. Have been trained as are they developers he just she mastered it quite well but it just took the much longer. So actually we had like even like internal competition evaluated by blue prism who will develop like a nicer process. And this guy with a legal background actually wanted so. Isn't. So yeah, which would kind of prove that it's not necessary but recommended. Recommended is good.

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Could you give me an example or maybe multiple on the projects that we are currently doing? Head office, network unit, whatever you think.

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So we're automating payment processes, but I think my colleagues will tell you more about it. I am actually automating now couple of processes in trade finance area, so it's actually sending some payment reminders via Swift, so we're charging for in trade Finance some commissions. Customers and there are some specialized swift messages sent for that purpose, and I have developed couple of robots we which is automating this type of messages.

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OK, and does this. How better does it make the process? Or how fast does it makes a normal process.

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So like, imagine so human would have to take data from one application. Application residential data file. A manually and then has to manually retyped and reformat it in certain formats, then type it into another application. Did it takes takes probably like for single message it takes like 5 minutes. OK, the robot will text you to take this task completely, so the data would be extracted automatically from a database and then the robot would type. This information is in this second application like human would do it but will actually no human is involved. So instead of spending time for this minor typing. So also business unit basically receives an email report in the morning that a certain number of messages have been processed during the night. And they just take it as a given and they just continue doing their daily work as they don't have to think about this sending message.

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OK, and how much time does the robot then in comparison take for this?

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It depends on the technology. Usually it's couple of times us like 2, two to three times faster than human. So, it depends on the kind of out kind of application we are automating. For example, if we automate web application, it's usually a little bit slower, but if we automated for example Windows application or mainframe applications and it actually it's much faster up to actor of 10.

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Uh huh. So this project you said is in trade finance.

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Example project with the traces in accounting. So what they do in accounting so they receive invoices from the vendors of partners by email. This invoice is basically it composer. Basically this email message company is composed of two parts. One is like email body or email text. And second, this is attachments in PDF format, which can contain an actual invoice and what the robot has to do. It has to combine this email message and attached PDF into one single PDF and upload it into SAP. So this is our account main accounting systems, our general

Ledger and it basically replaces half of FTE in Accounting Department because actually previously they were hiring student support for that. Yeah, now basically students are managing only some exceptions sure or handle, but most of the invoices actually processed by the robot.

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So which means it it helps in reducing manpower.

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And borrow it helps in automating like I would say Monotonous stupid activities. I would say for these stupid activities I would give you one example which is not here. It was in balance. So the headcount application, which was supposed to generate some reconciliation report, and it was supposed to do it like in every 05 to 10 minutes, just to check two different records and the human was sitting whole day and pushing one button generate report like every five minutes, the human was just sitting and pushing that button, but I didn't believe my eyes when I saw this process actually. But it was really. But it was the main task of this poor person was to push. Single button. So some for some reason they were not able to write it properly in application itself, so they would know what they actually did. The robot to push the button instead of a human.

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OK. But here when this example it sounds good, but how much was the difference then in cost? For example, if the human was being paid to push the button, I would just kind of understand that he was not being paid too much and then a robot was it substantially less.

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It's actually depends on the first of all the robot. Could this pushing the button and actually it could actually do not only that activity, but in between. It could also some other activities. So basically with no. But you could do a little bit of Multitasking than a human. Yeah well was it cheaper for the Department in Belarus. Yes, it was here, so we imagine. So there are open. Actually, cost you roughly 4.5 thousand per year and for the human, you would need to pay. I would say in Belarus it was at the time I think 6 or 700 per month. So multiply 12. This was still a positive business case. There was not, not. Well, but still you we have to involve some more like development effort and so on and so forth. But still it was business case was positive. So, in Vienna is much higher salary levels in Eastern Europe. It's it pays off much quicker

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Yeah, OK good. OK here, so what I understand from this example is this was unattended automation.

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Yeah it was unattended automation because basically it was scheduled job which was actually most of our robots are unattended. I would say 99%. Wait, I think here I'm going to have only one or two at. A someone has to provide some input in between and if you have anything with Alexander Hollmann, I guess he explained me a bit more about if he didn't have it all. OK, so yeah, I was. I was developing mostly, uh. Unattended robots.

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My next question is-what are the main benefits and disadvantages of RPA?

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Uh, so benefit of RPA is actually quicker development. So, if you would like to learn, at least in our in our environment. So here, here in like in banking, usually you have to wait quite a lot for your change request to change something in your in your system for quite long-time

cause this. Basically, developers are overloaded and in order to do even the minor change you would need to wait for six to nine months so we could do it. We usually can do this change much quicker if you usually development actually takes one month, two months and then just testing another month then we actually we know then we're at. So, it's quicker development, one benefit. So yeah, you see the result you choose the results much quicker. disadvantage of RP basically that usually we have we're fixing a bad process so we don't really go to the root cause of why this activity might know. We just replace it with a robot. So probably it would be better to dig deeper to understand the. Why is this mental activity even existing? cause in some cases we actually automating something really stupid. Oh, and, uh, yeah, and just do it to do sort of a cleanup before we automate it. But yeah, without paper usually doing this quick win. So this is something which I can easily automate which is automated cause like originally is idea of RPA was that It's like a bridging solution between normal automation can be done like as classical development. In fact, then, people are happy that this RPA solution exists, and they don't really invest anymore time or money just think that robot is still doing the job. So why? Why should I bother? Ok, but this is only possible in automations that are very rule based. So which yeah so robotics is very much role based you can integrate something with artificial intelligence but. To be honest, we didn't have so far successful examples of it, so we're working on a couple of pilot projects. Looks will turn a bit more, but as there is nothing yet in production at least now side.

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So, is there a project or has been a project where you wanted to automate it by robotics but you couldn't? And why was that?

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I think so. Again, my colleague Alex Hollman will tell you more about it when we maybe we can take a note and I think he had had a case where you couldn't automate that one application for. So yeah. Using not a was not able to connect to specific system, so just it was it was just too complicated. OK, OK, so there are some technical limitations, are not. basically, we're not able to connect to and automation would take too much effort.

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OK. OK yeah I will have an interview with Alexander as well. I think on Thursday, so yeah, sure I will check with him as well. My next question would be on the eligibility.

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Actually, maybe then another example, so we, but it actually was not technological reason, but it was for more organizational reason, yes. We had a project with HR. And then we realize that a major side. Basically, they're not ready to dedicate any resources cause they actually. They also had to provide something. For the robot from their side, and we have to abandon the project because actually nothing was moving from business side. They were not able to provide proper requirements, are not able to provide some input for the automation, so we have to stop it now maybe not to mention specific business unit, but yeah. Good to know.

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OK, good. Uh, what do you think can be the eligibility criteria for a process to check whether this process that is being asked to be automated? Is it eligible for RPA automation?

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It should be very repetitive, so you need to have like. For example, if you have these invoices, you have at least certain number of invoices per day, so the automation would make sense. He should be rule based, so there should be no thinking involved behind. So basically, it should be like a either AB or C and not like let's think about what the Robot could be should not use any. I would say unstructured knowledge to take a decision. And

then yeah, it should be either you if then else that's it. So, everything should be so. This decision should be simple, and inputs should be digital. So normally we don't work with paper inputs. You could theoretically. So for example there are some solutions which allow you to extract data from like paper scans and then. The digital format and do something with them later, but to be honest, you haven't tried it yet here, and the issue is that if we program, you work with payment orders, any mistakes, so cost of error is quite high.

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But now in RBI, is it? Is it not normal to have digital input? Is there still a problem in the digitalization of the input?

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You would be surprised by the answer. Many departments where we have still unstructured documents. OK, and like you need to be sending each other word documents with Screenshots. OK, and the source is so in then in order to automate it., with RPA or with any other to change the process itself. So was yeah, sometimes I'm really. I'm really being amazed how we can actually exist such level of digitalization. But yes. So, because this is like a case when you have like a one. Request in the word document, to Screenshots.

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OK, yeah, so which means, It would take time to 1st digitize the process as in the documents in the input and then RPA. So, and what is the life cycle of RPA like? How do we start? What step do we start with in? Where do we end?

00:20:20.966 --> 00:24:28.020
So normally we have to screen process in certain business unit like to identify candidates for automation sometimes been sent already has a clear idea what they would like to Automate because they understand what the robots can do for them. So they actually they do this identification for us. Then we have to quantify opportunity. So we basically still how much effort would be to develop the robot versus how much I would say costs. The robot would save. Now, much times it'll save. Three months of development process which save you 10-10 minutes a day is, and probably it makes no sense. And then so basically, once we have that person, so we do business analysis. A person like a business analyst sits together physically or remotely in our times with the subject matter expert. So we call this person SME and take screenshot of every process step this person is undertaking. Everything should be, so should be documented on like a click like we call it like click level documentation so all the fields which are being populated by the user or the clicks or buttons which users should do also. Although it's possible exceptions which might occur during during the process, so everything should be documented in the document called, we call it Process Design Document or PDD. And then this document is aligned with developers, developers, developers, screens, whether. Everything is clear, everything is everything. Everything is included, all the rules are described and then development can start. oK, uh, one thing I actually forgot to mention there's a when we have this list of candidates. We usually do. It's so we call it here like a like a technical handshake. It means that we are testing whether it was a blue prism, is able to connect to specific type of application. So whether we actually able to automated technically cause in some cases we're really not able to connect to applications. And yeah, then we have to. We have to drop, this opportunity or we have to learn to do to use some work around. Maybe they get data from different source, So the way humans doing the process is not the most optimal one, and we can offer the business unit some optimization. How we can do it faster with robot. So, we just program, we use different screens. We use some reports instead of some application forms and so forth. technical and shake the screen, processing the documentation and then development. Then we have a quick request. Testing, retesting and bug fixing. Uh, sometimes we use like more agile approach so we don't wait until this process design document is finished. The end we just start doing something already when we have all these first screenshots just just

to show how the ronot look like sometimes we like move over, sometimes use more like this part of waterfall approach so we end. Till the very last end of the PD is finished and only then we start development. But yeah, mostly we're starting now to this more agile approach that we actually starting to develop quicker. OK.

00:24:29.670 --> 00:24:36.130
But has it ever been that you've started developing as an agile approach and then didn't workout?

00:24:38.540 --> 00:24:58.140
Oh yeah, I think I cannot remember specific example now actually yeah so this HR example which was mentioned. So we were trying to get it more and more agile way that actually start development even before the requirements are clear till then and then we have to stop it.

00:24:59.660 --> 00:25:05.924
OK Alright Yeah so. Understood so thank you yeah so and so and.

00:25:06.830 --> 00:25:11.114
Two to tell you more. So like is the most time consuming thing is not even a development itself, but actually in our RPA environment is to wait for a system access. Because sometimes you have to wait for username and password for specific application for a couple of weeks so and its idle time for developer.

00:25:32.160 --> 00:25:35.995
So that time it was so I did not maybe understand it properly. You mean to say that I'm in the system? Access is being awaited for? The development starts in an Agile way. You said, Yeah?

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Not not, not necessary measured in general, so here in RBI getting access to application is quite long process. So you have to wait. I know maybe it's like no help this site or not. There is a lot of waiting involved when they have to receive things.

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How long is the RPA cycle in general so I know it depends on the complexity of a project and everything, but on an average, can you ascertain that OK? It takes between this and this many weeks or months.

---00:26:27.740 --> 00:26:32.840
Usually from experience it takes 2 three months, so in some very complicated cases can take up to five months. So development itself can be done quite quickly, but then you waiting for some approvals. You're waiting for people to look for before people become available to test your robot, so buy in in experiences we Just because of this, a lot of idle time which you have to wait some organizational basically things.

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In comparison to the traditional programming approaches you mentioned already that there is a difference. The programming takes much longer, and RP can be quicker. Any other reason why somebody would opt for RPA and not for a traditional approach?

---00:27:25.430 --> 00:29:02.056
Oh for example, if some really outdated technology is used and you cannot find the person who can actually change your old application, like for example this core banking system which we have here in the bank or in our network banks. So, these systems have been

developed in the 80s. And it's sometimes it's not really easy to find the person who could change it then, or the change would be quite complex, actually, too complexion, but if it is done in some other programming language which is which is there? Oh, if you can find the resource which sometimes issues then probably yes. Probably it can be done quick. Sometimes it can be done quicker in a proper programming language, and we actually now in our experience. Uh, sometimes we review some automation candidates and then find out that we can do it much quicker in the traditional development way so we can do it like a small change request decided to do an application and then solve the issue which businesses facing. Yeah. But sometimes it's not possible.

00:28:38.080 --> 00:29:19.256
So, with this, what I understand is generally RP doesn't compete with any traditional approach or anything, or it is it is a tradition. It's basically a temporary solution which. Started as it's temporary or an intermediate solution, but some people. Some teams are also wanting to keep them permanent. OK, and do you think so in a process? For example, there's a process as a whole and entire process can be automated by RPA or you think is generally a small part of the process for RP and the rest has to be complemented by other approaches?

00:29:20.400 --> 00:29:51.952
So usually we are able to automate, pop some parts of the process, not the not the tool for entire end to end projects, and actually IRP is not to fall into and automation, so it's actually, so it's actually a tool for this. Some pinpointed automation, so some changes. OK, Alright This is my opinion. So like I know that some organizations as they do, the user voted for into an automation. But I don't think this is the right approach.

00:29:52.590 --> 00:30:12.626
OK. And how do you think these effects the manpower in the company? Are there a lot of? Job layoffs because of our PA or people are not keeping many employees and trying to upskill the current ones what? What do you think is happening?

00:30:16.290 --> 00:31:07.240
It depends on the business unit, I guess. Just to cut to cut, cost to cut people and then they do it after being after herpes implemented for example in our network bank in Ukraine. RP is a tool to reduce manpower. This is this is like very dedicated focused approach. So, what do I mean the people with robots. As far as I know, in Vienna it's not like that, at least like in most kind of his units. I haven't heard about cases when we actually somebody got fired, but yeah, so maybe the colleagues have some other experiences, but at least from for my robots. Think yeah, we didn't have. Actually, we just help people to do the daily task more effectively.

00:31:09.100 --> 00:31:30.268
OK, so I think that answers the question. I had a one question that I still would like to ask you would be what do you recommend? I mean why should somebody opt for RPA and maybe not for another traditional approach or if yes also what do you think is the speciality of RPA?

00:31:31.530 --> 00:31:47.270
Oh so quick development, not so expensive development resources. So you can use less technical people to develop quite decent automation solutions in a short time.

00:31:48.380 --> 00:32:00.586
OK. And can we compare it in cost wise how? How expensive is a traditional approach or RPM? Is it possible?

00:32:02.490 --> 00:32:05.974
I don't think so I don't have this comparison, I would be making up numbers here. OK.

00:32:11.850 --> 00:32:14.790
Anything that I missed out and you would like to tell me?

00:32:15.580 --> 00:32:19.630
Uh, no, I think you were quite thorough actually.

00:32:22.180 --> 00:32:42.981
Yeah, I don't know, so maybe I don't know. Maybe you will be See some training materials or anything like that. so just so we're in the same company. I think I can share something With you that would help me to show what kind of training is required

00:32:42.981 --> 00:32:57.102
how technical is it? Because as far as I have read, it was always said that it's not so technical. And if I can prove it, that yeah it is still technical in certain areas and not technical in certain areas would be nice.

00:32:57.102 --> 00:33:03.895
Yeah, I can send you like a training book and you can judge for yourself.

00:33:04.650 --> 00:33:06.098
OK, great that's it. Thanks a lot for your time and patience once again. I will stop recording the call now.

Cvijeta Kojic

00:00:04.310 --> 00:00:31.456
OK, yeah, so welcome to my interview. Thanks to take in out the time she yet. How do I pronounce? OK, and uh, yeah uh, as we already spoke a bit beforehand, we will directly start with the questions, so what is the role you have in the team?

00:00:31.456 --> 00:05:58.014
So I'm a process analyst for RPA. Uh, but not only analyst, somehow Julia and myself, we also are a bit the controllers. The RPA controllers for all the process is so these monitoring tasks is the Bot running? Are there any issues? Is are the machines the virtual machines, the resources-are there logged in and so on, so forth, that's also some somehow part of our job. As at RBI it is not that the controlling or monitoring function is in the business departments, there are some ideas to change this, but at the moment currently so we are analysts and somehow a bit of controllers as well or monitor, so I would like to call it. So yeah, that's my role. As analysts, maybe some information what I am I doing as analyst, yeah, so I'm n contact with the so called SME subject matter expert, when there is the decision to start and an project and RPA project tool. Implement in robot. OK, so first of all of course there is the analyzes and the so called work shadowing we're doing here. So really, sitting next to the colleagues or now doing it virtual. And really, watching and analyzing the process on click. Basis 11 really unclick level. Yeah, so really every single step show me what are you doing. What are you doing in explain it to me as I would be if I don't know 6-year-old child yeah, Really this is just simple way so that's one thing. So just to understand the process then we are designing the process for development. Because of course you do not have to do every single step in the same way as a human does. Also, some sometimes you can improve it. Yeah, you can adapt it for the bot. Uh, when we write a PDD? The process definition document. That's the basis for the development, and our PDE's are really written on click level with many of Screenshots and description to make it as easy as possible for the developers to work with the idea and the next step is also to take care of the whole infrastructure. So order virtual machines or resources as we always need a test a resource.

A production resource if we need all the applications access to the applications. Maybe there are some firewall or restrictions that some requests have to be done and so on. So take care of this. Inform our currently wearing the lucky position that we have colleague in it smart automation in this Department where the developers are in Claus's Department. So Fritz is taking care of that? So I just have to tell. Now Fritz I need this and that yeah and he is in contact then with or does it always in contact with RIT? And yeah, that that's the first part of then. Of course, this goes on to the development, the then the developers are. Ask to to go on with the process and then of course, when we're starting testing, especially UAT (User Acceptance Test), then of course I'm again or we as analysts are again more involved to prepare the tests to agree it with the SMEs, to have the results checked and so on here to get the feedback. Sometimes you have to translate the business answer so that the business language to developers. Sometimes you have to imagine that there are two worlds here so there is, although our developers are not these, I would not. IT guys because they really understand and then having great overview of all the stuff that is happening. But of course sometimes you have to be some somehow translator between these. And of course then there should be the go live! and this whole thing should go to production and then of course the analyst is not needed anymore in in this analyzes roll. Then we somehow change to the controllers and monitors in for some processes in some. Cases we already working on it to have it outsourced to the business units.

00:05:59.870 --> 00:06:37.658
Yes, but the one question here would be So what are you saying in your role is that you were involved until the process of the PDD product definition document, and then the development is done by the developers and also delivered. OK, and then after the development is or I would say after the delivery of the entire RPA process. You're, you're all comes back in for monitoring purpose.

00:06:37.658 --> 00:07:44.340
Yeah so you have you start with the analyze this with writing the PDD. Then of course supporting the developers. Also during the development phase because there might be questions from that rise up from the developers where. He does not have to go to the business Department. He asks us, yeah us analysts, maybe we can answer it and if not then we go to the to the business units and then clarify that just to save their time and to give them the chance and the possibility to concentrate mainly on focus on the development and clarifying is as well, some questions that this rise. So that's it. And then, of course, the whole testing stuff for the UAT and so on. Preparing and aligning with business together of course, and then somehow supporting during UAT as well.

00:07:44.910 --> 00:08:10.339
Ok. with this I also actually got the answer to the lifecycle of RPA process. OK Yeah, but only thing what I would like to then add is there any process that you did not mention or is this the life cycle exactly? So from analysis to PDT then UAT and then again monitoring and feedback?

00:08:10.339 --> 00:08:15.080
Yeah that's it. OK, that's how you could summarize it, yes?

00:08:15.120 --> 00:08:34.440
OK, and because you are almost a part of the end to end process development in general. Could you give us an example of a project which was positive experience and one which was a negative experience from RPA perspective.

00:08:34.440 --> 00:10:02.550

Um, let me think. Positive. I don't know if my colleagues before from the development mentioned already this example, so would be Leo at Raiffeisen factor Bank for example. Or our Tiger IDMR Bot. IDM Tiger bot checks the requests in IDM, so your if you order something from before the Tiger products? Yeah, so not for all products, but for Tiger he has access to IBM then checks if everything is approved as it should be and then you have to grant this access in our ARM (Access right Manager) tool access right manager? And then of course, finish that request in IDM, so confirm it approve it that the employee who ordered it is informed. That's for example 1 positive example of a bot that supported colleagues.

00:10:07.780 --> 00:11:20.482
Or I don't know the travel management, but if this has been mentioned, also, something fine screening invoices for flights for some codes and fees and charges and so on and preparing this in SAP tool or for accounting. So capturing all the details from the invoices from for the flight but only for flights here currently. Maybe it can and will be extended later on Also we received these invoices by email with screen the emails for four invoices. If we identify an invoice then we screen the Invoice, take all of these numbers and figures, charges, fees and so on and capture it with the relevant code in SAP tool because I don't know some handling fee has a different code than at the price for the ticket or something like that. Yeah these different SAP. Codes, so we're capturing these invoices in ASAP for the colleagues, for example, and this is this.

00:11:20.482 --> 00:11:25.786
Invoices are in any format an it's OK for RPA or it has to be.

00:11:26.840 --> 00:12:13.264
It's always the same format. That's why we couldn't. We can do it with RPA and somehow with REGEX (regular expressions). You have the price of the ticket always with the same definition on these invoices look always the same. Yeah, they always the same. That's why it was suitable for RPA. But of course if you we would have for some free format invoices than I guess we would struggle a little bit with RPA only then you will need somehow, some colleagues from advanced analytics and so on..

00:12:14.000 --> 00:12:28.490
OK yes, OK, so with this the project that you right now explain for screening invoices and also for IDM bot. Are these what level of complexity would you take? It? Is it high, medium, low?

00:12:28.490 --> 00:13:25.684
It's low complexity, Yeah, because it's you get you get an invoice you pick your numbers you need here, and you capture it always for the same pattern the same procedure. Get this number and put it in here. For example, for the invoices and deny DM. It's the same, so you get a request Yeah, you know that the item you know the access rights there is a translation table access file that translates the product from my DM to the product. How it is called in in ARM in this tool and there, so you pick the thing from from my DM. Yeah? And then you grant or delete the access. Uh, in in arm? Depends if it is a request for granting an access or cancellation

00:13:25.684 --> 00:14:24.014
You have both. Any idea? I guess you know that. Yeah, so it depends on it you would grant or delete the right in ARM. So, it's here in my DM you get the request and yeah you tick some boxes on or off in arm and afterwards you confirm it in IDM. Send I this was for example done by a student before. Yeah, so you did not need some Doctor or Magister to whatever. That yeah, and please don't get me wrong I'm sure that our students should, have the chance to do much more complex things, but I guess yeah, that's maybe something. Also, you start with lot of exposure so please don't get me wrong.

00:14:24.014 --> 00:15:10.200
I would like to say that. Only people who called you already answered it that for this kind of work, do we have? Do we need somebody with extra qualification or is it also possible with people who have maybe business knowledge and not too much technical knowledge? And that's why I would take that as the answer for that question. Um, yeah, so this really helped with the project. May be more than one project which was very difficult. Even if you succeeded or not succeeded. But something which was maybe a high complexity process.

00:15:11.580 --> 00:15:17.390
Yeah, let us take a Nostra account reconciliation. So our bot called Noah. I don't know if he was mentioned already.

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I think yes it. In short, yes, it was mentioned.

00:15:31.340 --> 00:16:28.150
Yeah, so we succeeded. Noah is running, yeah. But yeah, we had two to somehow. Struggle and fight, a little bit to get him into production and to get him to work. Because Noah is working with three different applications, yeah? And that's some something that that makes it more complex. Because of course these applications interfere with one with each other. Yeah, so he's working primary with Corona cash. I don't know if you heard of that. That's the application where you get all the statements from the various Nostra banks.

00:16:28.150 --> 00:18:35.544
So you have a bookings from from our systems from all over applications that are done and then of course you get the statements from the banks who executed your payments. For example. Yeah, so you have to own booking and then that foreign booking and this has to match. That's something Corona does almost automatically for many many many bookings here, but some of them remain and. This has to be reconciled manually by by people by humans, and here we try to implement a bot. To support the people here and if there are some information missing, for example in if you get a booking and some information is missing then you have to go to the next application, the so called AZV. There the booking the payment system in search for some additional information. If you do not succeed and you do not find the needed information in in AZV system, then you go on and search for that in EN reporting. Yeah, that's the next system you will get you where you have all the Swifts uploaded. Yeah that they own and the foreign they received and sent swift messages. Yeah, so all the Swifts of RBI can be found in EN reporting and then the bot tries to search there for additional information here. Is an end and that's something that makes it more complex because you are not working just with one system and one application there. Few of them here. And of course there might be some issues that I don't know AZV is not up and EN reporting is a system that is quite slow. Yeah, so you lose time. And that that makes it a bit difficult. And that's all.

00:18:35.544 --> 00:20:56.520
Some feedback, we got them from the business area. I don't know why they expected that the bot would be much faster than a human easier. I don't know how they got this impression, but they expected him to be faster. From my view, point of view, that robot does not have to be faster than a human because he's doing the same things. He's also. Working with the same applications he's somehow tries it clicking working as a human does sometimes. Of course, he is faster. But I would not see this as a general rule or some something that you can expect. The bot is always faster than a human. Yeah, because if he has to wait for some response from their systems, yeah, so RPA is fine and our application we are using blue prism. It's nice that you have this but if you have to wait for the response of the other application you can't be faster and that's something. We were struggling with

and somehow trying to improve and also then working with the different definitions and rules and trying to improve. OK, is it really necessary to search in both systems for that booking or maybe? We should leave this for manual processing to support the people more and then to get them the results fast and so on. So that was something would be some example where we had to some challenges, let's call it some challenges. Yeah, that was of course some somehow challenging you. But of course, it is something that you will constantly working on it and trying to improve it. Yeah, and then you just realize or find out. OK, maybe if you skip this and that then you will be faster. You get the information here. The yeah it helped, it worked so noise up and running and I'm quite sure that the Support of the bots is already measurable further for the people.

00:20:57.540 --> 00:22:05.310
OK, and here my next question from the answer you gave would be when you say that robots cannot be generalized, that they should be fast. So if I talk about all the literature I read and the general perception of people around it would always be that we are deploying robots because that will free up employees, which means a person would take three days for a job. For example, one FTE, but the robot could do it, maybe in half a day. So everybody I know always thinks that that is a general standard, but I so that's why your comment does bring me to the question. Why do you think so? I mean, yeah, of course, based on the complexity, there can be a situation. The robot cannot deliver that fast, and that is dependent on the applications and many other things, but otherwise, how do you think RPA works and what are the main benefits of RP if we don't take fast as a preset benefit?

00:22:05.900 --> 00:24:14.548
Well, I I would say, being fast is one of the benefits. But, it depends what the robot has to do here. If it is something like I don't know. Some somehow screening, I don't know some Excel files or something quite simple and not trying to work with several different applications then of course it might be a robot, might be faster. Um, so somehow it it depends what he should do-The Robot? I don't know I. I think when you talk about robots, people assume automatically or somehow. OK, that's some kind of I don't know automation, something happening in the background here and nobody sees it. And of course, it has to be faster than I am. I I, I don't think that it works always. We have several processes is I think it is that that the robot is faster than a human would be. Um? But for example, this this Nostra accounts reconciliation process here. I am not sure. I maybe he is somehow a bit faster than a human, but I don't know if you would say OK, human, it takes him one hour and the robot can do it in 5 minutes. I don't think so yeah. So, the difference would not be that big four. The example I mentioned, Yeah, but somehow yeah, I don't know why people think that a robot is automatically faster than a human because the robot imitates the same things and does the same things a human does. So yeah, I don't know where this idea comes from to be honest

00:24:14.548 --> 00:24:51.066
Yeah. So, then my question would be directly question number 12 which is about manpower in employees. So mostly the general perception I understand is that automation leads to layoffs. Why we because robots do the job much faster and cost less in a longer term? But is it true or you think? No, they shouldn't be. Then the general fact? Because maybe they should, they need not be faster. They can do the same thing at the same time. Then where does the cheaper cost come from?

00:24:51.066 --> 00:24:55.954
Well, I think the robot at all is cheaper. Yeah, because when a human, even I, I guess the robot is even cheaper than a student would be.

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So, for the RPA Bot you mean for the RP, but yeah, because if you think OK there is some effort put for developing and for having the bot in place, but when he is in place?

00:25:21.042 --> 00:27:58.188
Yeah, yeah, of course you have to somehow do a little bit of monitoring if everything is up and running. But that's yeah, I, I don't think that it takes so much time to monitor about. Yeah, and when he's up and running. so, if you have a bot productive and. Then what do you have? You have to cost for the resources for the virtual machines here for the infrastructure. These costs, these costs you would also have for human, because your employee needs the same access rights and so on or needs all the laptop and so this stuff. Our infrastructure and you need the license for Blue prism here at RBI and I'm quite sure that is this is much cheaper than having an employee doing it. Yeah, of course a Bot. The thing is a robot. Cannot do complex things in the sense of being creative. Some interpretation of results or something like that. Yeah, so if it is really rule based, then of course everyone can support you. If there are clear rules and if you say OK if you get this result, then do that is if the rules are good if there is a good definition of the rules, and that's also something that is in the depends on the business you are doing, yeah. Then, or if you're reading, I don't know. Structured swift messages. Then of course the robot can help you, but if you read free format messages then RPA the robot will not be able to help you. Because there is some interpretation. You have to understand what you read here, not just pick some words and do this or that. Anne, and that's Why I think that a robot. Is only suitable for really structured process is yeah and rule-based process is and anything that is not structured then you would need some. I don't know some artificial intelligence, an LP, whatever I to somehow get this running.

00:27:58.190 --> 00:28:08.934
OK and one maybe, at the end of our interview already, but would you be able to tell me then? Because you say the robots are much cheaper the RPA bots, how much would an RPA bot cost?

00:28:10.090 --> 00:31:14.328
No, I don't know I don't have the exact figures because I know that there have some been some agreements with RIT and so on. So, I don't have to figures right now, so I'm afraid I would not give you any number now in that case maybe it would be helpful to check this with. I don't know Leo or Klaus; I are you talking with Fritz also Friedrich Hofer is he also on your list for an interview now? OK? But maybe? Yes, yes, because I know that there have been some changes and that's something the colleagues from smart automation department did. So, I don't know. I don't want to give you a number that is incorrect. Yeah, understandable. OK, but nevertheless I I'm quite sure that the robot is cheaper than it is in a human. Right? Are you a robot? Works also with a robot does not need a break. Yeah, and the robot. Of course, you can start him at. I don't know at 5:00 in the morning if all the data you need is available. If all the information you need delivered from, I don't know application ABC 123. If this information or data if this is available at 5:00 in the morning, you can start to put in five in the morning as well. Yeah, you will not ask a colleague, a human to start in at 5:00 in the morning, I guess yeah, or if there is a process you could run the robot, although I don't know at 8:00 PM. Yeah. An idea, so that's something of course, in advantage of the process always depending what he should do and if all the data is available or if there are no., I don't know cutoff time, some time, critical processes and so on. Yeah, so that's why. Also, I bought is in of course in. In advantage compared to human yeah, you can use him almost 24/7, not really because he needs some sometime for reboot. If I restart, I don't know something some 30 minutes to maybe an hour here, but of course then after these restarts and reboots. All after the machines of the resources, he could all again start and then go on with his work here. So, let's say almost 24/7. I don't. I know it is almost 24/7, but you have to keep in mind that of course also you need for the infrastructure for virtual machines for the resources you have. These restarts just to be up to date with all the

technical stuff. Yeah, so just sidestep and additional information. Yes, right anything important as well.

00:31:14.330 --> 00:31:19.514
Last question that I can think about is how would you compare with traditional programming to RPA?

00:31:25.533 --> 00:34:43.540
OK, how? Or again, depending on the processes, um, you want to automate with RPA. I guess if you really only use blue prism and RPA without any coding in some somehow somewhere in the background here and then without code stages where of course you then need to be somehow programmer developer. You have to know these programming languages. But I guess if you would keep it for simple process is. Yeah, I think it's it's quite easy to learn to work with blue prism and use these tools you have. Um, I don't know if it is that easy to, I don't know, right? Some programs for let's say let's call it normal human being, not a developer because for me these people are Magicians, they're doing some magic game behind with all this stuff they're doing. That's something maybe for RPA that is a difference to the classical. All programming and then developing. Yeah so if I would say OK just I don't know. Pick some Excel file transferred to that file that. Excel put it into an email or something like that. At least I think even I could manage to do this. If oh attending before an RPA training? Yeah, and then somehow investing some time to work with it to get some impressions and some knowledge and so on. Working practicing, think even I would manage to do something simple like that. Yeah, and maybe that would be also an advantage of RPA here. If you would like to automate really simple structured rule-based process is without codes and logic behind. Uh, I guess that's quite easy to do. But of course, always be careful you cannot compare this one to want to our processes. We use RPA in Italian because we have here really many, many complex processes are intense and many of these things with logic with code stages in behind. And then somehow, it's maybe not the classical RPA approach. How it was meant before to do so, or when inventing is representing our RPA because we have here really some several really complex process is with codes. So here again are magicians did some great work, really great work to get these bots up and running. And for that you need of course this programming languages as well.

00:34:43.550 --> 00:34:51.130
But do you think then in that case RPA could work, hand in hand or complementary with programming and artificial intelligence to have an end to end automated processes?

00:34:51.130 --> 00:34:54.920
Yes,

00:34:54.920 --> 00:35:02.121
and do you see a good future bright future for RPA that it will stay or there will be something?

00:35:05.360 --> 00:36:34.708
I hope so. Yeah no, I think. We will learn Some how to connect RPA maybe with artificial intelligence or somehow OK with classical programming and so there will be some combinations maybe? So, I'm quite sure that this will be an to enter as the process is we have a in RBI. Many things are already automated, or you have so many different applications where you try to do it as efficient as possible? Yeah, but of course there are some barriers will say OK here I'm stuck and maybe on that at that point where you're stuck, maybe RPA would be the ideal. Think to go on and to say OK, I'm stuck here with my classical programming, but if I would use RP and get these, I don't know data from here and then transform it to that and then put. I think it is this combination and I think it there will be some further development here as well. Course we are also learning, and every project

brings knew information, experiences and so on. Yeah, so yeah. But I hoped it RPA will stay at RBI.

00:36:34.710 --> 00:36:50.214
Even I hope so. Rather, I would say I'm pretty positive about it. From all the interviews I've had until now. So yeah, OK, yeah, OK. So that was it from my end, but if you think of missed something it would be great to know more.

00:36:51.800 --> 00:37:19.700
I don't think so. I think I talked a lot. I hope you can use the information and then I hope it helps you. In case that there is anything else you would like to know to discuss more in detail or whatever. Feel free just let me know. Contact me, I'm quite sure we will find some time for that.

00:37:19.700 --> 00:37:30.494
Yes, thanks. Maybe I will come back if I come closer to writing what I want too, and then if I have some specific questions, I will come back to you

00:37:34.200 --> 00:37:44.153
Thanks a lot for all the information. It was very open ended, so you really gave me a lot of information that helps a lot. Thanks and I will now stop recording the call.

Christian Maslo

00:00:11.930 --> 00:00:33.930
OK, Hi and welcome once again I will share my screen so we have the questions in front of us. I shared them it with the invitation. I don't know if you got a chance to go through them, but yeah, we will anyways go through it. OK yeah, so my first question would be what is your role in the Department?

00:00:35.260 --> 00:01:13.768
I'm working for RBI since August last year. Department called Smart Automation and we're dealing with. Yeah, is is the name is like to find technology and methodology to automate processes and and make some processes more efficient and I'm an RPA developer, so the developer, the development of low and high complex processes of applications involved and high risk are reported. I use RPA

00:01:15.280 --> 00:01:24.355
OK, and when you say low and high complex so that could you define complexity in some way, do we have some definition for it?

00:01:26.010 --> 00:01:29.895
This is an internal definition. Low complex means there is a low risk. There are one 2, two or at least few applications involved, which means high complex processes are with a higher number of volume, higher number of applications involved and high risk. So that's not an official definition but our internally.

00:01:53.582 --> 00:02:07.406
OK and high risk in the sense that. Do you think? Then it's more applications involved. The risk is that you weren't able to complete, the project when we finished, or there will be more hurdles.

00:02:09.970 --> 00:02:33.588

More or less, the more applications you use, the more dependencies you have this application because even application is not working or not inaccessible then the RPA doesn't work and if you have more applications than you increase the risk of the whole process.

00:02:34.580 --> 00:02:40.844
OK, and may I ask, were you also developer before in some other traditional language or something?

00:02:41.844 --> 00:03:15.810
No. I before trying RBI I was at Erste Group Yeah. And there I wasn in the ummm. operation of trading of international trading. And there I. Oh, start to kind of develop in some Excel VBA Macros and then started to develop with blue prism.

00:03:17.620 --> 00:03:35.830
OK, so which means you were also not from a technical background as such. Were you or did I understand it wrongly, so you were in the operations of the trading Department? Does it mean you were still working with the IT department, or was it more like trading?

00:03:37.070 --> 00:04:03.535
Hello Christian, can you hear me?

00:03:03.535 --> 00:04:23.365
Hi, I can hear you now. Yeah I think we lost connection. Yeah OK repeat the answer. No, I have no development backgrounds. I have a master’s in business as well.

00:04:26.340 --> 00:04:42.760
OK, that's interesting. So how was your transition from a business background to a technical or I don't know how technical this is, but that's what I want to know. So from a business background to win RPA Department.

00:04:44.030 --> 00:04:49.480
When I was with Erste group I started to too, Two to develop some VBA macros to make the processes more efficient and to help our colleagues and coworkers to increase the Yeah, efficiency with the operating

00:05:08.300 --> 00:05:18.009
Yeah, but that was initiated by you so yeah, just out of interest, is it and then how did you decide to change into RPA

00:05:19.360 --> 00:05:25.268
The sum of interest and Because in our in our Department we then started to use blue prism as well to kind of get experience in the RPA into development and automated first processes, and so I attended the RPA developer training. There's a group, and so I was interested in this topic and that's why half year later. Applied for a job at RBI. Full time developer,

00:06:06.412 --> 00:06:21.465
that's really interesting. Was it difficult for you as the transition when you when you like? I understand you to feed training from for RPA development, but how difficult was it for you to change from a business to RPA I mean? How technical is it?

00:06:23.180 --> 00:06:42.798
It was quite hard, but I have to say. My high school, had focus of digital business so I I got used to to this this computer science and IT back then.

00:06:43.380 --> 00:06:59.400

OK, so which means you had that basic knowledge of maybe algorithms or

00:07:00.910 --> 00:07:11.559
exact locations and something and this is needed to have understanding of RP. You don't need to code most of the time, it helps, If you have a basic understanding of conditions, algorithms and how it works.

00:07:12.800 --> 00:07:15.710
And if you don't have to code, how are the instructions then given?

00:07:19.700 --> 00:07:41.238
In blue prism you can drag and drop actions are predefined objects. To sound like a you Mail diagram. So, we have decision stages. You have loops, you have conditions, you have actions to be done. You have data items you can manipulate and so on.

00:07:41.268 --> 00:07: 51.540
OK, so does it? Is it a flow chart? Kind of a thing? It sounds something like that

00:07:51.540 --> 00:07:52.528
exactly exactly.

00:07:52.528 --> 00:08:11.840
OK, great. Uh, and now that you are exactly the right person then to ask this question, or why do you think somebody would opt for RPA instead of a traditional programming?

00:08:13.900 --> 00:08:56.806
It depends on the process itself, whether to go for traditional Process reengineering or redesigning or RPA . RPA as I understood this is one of the of the of the last things to take in the into consideration. First, our process manager tries to redesign the process itself. OK, be to get some interfaces for from the IT department and so on. And if there is. No help or the process could not be really spent then. We take RPA to account.

00:08:57.580 --> 00:09:13.996
OK so but I did not understand this very well now, so do you mean RPA is not an option initially? I mean, is there a disadvantage to RPA or you mean because RPA will anyways be able to do the job and that's why as an advantage it's kept to this last option?

00:09:15.180 --> 00:10:03.040
No, it's not a disadvantage, but you would first Try to solve the processes or issues by getting rid of some, for example from not needed steps. So to make a redesign of process itself. Exactly to try to optimize the process itself and not to put RPA in the 1st place to it. First try it to clean the process to get rid of some steps, but if this doesn't work then of course you. You take RPA to consideration.

00:10:04.600 --> 00:10:09.514
So then what could be the benefits of RPA? I mean why would somebody then choose RPA

00:10:22.040 --> 00:10:49.980
Um, benefits from RPA is when there is a high volume of tasks when it is. Highly standardized and rule-based tasks. And when the when the applications are accessible, automatable. So if you have a lot of mundane task, you want to make your employees to get rid of, then RPA is the first choice.

00:10:52.060 --> 00:10:54.328
OK, any other reason?

00:10:57.480 --> 00:11:26.820
Um, yeah if Department reaches out to the IT department to get some help. Often support from the them is rejected and say they have no time and it's too expensive to develop the interface or something like that, and that is when RPA is the first choice for a quick resolution.

00:11:28.330 --> 00:11:45.790
OK. OK, and is there any troubles also with RPA that you realize from your experience from whatever you've done that OK, this this is a place where RPA cannot be considered, and this is a barrier in RPA implementation.

00:11:47.360 --> 00:12:58.996
Um, yeah. If the volumes of the task are not enough. For example, if you want to Automate the process with for example like 5 tasks, then you would not do this with RPA, but if there is a task with, for example 1000 iterations, which would take a human like 4-5 hours or even a day, then it would take RPA into consideration. Then if the tasks. Are not standardized. If there are lots of exceptions and every time, there is something different than this would not be an optimal case for RPA. OK, there are some applications that are very difficult to access and where the computer cannot communicate with the complicated with the application. This would be an area to RPA this wireless as already mentioned if this is a high-risk task. For example, if this is every time critical. Yeah, then. RPA may not be the first choice.

00:13:00.000 --> 00:13:03.920
Ok, but isn't it faster than the traditional programming approach?

00:13:05.500 --> 00:13:34.973
Yeah, it's. Works faster, but in with some exceptions you have to interact with human as well, and yeah. As RPA of work then rule based? It could be the case that for time critical tasks you will not have time to interact and reach out with the with the coworker.

00:13:36.180 --> 00:14:05.033
OK, that way you mean so. Which means if there is a interference of a human on a time critical phase, that's what may not be possible exactly. what do as from the other colleagues? What I understood is we're doing more unattended automation. Maybe, but do we have any examples of an attended automation as well? Have you, do you know of any project?

00:14:06.130 --> 00:14:43.463
Um, yeah, we are started to research this topic, how to use attended RPA as well for now, where we are mostly using the unattended RPA which is end to end and you don't need interaction with the human co-worker most of the time, We are focusing on the attended RPA as well. OK, so it's at the very beginning stage, so which means there wouldn't be any examples at the moment.

00:14:48.300 --> 00:14:54.870
OK, uh, what in your view is RPA cycle look like? How do we start considering whether this can be an RPA process or not? And then implementation what is basically the cycle?

00:15:04.640 --> 00:16:03.614
So first our colleagues from the process management are screening the processes with the business areas on a high-level band. What it seems that there would be a candidate for RP. Our business analysts are conducting some service regarding the process, so the volume the applications that would need to be accessed and so on. If the criteria and prerequisites are met, the business analysts of work shadowing. On the processes and writing down the

process description document-PDD. Um, for the developer who then starts to develop the process according to this document. Afterwards in UAT user acceptance test with business. The robot can be set productive. The last two stages would then be monitoring and maintenance of the bot and optional switching off if not needed anymore.

00:16:04.670 --> 00:16:08.520
OK, OK and then is that anytime that happened since the starting of the RPA Department that you have switched off a process?

00:16:15.960 --> 00:16:33.185
mm not yet, but we have one robot will be switched off by end of this year. Because the underlying application will be replaced by another and then we don't need this robot anymore.

00:16:34.530 --> 00:16:43.386
And it will be replaced by another, meaning will it already be, doing the job that RPA was helping them with.

00:16:44.890 --> 00:17:31.553
Kind of yeah, for example, This is the publication upload so from the markets area they have some publications with new paper and if some of the publications to arrive via email, the robot would screen the email and then screen the paper and extract all the needed data and then infuse the application with these extracted data and then send some emails. Depending on the results of the of the analysis, but the new application will kind of have this. Place already. So, which means the new interface that will be used will be already programmed accordingly exactly.

00:17:31.553 --> 00:17:41.818
So, does it mean it will use traditional programming approach or? The application itself, the new one.

00:17:42.650 --> 00:17:50.819
Yeah, I guess so yeah, so this is nothing to do with RPA.

00:17:52.380 --> 00:17:55.116
OK, that's a very good example, thank you.

00:17:56.280 --> 00:18:34.465
OK, and. What, uh? What do you think about RPA is because you said that mostly when you're doing an unattended automation, it's an end to end automation, but end to end automation? Does it mean for just one part of the process or you mean the entire process because? Many times, I've heard that RPA only does a part of the automation and so my question here is, do you think are pretty good act as a stand-alone for all automation needs of a process or is it not?

00:18:36.110 --> 00:19:23.186
OK, I meant this end to end some in terms of that no human has to interact with because with attended RPA there is always a human in loop which interacts with the process automation. But the part you automate with RPA, this is end-to-end, so you have a trigger and then the RPA process does this thing and then it ends. With the attendant RP. There is always a human in the loop that help you connect with the with the pro. That's what I meant with, but you're right is RPA is only part of the whole of the whole process.

00:19:24.880 --> 00:19:29.780

OK, but when this is the case and then you also say that RPA can be switched off for some processes when there is no more need of RPA in that process, what do you think could be a future for RP? Do you think it will stay long in here in the technical side? Or how do you think?

00:19:49.130 --> 00:20:30.150
Of course, a lot of potential too, but I think the future is lot RPA, but hyper process automation, which means the combination of RPA and Other technologies like machine learning I see are so intelligent, character recognition, OCR, etc. So, RPA will be for long, as a valid technology, but infused with other technologies. OK so yeah, so it answers to both questions.

00:20:30.150 --> 00:21:04.690
It can be a standalone and also if it is infused with others it makes more sense and powerful exactly. Yeah OK. And now the other the last probably the last important question was about manpower. That we already know. So basically that there's so much automation going on and most of them have target of Less employees, which means also layoffs or recruiting less employees, and so on and so forth. How is RPA playing a role here? Is it also true for RPA or RPA has a bit of a different motive than reducing manpower?

00:21:06.200 --> 00:21:44.346
Mmm one of the main benefits of RPA is to free some resource. This to enable people to focus on creative and challenging tasks instead of mundane tasks. But RPA could lead to layoffs as well as any other digitalization or automation initiative. Yes, so there's a difference. So every program or every application that is this programmed would come in the end. Lead to layoffs, so that's the specific, with automation and digitalization.

00:21:46.570 --> 00:22:16.892
OK, and how do you think it affects the cost of a new Department? For example, if my Department wants a small automation for repetitive process that I am doing every day in, day out. Then I mean, I know that it's difficult to judge just like that. But is it a substantial difference? Because RPA is also cheaper, and not so expensive as a normal programming or a traditional programming. Does it actually affect the cost of the Department?

00:22:18.800 --> 00:22:33.080
It depends on the cost model. If the if this Department who develops and runs the processes charges you for the for the processed, but for now we're not charging any Department for the processes.

00:22:35.170 --> 00:23:06.450
If the question yeah yes, of course it was a question, but also its effect on the manpower. So, for example, if there is a robot dedicated for the RPA process of that Department and you charge the Department but still of course the man the full-time employee is now not needed anymore for this particular task. So, in that respect also if you charge the Department, is it almost equivalent to the FTE or how different is it? Is it substantially different?

00:23:06.810 --> 00:23:52.163
Yeah, of course there of course. Um, I don't have the numbers by heart, but there is a substantial difference between the cost of running a robot and the cost of a manpower. OK, but that is why I'm why we select only cases with the right criteria. So if there is high volume so on, so to have an impact you would not do RPA for let's say a small. Um, small process where you can where can still 4 minutes of time. Then you would have to pay.

00:23:53.890 --> 00:24:06.258
And when you talk about criteria, I understand you already mentioned that one that it should be high volume and it should be standardized. Are there any other criteria that you look for before you start the process?

00:24:08.780 --> 00:24:59.750
Yeah, the overall impact on receive from the business area. So, they say OK on this product process, they're working, for example 3 colleagues 3 hours a day each. So then we say OK, this is a process that makes sense to Automate because there is a lot of impact. OK, but if you say OK this is. It is a process which occurs wants was half a year and took a colleague one hour then we would say OK this is a one-time job. I don't need RPA for that. Then you would better do a macro or something like that.

00:25:01.510 --> 00:25:09.754
OK, that's right. yeah, Thanks, anything that you think I missed asking that you would like to tell me about this topic.

00:25:10.930 --> 00:25:50.157
Ummm. I go through the questions, maybe the question about 10. How would you explain RPA, or how does it differ from traditional approaches? RPA mimics a person, but by faster, cheaper and being more accurate, whereas traditional approaches or focusing on the improvement of approaches process itself? So that's the I would say that the difference between RPA and the traditional approach.

00:25:50.378 --> 00:26:23.264
Yeah, so my main question, which I still kind of don't understand very well because of course every process has a pro & a con and I also realized that RPA is advantages. But also there are times when RPA cannot do the job, just like maybe other approaches. Then why do you think with somebody choose RPA?

00:26:23.378 --> 00:26:59.576
If it's not fixed to our pay, why would he choose RP? Or what

00:26:59.576 --> 00:26:37.515
no? I mean if the same job can be done by a traditional programming approach and also by RPA. And why should somebody choose RPA instead of programming

00:26:37.515 --> 00:27:30.520
Because for the traditional approach you need the IT department. Some developer who has time, will do the development for you, but it's most of the time if you if you ask IT two to develop something for you to have an interface or something like that, or a new application they say OK no, this is we have no time we put it in our backlog and come back to you or it's way too expensive. And then RPA could be a quick solution quick help to bridge this. Yes. You know what I mean? If you. 30 this is we expensive and you're most of the time are in the backlog and they're coming to you one year two years?

00:27:31.950 --> 00:27:53.030
No, yeah. good, we all face this and is quite understandable now. That’s it from the questions. Thanks for all the answers and your valuable time. I will stop recording the call now.

Julia Breitsching

00:00:05.210 --> 00:00:38.498
A very good afternoon to you, Thanks again for taking your time for the interview. As we've already spoken about the introduction, I will directly share my screen with you, so we have

all the questions in front of us. And then we will start. To start with the very first question- what is your role in the RPA team or in the team you belong to?

00:00:38.498 --> 00:00:49.110
Yeah, I belong to the Department- Head Office Efficiency Management and my role is RPA business analyst.

00:00:55.230 --> 00:01:04.555
So I mean, what does your role consist of, so what do you actually do for the RPA Team, or in the RPA perspective.

00:01:04.555 --> 00:01:11.634
I analyze the process and try to set up a process with which robots can be developed

00:01:13.590 --> 00:01:33.613
Uh huh. OK, uh, could you give us maybe an example so that we can understand better? What is your role? So are you involved in the programming bit or when you say analyzes? What kind of analysis do you do? Is it pre-analysis or post analysis? What is it?

00:01:34.330 --> 00:02:27.506
So, um, usually some Department of the visions contact us and asked us for robot. In this case, it is us. There are different options in some cases they do already know which process they want to Automate, so in this case I would look at this process and Yeah, try to define if it's possible to set up a robot. In other cases, they just want a robot and have no specific process, so we do a discovery, and pick out the most applicable process for RPA.

00:02:28.170 --> 00:02:46.458
OK and when you say the most applicable process for RPA, what is the eligibility criteria? How would you determine a process is eligible for RPA?

00:02:46.460 --> 00:03:16.168
The easiest way is if it is standardized. If it's all digital, there's this. So just rules they apply, so no. Brainwork or something like that. No phone calls or something like that, so these are the Main. How to say? So standardized rules, System availability so.

00:03:18.320 --> 00:03:21.864
System availability, meaning documents? or something else as well?

00:03:22.294 --> 00:03:43.128
I mean the documents or any information which is needed for the process and system availability is like if the robot is able to or our software in that case is able to handle this system.

00:03:45.240 --> 00:03:51.800
OK, and are there any specific systems that RPA cannot handle?

00:03:51.800 --> 00:03:53.054
Yeah, like Citrix.

00:03:54.700 --> 00:04:02.716
OK, any other software? So is that the only one that you come across or are there more?

00:04:02.716 --> 00:04:14.390
We already came across that Citrix application, but then we just it's not possible and we can't develop a robot for this.

00:04:16.830 --> 00:04:35.380
Ok good, so this is the eligibility criteria according to you. What do you think are the barriers? Or what kind of challenges have you faced during the RPA analysis for processes that you could also manage and sometimes could not manage also?

00:04:37.360 --> 00:05:30.255
Mm mm, Mainly system problems I would say, because from the first point of view, we already know if there are rules or not know rules applicable. So, this is very easy, but in some cases, we think it's possible. And then we try to develop the robot and yeah, we have issues with the systems, so the systems are not working with our software. We had that, for example in a substitution leasing. OK, that core system was not able to. Yeah, we couldn't develop the robot and so they ask the vendor to change the core system so we can set up a robot.

00:05:32.290 --> 00:05:41.506
OK. So, which means that if the process is important to be robotized the core system can be changed?

00:05:42.260 --> 00:06:12.009
Well yes, but for example, it wasn't so important, so it started last year and a month or two months ago they changed everything in their core system, so we're just starting with the robot, it will be the first robot in Raiffeisen Leasing so we start with a very small and easy process. But where there is urgency, yes, things can move fast.

00:06:15.520 --> 00:06:27.040
OK, and when you say about barriers and you see only system are there no other barriers, so you don't find any other challenges happen to have not come across until now?

00:06:28.270 --> 00:06:36.274
Maybe sometimes to get all the information. Which is needed for the process. So, in some cases we have rulebooks.

00:06:37.620 --> 00:06:41.580
Let me think there's one process. I think they the robot has about 10 rulebooks/Systems.

00:06:44.630 --> 00:08:00.326

So, we must proceed every step in the process, but in some cases, we have problems because we don't know how to receive the information, meaning the robot might have to enter 10 different systems to collect all the information needed, but isn't that efficient. So, the easiest way is, we usually ask for reports or extractions or something like that, as this is out of the systems to receive just an Excel, which is much easier for the robot and also faster. These excels are also mostly automatically generated and saved the robot's drive.

00:08:00.326 --> 00:08:07.270
OK, so then the report generation is another kind of automation then that's not involving RPA, right, yeah?

00:08:08.390 --> 00:08:08.830
Uh huh, Ja.

00:08:10.050 --> 00:08:45.018
OK, what do you think about RPA as a process in the long term, because what I understand from other colleagues is that RPA is treated as an intermediary solution during the time

taken for the process to have a classical programming automation ready. So, what kind future is in store for RPA?

00:08:45.850 --> 00:09:14.714
Well, I agree with my colleagues, RPA is usually set up for intermediate solution as the IT solutions are always need a very long time to get developed and it's much easier with our RPA to set up a process, yeah, it's less time taking

00:09:14.714 --> 00:10:26.754
yeah? OK, is it also cheaper? so if I was to compare the costs of a robot to number of FTEs that it would free up, is this also a part of your analysis role? For e.g.: 10% or 20% of the costs of an FTE can already employ a robot, etc.?

00:10:28.460 --> 00:10:55.488
No, so, basically when we are analyzing the process. It is only a feasibility study of pre and post implementation and then it is analysis of how good will robot run so it doesn't involve any cost analysis of the robot or anything.

00:11:26.010 --> 00:11:50.447
OK umm. As you mentioned that not all questions are relevant for your role, it would be very helpful to know more about RPA in general. Or if you could have a look at the shared questionnaire and answer any other question which I haven't asked.

00:12:36.550 --> 00:13:49.528
Yes, in-terms of current projects. we have some in production. There is one case with specific requirements. It is a regulatory request that we need to check all ratings of customers which have a separate direct debit contract? And this has to be checked. I think on a daily basis. Currently we have about 300-400 customers which have such a contract and we calculated about 3 FTEs for this process. So, we set up a robot and the robot take only about 10 seconds every morning to do this check.

00:13:50.580 --> 00:14:08.835
That is a very big difference in time taken for the same work. This is a very very good information for me because this also is ascertains to some extent the cost. It also shows how much time it takes and what is the difference, because 10 seconds for a robot and three FTES is a huge difference.

00:14:10.320 --> 00:14:43.796
Yeah yeah it is! And there and since this year I think we have the same with cash pooling contract. So, we set up contracts, just checking that an extra board with cash pooling in RBI's Cash management department.

00:14:44.630 --> 00:15:12.505
That's it actually, though it was shorter than I expected. Thank you once again for your time. All the information given by are very valuable. I will stop recording the call now.

Mario Passweg

00:00:02.260 --> 00:00:28.232
Again, thanks Mario for your time. I will share my screen with you, so we have the list of questions which are already shared with you once again in front of us. Yes, so my very first question to you here would be a what your role in the RPA team is and if you can explain us please.

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It's quite straight-forward an RPA developer to really develop the solutions. I get my information from the business analysts. Then Oh yeah, program it, design it in RPA with blue prism.

00:00:49.200 --> 00:01:04.172
OK, uh, so when you talk about RPA development, what kind of development is it? Is its technical coding? What kind of instructions are given to an RPA and how different is it from a normal developer's job?

00:01:05.450 --> 00:01:49.080
A normal developer chocolate a piece, kind of like an another language, it's a visual flow system to design with quite technical parameters in the background for the floor. And also the possibility or the need depending on the process we automating to really do coding also in C Sharp for example. Mixture. The tool is a visual engine to design workflows mainly.

00:01:51.460 --> 00:02:18.684
So what I understood is, you said that there are technical parameters in the background and also that it involves coding. Honestly speaking to when I was reading about it or had a few maybe informal discussions with some colleagues, I understood that. RPA it does not involve so much of technical knowledge, know how, but is it? Is it true?

00:02:19.860 --> 00:04:49.146
It's depending mainly on the process that you'll want to automate there. The pure RPA solutions. For example, you can do solutions without any coding. It's possible it's for really simple process is like logging on a web page. In the specific date of you got from an Excel for example, though, there are no fancy things you have to do. You can, if you're developer, you will design the process more stable if you're just citizen RPA developer, you will have more terminations and restarts for example, but it isn't necessary to write any code for. The process is we automating. Uh, for them. For most of the process is we automating quite complex business Logic is in place. Most of the times. Therefore we have performance issues, memory issues, for example, big data that aren't native to an RPA solution, and in this case we're kind of mix the technologies or marry the technologies with each other. We use RPA for example to get the data out of legacy systems. That's purely without coding. Then two calculations, modifications, transformations with the data decisions. For example, this issues engine decision engines and then the result is also again processed with RPA For example. More complex process, there you can't do it without coding, but we have also a few simple ones. In RBI there you. But, for example, Jira tickets are checked and approved or not approved based on fixed decisions you get out of Jira. And there's no coding part whatsoever included. So it's really depends on the process. You can do up here without coding. You can do it with low coding. You can do it with kind of hyper automation and with coding parts

00:04:51.230 --> 00:05:00.533
And this complexity is defined somewhere or as to what complexity needs, what kind of technical knowledge? Is it defined somewhere?

00:05:02.440 --> 00:05:40.894
Not really defined during the process discovery or that process selection, there is a kind of educated guess what kind of complexity the result will be that will be process should be what will be. And yes, depending on this educated guess. Uh, yeah, it's decided. If you. If you need a coding developer for it. OK, do a RPA coding or if it's enough, is someone with technical background can do it in up here.

00:05:43.280 --> 00:05:52.568
OK, any processes that you can name as an example? For me, this is a complex. This is not so complex and so on.

00:05:53.560 --> 00:08:21.416
Um? A complex one I would say, is for example my last process, that's the Nostro consolation, but it didn't work for cash management and mainly it's the reconciliation of cash accounts. And that's involving get the data out of Corona investigation software. OK, get the account data out there. Check it in asset photo outline styles for here. Check it with Ian reporting that's in web portal for Swift and based on this decide if you can match information we get from Outer Banks and we have in the system. And there's a quite complex yeah, matching algorithms. That's just only doable with C Sharp code. So the older navigation and data collecting is done with pure RPA. The decision making is done in the code stage. Result. Is done then we RPA either match the projections or capture new transactions in a with RPA again. That's a complex one, and simple one from my process is where coding is involved, but not really necessary. It's just sometimes more convenient to do it in the code stage instead of Pure RPA is for accounting services, so Travel management, That's mainly we get structures PDF invoices from the travel agency in the group mailbox. And the bot is reading in this PDF is extracting the data with regex. So pattern matching mainly and is entering this information in SAP. In this OK. And there's no code stitches Mail. If you get the information in a structured format, you extract this information and you entered in the system, so that's the. simple RPA case I think.

00:08:22.360 --> 00:08:42.236
OK yeah, these are good examples. Thank you, uh, what? Could be next is if you can what do you think is RB? Why should somebody choose RPA and what are the benefits? And on the other side maybe some problems or barriers also

00:08:44.310 --> 00:11:27.120
The benefits there I think 2. High valuable benefits. The first one is you can automate, also for data extraction but also for data input legacy systems. Legacy systems you don't have any interfaces and have no chance to get an interface. For example, that's one of the main beat up a you can still do it most of the Times, and the second really big interfaces you use the business logic of the systems you are automating. So for example, AZV. Such example if you enter as human as employee in art set for an account number at it for automatically those checks, get the information for the counterpart, get the information or the name and so on. All this information you don't have to collect yourself because you are using asset forfeiture pay. If you would use an interface, you have to provide all this information to and if it's not just a simple data collection, but with background, that's quite hard to do it. Main benefits of say. Barriers ofcourse criteria. If you don't have digitized input. All the processes and workflows were human. Intervention is needed in anyway or the input isn't structured, and so on. You can't do it with pure RPA. You can connect it with different technologies and OCR ICR and so on. But at least for the unattended automation, we're mostly doing at the moment that's. Local criteria because you can't circumvent it really. Other barriers. mainly pending, then on the process itself that could be memory issues depending on the window you are using, there could be performance issues because the calculations are just to make sure that files you're working with two too big or something like that, but that's not really various, it's just a barrier for pure RPA solutions because in these cases you have to. Yeah, excite steps to either coding or other tools that are around to make it more manageable.

00:11:28.380 --> 00:11:37.655
When you talk about pure RPA a couple of times, what do you mean by that? So basically, are there different kinds of RPA solutions?

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Pure RPA mainly mean we have our windows blue prism and we're using blue prism as our RPA solution. Yeah, but that's the software we're using to design a process is and pure RPA it for me as long as I don't have to go to any different paths. Be it a code stage, where we

have to code something or be it any third-party module like OCR technology or something like that. They do everything, in that blue prism software, every designing editor and the whole development. Then it's for me pure RPA solution.

00:12:26.730 --> 00:12:32.760
OK and otherwise. What kind of solutions are there on? How do you call them?

00:12:33.940 --> 00:13:06.570
Also RPA solutions then Yeah but mixed with other technology. It's in the other technology and artificial intelligence for decision making and OCR software for text recognition or something like that. Vitko stages for a complex decision making and so on, can be included in the up a solution but aren't really do able just with software from blueprism for example.

00:13:08.210 --> 00:13:12.098
Another question was you mentioned legacy systems. So, what do we understand by legacy system?

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Um, the mainly old system that don't have the modern interfaces 'cause If you have an any software mainland that's developed in the last 5 to 10 years, then you have APIs. You have small services, microservices and so you have a lot of possibilities to connect to this software with the program. The legacy systems mainly built on the mainframe and 20 plus years old. So every single connection you have you want to the systems it to database for the data or any control interface has to be. Programmed and developed by the IT and that's from your legacy system because you need specialists to have the time and the ability and the use case to do and you interfacing this just software that are mainly cloud based or online already. Most of the time you have all the connections already you need. Or you could need OK.

00:14:28.608 --> 00:14:39.226
So, if you have to for a project or a process you have to deal with the legacy system in in the very first phase. Then would you categorize such a process as a complex one?

00:14:39.226 --> 00:15:10.260
No, not necessarily. Cause for RPA if you automate the interface that the employee is using it doesn't matter if it's an interface that's done in the last five years or the OR that it's has been done 30 years ago because you're still using the interface, then normal UI the normal and for RPA most of the time isn't any difference.

00:15:10.260 --> 00:15:31.618
OK, can you give me some examples of projects that you RBI is rather taking part in or is. Using RPA in would you be able to name me a process where you think RPA as a as the automation cannot happen because of whatever reasons and the reasons for it?

00:15:33.810 --> 00:15:39.218
Do you mean where we tried to automate and found out we couldn’t?

00:15:39.218 --> 00:15:44.626
Yes, yes it would be great to have such an example.

00:15:44.626 --> 00:17:54.710
We have one example that was OFSA because everything was already done in the test have been done. Have been checked and approved and then we gone live and notice that it didn't work 'cause the kind of up here is interacting with this application. Don't show in the database in the background, it's just a visual view via manipulating but not the real data. At

the moment the refresh was done from the web page in this case. Everything we've done with a Bot was lost. So this was a project I think it would be automate table, but you we would had had to start from the from scratch and not example was for example the main software from leasing. Exactly was but this name was it was, it was not. None of the object of the UI were exposed to blue prism. Couldn't connect to any of the object. It was just a blank field. That was example we couldn't automate in this case that Raiffeisen leasing. Went to the window and asked if he could improve it and together with Alex Holman they tried around and played around. And I think last week or two weeks ago, but get on, you got a new release that is now automatable. Other than that, the processes we excluded are just because, but mainly because of the part of the digitalization. For example, you had to do 3 phone calls to get the information you need, or you get just a scan in a bad quality. Because of this, can you had to do something so we could only Automate small parts if we could at all.

00:17:56.020 --> 00:18:07.711
Do you mean here that every time you think there is a human intervention, it's difficult as an RPA for for the unattended RPA we're doing?

00:18:08.570 --> 00:18:58.620
Yes. The Human in the loop and human intervention. That's the attended RPA, Uh, we don't have such RPA solutions life. At the moment we are testing around and doing a few prototypes and the plan is to do it with, not with blue prism between automation, or power automate about it is called. He's doing that mainly and that is a kind of, ummm, appears solutions that's running on your desktop is informing you you have to do now something and then code whatever and after that the bot is running again

00:19:00.269 --> 00:19:14.306
OK, so it basically informs you and then you have to make that. But now you have to initiate it correct next step manually and then the bot. This already is taking over again. I did not get the name of this automation correctly, Power automation.

00:19:18.410 --> 00:19:39.778
At the moment, it's called winautomation when windows. I think Microsoft is in the process of re branding it to Power Automate.

00:19:40.370 --> 00:19:43.232
OK, alright. Yes, A question on QlikSense, as I am not sure if it uses RPA So, may be out of the topic a bit, but I am working on Qlik sense a lot which is a BI tool. It involves a lot of instructions that are automated. For e.g.: reloading the data thrice in the day which happens behind the scenes. Do you think RPA is involved or is it only BI?

00:20:16.730 --> 00:21:04.638
It's hard to say, most of the time or the other, typically apiece sales solutions you get if you're inviting you window mainly RPA, clicking somewhere. So you don't have just the automated process in the background. Most of the time it's open up an application, click there, log as log in, click the get information to open the next application, and on this something is doing. All this is happening all the time. QlikSense is more classical automation your yes maybe I'm not thinking it up with setting it up kind of sense. And then in the automatically helps.

00:21:06.200 --> 00:21:29.844
Yeah, and because we are already in this particular topic, I will quickly jump to this question first. How do you think is a traditional automation which we just spoke about a coding by or maybe even a SAP-ERP? Different from RPA and do you think one is better than the other? Or how would you compare?

00:21:33.120 --> 00:24:01.188
The case in automation is there for a long time now. And the main problem is because it's there for a long time and that you need Interfaces, APIs Rest APIs. Program developed interface. It's often slow. You have to wait a long time because there are big backlogs into it. Almost in every part of the IT and of you have the dependency that you first have to get the interface to start your own development to do the process. On the other hand, as soon if you have can start the application, you can start the development. Though both have their benefits. The Target I think should always be too if it's possible and feasible, do it within classical automation because it's more stable and interface you develop exactly. An API will not change, just cause a new interface is released. RPA solutions have to be adapted or at least tested each time, and you release of the software is released. Because if you automate the object on a specific form of an application and the form is changing and the object now is hidden in group box or something like that, then update can't find it anymore. It's easy to adapt most of the cases. But it's you, as you have to adapt it. And so the more stable is always the classical automation.It coding be it guys or workflow engines or something like that, but the. Off, you don't have the chance to do it or it would take a too long time to do it in this way and then RPA, here is a lot better than do it manually all the time. think both have to exist on the side of each other. Yeah, Co-existed complementing them.

00:24:03.850 --> 00:24:25.103
OK, but then when you say that RP is automated and it takes less time, so do I. Also, should I also understand that it's quicker and or how long does maybe a normal? How can we compare the timelines between an implementation of an RP, a process or maybe a classical automation?

0:24:26.900 --> 00:26:00.730
Yeah, that's mainly depending on the process itself. If it's a complex or simple we have. So if we take one process and we compare the same process for both automations. Any any process beat complex or I don't know. So yeah, maybe I did not understand what you mean. For example, we have automations that have took. 2 two weeks two to three weeks from discovery to go live with RPA. I never had that in my experience is with their classic are automation because just to write the structure of code application and get the right information that interfaces and so on have to log on. Most of the time. But also, we have the complex RPA solutions to took six or seven months from discovery to go live. Uh, that's I think the same time spent for a Complex classification automation solution, so I think it in the part of the complex one. There isn't a big difference. In the part of the the easy and non complex ones RPA is definitely a lot faster to develop because it's with being not stable, not so stable like and classification automation.

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Where do you think that one? So for example, if right now this is a easy kind of process automation that we're talking about where RPA has set its foot. Basically RPA is working on that particular process, but do you still think because somebody would need a stable? Structure, they would still opt for classical automation and then What about RPA? So why would somebody choose RPA then?

00:26:31.670 --> 00:27:55.674
In this case, if there's a chance to get it. In a time, frame that's suitable with classical automation, I think. Most of the time they will be. That choice on the Classic automation. Often appears also used as kind of patchwork, where you know OK in two years I get the new version of this in this software that has all the interfaces I need for the classic combination, but for these two years and doing not so stable RPA solution. They just take RPA which will take only 2 month went to develop, for example, and have a benefit of here. 22 month at least without pay. And then there are a business case. I will change it when

the new version is here of choice cause the other one is doing the minimally. I will not adapt their pay solution, but will write in classic automation. So as a kind of patchwork, a quick win. Now I have this one and I think there I know there are always applications where you don't get an interface tool, though the option of automated of automation will not be there for the foreseeable future. OK, then RPA will always be the tool

00:27:55.674 --> 00:28:13.980
Yeah, but could you name any such process? Because this is what I find difficult to understand right now with classical automation and RPA, which such processes do you think will then not go for a classical automation if they have RPA in place.

00:28:15.050 --> 00:31:21.380
For example, the Norcom process is a good example, it's in current list in the reconciliation. Then no, then Norcom that's. Yeah, that's a software in compliance. Alex Hollman did it. That's mainly holding up the transactions that are suspicious or head in the Norcom system and flag that it has to be checked and then there are employees that are checking each transaction. That's coming in and say, Yeah, it's OK. You can let it through or block it and. There's Norcom software. Is extremely expensive. And modules are extremely expensive. But it's a regulatory issue, so you have to do it and you have to do it with. This software is on the main problem, which is you won't get any interfaces to this software. To do it, automatic cause.com is selling this service. In this case you don't have the choice. Two automated in anyway, because you don't have, you don't get the data out of Norco without pay. On the other hand, at the moment there are three bots running in parallel that are screening this transaction and doing and educate the rule based definition for false positives that compliance area created cause no come. For example if, Any? Mohammed Franz on a blacklist. Then each transaction where the name is Franz, for example is being hold, but that's a false positive because it's not the permit France living in. Tyrolia it's. France zip from Vienna. The cheapest version of norcom we are Having to check it so the bot is doing nothing else and the employees are doing is checking is there more than one or three matches or just small match of this specific item. They already know that the all the time false positives and on and with this rule base the Bots can do a lot of work and take and Automate a lot of the work the employees have to do normally. For example, the process you don't have a chance to automate it with classical automation.

00:31:21.380 --> 00:31:43.839
Automation OK? Yeah, very good example. Thank you so much now that we have understood how RPA works and what are the benefits. Do we have some eligibility criteria to decide whether a process can be are is RPA eligible or not?

00:31:45.250 --> 00:33:24.770
There are criterias that's mainly depending of the focus of the board area, to be honest, because they're doing the criterias are changing some, sometimes it's because they want to upscale, like for example life is in Factor bank, but don't want to get more employees to do the job. So that's your case is sometime it's just 50 reduction cause the board areas think we have to. Have a look to Automate something to get rid of a few FTE and sometimes it's regulatory or quality thing. Saying OK we have. Because we have, for example 10,000 transactions we doing manually each day we have a failure rate of 0.001% and that's still too much and we want to try to automate that. The failure rate is going down for example. The criteria varies sometimes time dependent sometimes board area dependent. So there are criteria there. Most of the Times are defined up front. Then do the discovery you have your screening. The process is. You discover that before choosing you. Yeah, you create the business case and how much weight which part is going into this calculation? That's a thing of the board area mainly.

00:33:26.750 --> 00:33:52.244

Yeah, so basically this I understand. But also what I mean is that. There can be processes right which is expected to be automated by RPA, but in the RPA team, after checking on the eligibility criteria, you realize that this kind of processes are not possible to be automated by RPA, so this eligibility criteria for instance

00:33:52.244 --> 00:37:04.741
Ok. For example, one of the first thing we're doing after the discovery and the main screening is done and there's. The most promising candidate, then one of the first things we are doing as a paid developer is doing a so-called handshake. Then we we try to get the access to the software. Whatever we have to Automate and play around with blue prism and see if we can automate it. For example the leasing. I said with this software. So Ok for Blue prism just a blank box this application. Then we say, yeah, that would be fine to automate it, but we can't do it. Because we can't read out. Although the criteria, if the application is running in a Citrix environment, then blue prism also can't automate it. Or just with big disadvantages, yeah? In this case we also they know, just pick another process process and see if we can do there more, even if it is there, these kind of eligibility criteria define somewhere that you decide. OK, this is what we have to look for. Any of these are not available. Uh, kind of the documents. I don't know. They are officially documents. It's mainly experience because we're quite a small team with just the core team of two business analysts and three developer. So it's most of the time we just talk about it. Then the girls ready know what's the Criteria is because if the input is just on paper or justice can't picture result if they don't even bring it to us because they don't already know know you have two digit outlet it or entered. We're form or structured in any way or have to provide it before we even think about automating our self pay. But the last check is made with the handshake. Then it can happen. Also six I think it happened already, but it's possible that during that development within hit somewhere of all and have to abort the process kind of off. So for example, but that's quite rare, so if the handshake is working most of the time, we're going before we end automate the process. Small berries we have to so competitive anyway.

00:37:04.741 --> 00:37:25.131
OK, so with this we also come to the cycle. So you said that you first have to discover the process an understand also from the body area perspective. What is that is needed and and then is the handshake, which means you fit the eligibility criteria with the process and see if it can be actually automated by RPA. What are the next steps? So how does the cycle look like about implementation?

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The next step is mainly the part of the business analysts they're talking with the Business Contact. They're getting the subject matter expert. And going through the process, click by, click through the whole. Yeah, everything they're doing, but what you want to Automate and are documented documenting it in the so-called PDD-Process definition document. That's really an onclick basis of the process we are automating, including screenshots of the application, how to look like and in which form it is in, and so on. Mixed with explanations in written form. And on and if the PDD that it's checked with the subject matter experts and also with the developer in between, so the start of cooperating and the final product PT will then be signed off most of the time. But the head of Department or head of team from the business expert on the business expert subject matter expert. Then the developer gets the GPD to develop it and Uh. Yeah, that's the starting point of the development and this point we should have already all the necessary information. The access to the software we want to Automate and on, and then we start to develop. While did we develop in contact with services, analysts and the subject matter expert, if any questions arise. Uh, till the part where the. Testing begins or yeah, for testing most of the times. The business analyst already doing all the requests for new licenses for Blue Prism for the resources for the hardware. We told machines we need the access for a new user because each robot isn't an

own is a known user and unemployment. All this request are done and then the system tests start. Then the UAT starts with the subject matter expert, together the results are checked and if everything is OK and it's working as intended then we go live.

00:40:05.140 --> 00:40:19.078
Write only two 2 short abbreviations, UAT is user acceptance test. I understand yes. And what is PDD? Just process definition document?

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OK, so basically there is a process definition document for every process that you automate. Yes!

00:40:32.080 --> 00:41:01.400
OK, Thanks. Coming to a bit more broader understanding on automation. Do you think our RPA is a process which can handle end to end process management in RBI? Or do you think it's more like just a part and can be complemented with other automation approaches? So, what's your view?

00:41:03.560 --> 00:42:25.222
Definitely a part of the process it there are some simple process is where RPA could defined it from end to end, but most of the Times this process is are either no pain for the business or don't do any other. Don't take up a lot of time so there's no business case to even do one- or two-weeks development for them. OK, but as soon as the process is more than three clicks, I would say, RPA is just another tool, in the quiver to Automate from end to end. I personally think the first steps should always be to optimize the process itself, and then just pick the right tool for the right steps. It doesn't make really sense to just take engine and on the combination of the Technology I think.

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RPA you think can be easily combined with other systems or approaches?

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Yes, yes, definitely.

00:42:32.874 --> 00:42:43.436
Any such process that RBI is working on where we are using RPA and another approach?

00:42:44.870 --> 00:44:38.022
Mainly every time we're doing an extensive decision stage in the code stage, it's already in combination. Because this decision stage with the complex business logic invite is nothing else, if I can just take it and replace it, for example with an AI model or Can replace instead of do a fix scheduling of some process is to do it via web methods API codes or something like that the at the moment there is one process in development. Central O thinks keys that is, for example, getting the information via an API. When and what the robot has to do, then the robots is automating the webpage. And send it via API back. To the main process flow engine that he's done it. Sort of working hands and this combination as well. As I said, each coach stages already and a mixture of RPA and another technology, like machine learning, AI. Yeah they have the tools already. We don't have it in production. I think maybe pilots. OK, pretty sure I'm not sure about that. Other than that, cant think of anything a t the moment. Can’t think of anything we have already done a lot of plans, but just in the pilot phase.

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But how many processes have we in RBI? I been able to successfully automate via RPA in in head office and in network banks. In general all total?

00:45:10.970 --> 00:45:31.629
In head office, I know we have 17 process is. Factor bank has one. Life is in service center. Receipt has two. Central bank has, I think 15 yeah, just smaller ones in network banks. We are over 100 I think.

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OK, so that's quite a lot.

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Yeah, because in head office we have more complex ones. In for example Russia, they're using RPA also for automation of copy jobs or something like that. OK, and yeah, it's it head-office or in the Verbundunternehmen around us we are automating already with basically automation last 20 years, I think, because the employee costs are quite high in the countries where the employees caused lower, there wasn't a lot that big of a need in the last years to automate, just mainly employed more. And so. But I think that's many reasons by in head office we just have complex ones and rather not so much different processes and in other countries the 100 plus process is running because it's just more potential there.

00:46:54.504 --> 00:47:57.891
Yes, ok. This was also a lot of information thanks. One more question that I have in mind is when you say that. At the time of think user acceptance, so no ad PDD. So basically when you are processed definition document, there is a dedicated an employee or colleague. Who sits with the process owner and tries to do everything. So click by click which means there is a dedicated manpower required at that point, yes. But it also means to me that depending on whether it's an attended RPA or an unattended RPA that it will affect the manpower count of that Department, either on the layoff side or upskilling so it can be positive, negative, whatever. So how do you see that? Does RPA actually lead to Reducing manpower, or is it also helpful in Upskilling some employees?

00:48:00.030 --> 00:49:36.800
Sadly, the project we have to that's TOM and OPs Automation in RSC and something like that have the main focus on lowering FTE OK, and happy is one of the tools they're using for that. OK. but I had luck that's my first process I did on my first big one was forever is a factor bank. Yeah they approached us and that the there. Area of interest here. Doing that daily work is increasing and increasing and discrete increasing and they can't do it with the 50 people they have at the moment it will be. They had to employ a much more over the next course of the next 1,2,3 years because it's just a growing field. And they ,approached us and ask if we can automate the simple cases. Their employees can concentrate on the more complex ones they can do. They can do more. They can handle with the same number of employees more of their field of interest, and they're doing that. They're really happy about the robot and no FTE was lost. But we could increase their volumes without increasing their FTEs

00:49:38.370 --> 00:50:27.470
Very positive. Good to hear. so that was it from the list of questions I had. I hope I did not throw too many questions on you. Thanks a lot for all the information. Once I have taken all the interviews I will share a summary with everybody in the team and if there are any changes please let me know that maybe is not represented correctly or anything. And on the other hand if I have any questions I might reach out to you for these particular ones, which probably we can also do in a written form or even another call just like now.

00:50:28.750 --> 00:50:36.260

Yeah, of course it's no problem. OK, you're welcome to. Just ask

00:50:42.480 --> 00:50:46.800
Great thanks a lot, Ok, then I will stop recording the call now.

Kamil BRYCHTA: User side: Customer Management System

00:00:04.070 --> 00:00:31.713
OK, so once again welcome to my call. I will share the screen so you can see the questions in front of you. Obviously, not all the questions will be relevant, only the questions which are relevant from the user perspective is what we will talk about. So, the first question will be what was the process, which process have you used the RPA for?

00:00:34.700 --> 00:00:52.526
We used the process for two topics. First topic was the customer creation in KMS.

00:00:52.526 --> 00:00:53.895
What is KMS?

00:00:53.895 --> 00:00:59.756
KMS is our source system where we have our customers from our business.

00:00:59.756 --> 00:01:01.875
Customer management system, I would say.

00:01:01.875 --> 00:01:52.895
Yes, customer management system! and this is then where all RBI customers will be created, one project which is running in the RBI is the factoring topic and we have every month approximately 200-500 customers which we have to create in the system and therefore we use the RPA. OK, and the second topic is the, From there, every customer in our system has from the Austrian national banking and identification number, and this identification number we have also to apply on the homepage from the Austrian National Bank or we have to search for them on this page. So, for these two topics we used RPA, and, um, yeah.

00:02:12.930 --> 00:02:27.354
OK, and how was it, so, were they already, was it easy implementation of RPA or was it a kind of complex process?

00:02:30.230 --> 00:04:34.620
The implementation for the KMS for our customer management system was not so complex because it's a system in our house and developers had all the credentials for the systems in there and it was easy from for them to develop the RPA. But the bigger topic was that we had to create or develop the RPA for an external homepage for the Austrian national Bank, this was a little bit tricky. Because first of all we had to contact the Austrian National Bank that we want to implement this RPA, so yes, we need to contact them and ask them if it's OK for them. This was the first thing what we have done and afterwards, umm, we need credential, if you are a user, you need credentials to get on this home page, so we had to create credentials for the RPA and we also need the handy signatur. I don't know if you yeah, yeah. So, we need also this and the handy signatur we got from another company. So, we had also to contact a second company for the login for the RPA. So, this was the first process, what we have done that we contacted the Austria National Bank and second company RTRUST. For the credentials also we also need an OK from them, so this was the first.

00:04:36.260 --> 00:04:43.424

OK, one question here would be a what kind of credentials are you talking about?

00:04:44.650 --> 00:04:46.890
A username and password.

00:04:48.040 --> 00:04:54.850
This are the credentials from the Austrian National Bank and the Handy Signatur.

00:04:57.810 --> 00:05:01.146
That's the online signature. I understand like signature rights.

00:05:05.130 --> 00:05:33.518
And this we got from the secondary RTRUST and so we had to contact these two companies to get these credentials and this was the first step for us, that every part in, or for every company that's OK for them. For them that we are on RPA from an external homepage and this was the first step

00:05:27.840 --> 00:07:31.944
And the second step was that, this was the tricky one cause to apply for such an identification number we need some basic data like the name or address, Postal codes, the identification number of the companies. But every country has its own identification number structure, so it's not always the same template for every country, so we had to build some mappings for the RPA, that's when we got the list, because we use X lists data which we gave to the RPA and then with the mapping list the RPA would know, ok, Which country is that? Which data is needed in for this country? Which structure for the identification number or for the legal codes? So, we had to build some mapping lists for the RPA. So this was a little bit tricky. In the test of fivestets, the developers had to update they need. Uh, they got the information from us or the mapping list. They told us what it's needed and so in the test phase they tested it and so it was a little bit tricky these parts. And, uh, yeah, in the next problem is that when the Austrian National Bank some changes something on their website or the RPA had to be updated and Yeah, so these are the tricky things.

00:07:31.944 --> 00:07:53.790
Ok, and if I was to ask you what the timeline is. So for the easy or the simple process for the CMS, how much time did it take overall for the implementation and its normal running and how much was it for the complex process?

00:07:55.090 --> 00:08:47.930
So, um I would, we build, or we developed both topics in the same time frame. But the first but the first, but the identity they applied for the identification number was the first topic what finished I think. I am not sure exactly, but I think a few months, yeah, it takes a few months. Maybe I have some slides and I have the information exactly for you, just a second. I will check this. Do you need an exact timeframe or have the information exactly?

00:08:47.930 --> 00:08:51.455
no approximately, So it was two months for this one, four months for that one or something?

00:08:52.910 --> 00:08:55.379
I think approximately 4 or 5 months maybe?

00:08:56.380 --> 00:09:00.600
For the entire, so both processes?

00:09:00.600 --> 00:09:24.868

For the identification number in parallel, they worked also on the KMS and this was also, I think, about four, five, six months, because our private prioritization, yeah, the priority was first to do the identification number on the Austrian National Bank page.

00:09:26.220 --> 00:09:54.310
Yeah, but then there I get a bit confused because when you said so, the simpler process and still it took so long and complex one also takes the same amount of time. Um, then how is it different for a complex process? It wasn't so time taking you mean to say it was just complex in terms of different user or different parties to be contacted.

00:09:55.330 --> 00:11:12.349
Yeah, that the whole process because first of all we had to talk to our developers and write down the process and discuss the process and draw the process. So, this also takes a while because we had, like I said a lot too many Mappings and we had to be careful, because yeah, no, not everything was possible to bring into one template, so we had to discuss this in this process definition phase And this tooks a while. Then we had to contact the companies. Then we had to. Yeah, we also had to wait for the answers then. Afterwards we had the credentials to order that the handy Signatur, the developers started to look them. And yeah, so it was like a ping pong.

00:11:14.400 --> 00:11:16.080
Yeah, I can understand now.

00:11:17.280 --> 00:11:45.988
This process is yeah took a while and I think it was a few months, like I said three, four or five months, I think. This time frame maybe, yeah, and it was something new also for the developers. What I heard and also for us was then new., so I think so, So yeah.

00:11:47.280 --> 00:11:57.360
OK, yes, but do you actually have some kind of presentation on the kind of the process, how it was handled? Or maybe the flowcharts that is used for the robots?

00:11:59.680 --> 00:12:36.594
Oh! I will check it. I don't have a flow chart, but we have a run book.

00:12:41.090 --> 00:12:51.086
I mean, is it OK for you to share it with me because I'm not going to share it outside the company anywhere, but just to understand the process a bit better, OK?

00:12:53.460 --> 00:13:26.905
So, I will share my screen. So, as you can see, this is the Run book. This was created by the developers, not by us, and here you can see the contents.

00:13:29.300 --> 00:13:34.156
Yes, So, the 2.3 which says the prerequisites, yeah?
00:13:38.340 --> 00:13:46.280
Yeah, 2.3, So, yeah.

00:13:47.810 --> 00:13:50.618
OK, so this is a German. It's a German one

00:13:50.618 --> 00:13:58.970
Yeah, it's written in German, that's right, yeah.

00:14:01.100 --> 00:14:24.270

In German is not the problem. I can, but just to understand it doesn't even say much. So, if it says it is only the details of the prerequisites, so it is a very short point. But do you have anything where it's written OK? These are the prerequisites for this process, and this is what we need to be able to RPA this process.

00:14:25.950 --> 00:14:30.726
Um, no, no, we don't have something like that. No, not yet.

00:14:32.400 --> 00:14:56.672
Yeah, but yeah fine, no problem. But, uh, so when we go to the next question it would be for me, because you have a firsthand experience on the implementation and how it happened in your department. How much of a difference did it make to you, and your Department with manpower or cost or anything?

00:14:58.180 --> 00:16:09.364
Um? It makes a difference, yes because before we had this RPA solution. Three or four people works on this topic. Because we created this RPA for the topic factoring, as I said before and before this RPA solution. Yeah, we were three-four people were working on this and afterwards it was possible that just one person is working on the topic because the RPA Solution helps US states it's not necessary that a lot of people have to work on this topic. So we reduced that the manpower from 3 or 4 to 1 plus this RPA solution, so it helps a lot and we had also backlog and with this RP solution we could reduce the backlog a lot so.

00:16:11.170 --> 00:16:23.784
And in terms of cost, so when you have three employees less, of course you have three less salaries to give, but does the robot cost a lot? Or is it actually cheap?

00:16:25.080 --> 00:17:06.320
Um? I think. I'm not. I'm not exactly sure what's the costs, But what I heard it's not so expensive and Yeah, it's costs much less than three people or other solution. Yeah, that was what I heard. And therefore, our head of Department also wanted this solution because it was a cost rate reduction.

00:17:06.320 --> 00:17:20.940
And from the three employees that that you did not need anymore, was there anyone who was reused for another role in your in the company? Or was it that they had to leave?

00:17:20.940 --> 00:17:24.810
they were reused, or another topic in our Department.

00:17:26.270 --> 00:17:44.609
Um? OK, so would you say that RPA is more focused on automation but not for employee reduction, but for a better use of employees? Or would you say it acts for both or only for employee reduction? What is your view?

00:17:44.609 --> 00:18:39.635
Yeah, I think it depends on the company. You can use it for both, so if you implement this RPA solution, you need people who can use it. And because you need some monitoring and you also have to check the results of the RPA, so you need people who use it and but as I said in our departments, the people were reused, but if the company don't need these people anymore, then they lost also the job because in RPA you don't need as much as without RPA. Yeah maybe.

00:18:41.630 --> 00:18:49.386

OK, and would you so, because I do understand you don't know the exact cost? Or maybe it's also not good to share I'm not sure but?

00:18:50.770 --> 00:19:03.385
No, I don’t know exactly the costs. Maybe you can ask the developers they should know. It may be Christian, who you can ask again, but I'm not exactly sure, so yeah.

00:19:05.520 --> 00:19:21.974
OK, um yeah, um what can you say about RPA? I mean, what are the advantages or disadvantages? How do you feel with the process? Is it a good tool for automation or are there some limitations?

00:19:23.920 --> 00:19:54.240
Yeah, as you said it is a tool. Which helps to be more efficient in if you if you need to, yeah, implement big data in systems it can help. But in our experience, it was that is what it was like. That yeah, when the RPI is working it's fine, but. If something is not working, maybe because we need because we use Excel sheets. Which we gave to the RPI on behalf of the Excel sheets that are pass starts working and then the RPA knows what kind of data he has to create in the system or so. So, we have to. Build a.a.a..So the Excel sheet has to be. Without any kind of.

00:20:40.130 --> 00:20:49.155
Should I say do you mean format? Do you mean format.

00:20:44.823 --> 00:22:55.700
It is important to have a specific format for RPA. The format has to be always the same format. If something changes in the format or. Uh huh. It makes problems so OK, and if you use a lot of data. Yeah, it can happen from time to time that it struggles or if we had this problem that it runs on the one drive and that the one drive had to be started from the developers regularly and I don’t think one drive is a system that runs without problems. so, this was also a kind of topic, that when we use RPA then we had to regularly contact the developers that they have to start the one drive because the RPA doesn’t recognize all the files in the folder so it’s a little bit tricky and as we said that the format needs to be the same every time and nothing has to be changed in it, also the system behind the RPA also has to run properly. So,

00:20:14.823 --> 00:22:35.759
I think this is a very typical IT Kind of problem that I feel because except for Artificial Intelligence which would be sensitive for intuition and other things. I think all IT solutions have these problems

00:22:36.700 --> 00:22:35.700
Yeah, that is also the problem with RPA, it is a tool and it is fine. But you need a person who can monitor it and check it. These are advantage I would say in use of the RPA.

00:22:56.990 --> 00:23:01.646
And what would be the advantages then?

00:23:01.646 --> 00:23:39.838
Yeah, the advantages are if the system is running properly then. It's very efficient the because, um, if you have like us, we have to create a lot of customers in our system and with the RPA solution, it is possible that the RPA is working nonstop on this creation in the system. So there RPA needs just this Excel file with the data and then he's running so we don't need manpower for it. That’s maybe, and it's the advantage of that.

00:23:40.810 --> 00:24:01.929
OK, and then one last question that comes to my mind is then if you think so that it has disadvantages right? Like many other systems maybe then, did you already think about implementing it via the traditional programming system? Or was RP the only solution you wanted?

00:24:04.960 --> 00:24:09.978
Um, what do you mean exactly?

00:24:09.978 --> 00:24:34.296
So I mean to say that the automation that you have right now, this I'm sure, can also be done via traditional programming like the IT doing it for you, as setting up a new program for you, and like the olden times when everything was done via programming. Yeah, so did we actually think about that at all? Or it was just an option? Only RPA was the option?

00:24:34.960 --> 00:24:50.765
Uh, it it came up. Yeah as a possibility for uh this topic, and it was a new Solution and our head of Department wanted to try it so.

00:24:53.980 --> 00:25:01.400
OK, and no other reason why you would choose RPA over a traditional programming.

00:25:03.280 --> 00:25:40.152
Um, I think it depends on for simple solutions or for simple topics the RPA solution is really good because it is always running and if you, don't have to monitor it regularly or or check everything regularly so with simple with simple topics is RPA, I think a good solution, but if it gets more complex maybe it's the I'm programming part better, but yeah

00:25:43.810 --> 00:26:10.242
Yeah, OK um. Now I'm just checking the questions if I. Need to know more but yeah, Was there also an eligibility check before the RPA process was started here? Whether this process can be RPA'd or not?

00:26:13.460 --> 00:26:26.460
So was there a check like how much volume is there, or how frequently test to be done? Or is it simple? How many how many legacy systems would you need or things like that?

00:26:26.460 --> 00:26:40.860
Yeah, it was before. Yeah, it was discussed at first Also that the the developers wanted to know which volume, it will be and if it and if..

00:26:52.960 --> 00:27:37.910
yeah sorry yeah, we discussed it before because the developers need to know OK which volume, we need to create every month and if it's for them it's. Yeah. Whether its worth. And this was this, where the first discussions with the developers and after they said, OK, we think it's worth it and it would bring an advantage for you. We will not develop it. Yeah,

00:27:37.910 --> 00:27:49.500
OK great. So, which means that there was a check done to see whether I think they do it every time it's somewhere. Such archive solution so.

00:27:49.500 --> 00:28:15.995
OK, so I think from my end that was it. Maybe we can close with one last question. So why do you think will anybody choose RPA as an automation if they have the availability of maybe

traditional programming or artificial intelligence. What is that? Maybe few points or one point that makes RPA stand out for a few things? Could you? Could you answer this?

00:28:17.440 --> 00:28:20.806
As I said before, I think it depends what we want to or what kind of possibilities we have cause or what kind of topics are? Are on the table, so as I said, see a simple process. I think it is with the RPA solution a good thing. If it gets more complex, it is. I'm not sure if this is the best solution. Maybe is the old programming style that the better one I am not sure yes, but as I see in our solution that if it gets more complex, more problems come up

00:29:35.090 --> 00:29:30.976
of yeah. So, and then if it was, for example, a bit more complex than you think obviously that RPA wouldn't be enough, would it also be an option that RPA, along with maybe artificial intelligence or some other smarter automation would help?

00:29:30.976 --> 00:29:31.226
Yeah, I think so, yeah.

00:29:35.090 --> 00:29:39.945
Yeah, OK, so I would say thank you. Thank you for your time and answering all the questions patiently. I think are repeated if you just to be very clear. On the topic and also thank you for answering in English. Yeah, I will stop recording the call now, OK?

00:29:51.810 --> 00:30:04.526
you're welcome.

Susanne Novotny: User side: Customer Management System

00:00:18.220 --> 00:00:29.978
So hello and welcome, Susanne, in my call and thanks a lot for taking out the time to answer my question.

00:00:30.150 --> 00:00: 33.848
As my son is also studying so, I really can understand. So I really appreciate this.

00:00:35.280 --> 00:01:12.227
Great thanks, as I already mentioned to you, I will just give you a short brief on this call. It's basically going to be a call with the questions on the user perspective to understand in general how you use the RPA for what and what are the effects they may be positive and negative. So, my first question would be which process is that you are using RPA for? And which team do you work with?

00:01:14.150 --> 00:04:31.039
So, question number one, I'm in CLM responsible for excess monitoring. We are using it for this part and the thing is in back in 2018, my team manager came to me and said there is a project with a robot, you know, and I have I ask you to use this and to work together with efficiency management and to find the solution here for just the process here, it's called settlement risk only to detect all accesses which are caused from settlement risk only, that was the case. And here I worked then on it to fulfill this task of my manager and I did, beginning of 2019 I think in March 2019 it started to go online, and it works until now. I would not have started this process on my own. My manager came to me and said I have to do this, this would be a very nice task, you know. Then yes, this is what I did, and it works very well and starting last year there was a new project. Also, including a robot for booking purchase value like real excesses and this went online beginning of November this year, so it's very new. OK, so it's also covering question number two. What? What could be

one example of a project? So, we have this segment risk only starting in 2019 March and now we have this really excesses booking versus value starting from November 2020 and as I can say and maybe also covering other questions. I can confirm that for the robot just standardized processes are useful, then it can be used. I mean the robot has no brain. The robot has no logic thinking you know you just for my perspective you can only use like this processes that are really stick to a standardized process to be to be used for.

00:04:33.740 --> 00:04:39.354
Ok, thank you, one question I have from your previous comment, is what is CLM.

00:04:40.930 --> 00:04:43.840
It's my team Credit Limit Management.

00:04:45.740 --> 00:04:57.232
Thank you and you also mentioned that the new project is something called booking versus value like a green access is. Can you please explain it a bit because I don't know about it.

00:04:57.975--> 00: 07:50.890
Um, you know, I mean, I'm dealing this excess monitoring. And you know, um, we have systems like GEM to see if we are like monitoring really excesses is on a consolidated exposure. And here in our Department we have risk limits on G1 like a Gross level and the next exposure, and if those limits are breached then we get view to another program like Llama. We get notifications that the limit is breached and if some accounts breached on a booking date level, then it is a real excess, although the value its value lies covered but this is a real excess and then. If there's a real access of above 10 million euros, we have to report to FICC on a weekly basis and if it's breached value is at booking price then also we will have to report it, and so and then on the other hand there is this settlement risk only, if this is the case, then we do not call it as a real excess. Then it's like a processing calculation issue. Which we have several. Um, yes, programs in place where we can get back and what we learn also what the robot can and that's this is not meant to be reported to FICC. Many information at all I know. But yes, I mean this thing is, for the robot you know to sort out real excesses from the not real. This is like the overall conclusion, you know, and to detect which accesses to report two FICS over 10,000,000 and which ones are not the case to report there.

00:07:50.890 --> 00:07:52.340
And is FICC is some compliance committee.

00:07:52.340 --> 00:07:55.210
No, it's the credit committee. I have a credit committee every Friday. There is also a corporate credit committee, but for the corporate excesses no robot is now in place right now.

00:08:13.850 --> 00:08:38.546
OK, um, so yeah, this obviously answers my second question in terms of examples or the processes that you are working on with the robot. My question would be how does it feel so? Basically, what is the difference between the robot working for you or how many full-time employees were working on it before? So, does it actually effect in time perspective?

00:08:39.700 --> 00:09:47.908
Yes it does. But you know, um. I have to say I still have to check the robot. It's not. I mean I do it cause I'm a very, I don't know I'm I get notifications every day. The robot sends automatic notifications of his results every day and sometimes I do not understand his comments or whatever it's comments and then, you know, sometimes the robot does not start, the robot fails, 'stolpert', but it's not a fully automatic process. You still have to. I do

not say it's the full time you spend without robot involved, but you have to keep an eye on it. You know on a daily basis.

00:09:48.850 --> 00:09:53.075
Yeah, so you mean to say there should be 1 FTE supervising the robot always?

00:09:53.075 --> 00:09:57.570
Yes yes

00:09:57.570 --> 00:10:15.750
OK, but otherwise. For example, let's take an example of some random process, there are 10 people working every day for five hours on a particular process. And when RPA process is set up, the robot can do it in one full day. So then it does make a substantial difference.

00:10:15.750 --> 00:10:20.950
I'm not in the position to tell you because I started the robot process as in 1 FTE. You know there were not many people involved and it was just my person affected.

00:10:32.640 --> 00: 11:36.880
Maybe um in in financial institution and now and I see. People should comment tickets, excess tickets and now they do not do it so, because the robot does it for more people, I'm not in the position that I can tell you, you know. Like the only thing I can tell you. I mean. I have to cross check um, what is the outcome from the robot from the daily notifications? And sometimes I do not get notifications and so on and so on. So, it's still a little bit work on it, not the same as the robot would not be in place, but it is like I would say like 20 to 30% of the daily workload without the robot.

00:11:36.880 --> 00:11:55.780
Yeah, yeah, exactly that was my question. So, if how many hours were you spending before for the process and how much are you spending now? So, you said that now you're spending 20 to 30% of the time you were from before, right?

00:11:56.060 --> 00:11:58.310
Yes yes alright.

00:11:59.660 --> 00:12:19.826
OK, now the question comes when you wanted to apply for an RPA process for this particular process, was there some check whether the process is eligible for RPA, like when it is standardized, or it is repetitive something like that?

00:12:22.370 --> 00:12:26.572
I mean, I do not know if I understand your question right.

00:12:26.572 --> 00:12:43.762
So, as you already said in the very beginning that RPA can be done through a robot can be set up only when the process is standardized, yes. So in what sense? What? What is checked to see whether it's standardized or not?

00:12:45.490 --> 00:14:59.020
Umm, How can I say, You have the programs you know, you can check with some standardized process is and there is no logic thinking behind and I think this is the One advantage or disadvantage if there is a logic thinking behind a process, then the robot fails, yes this I definitely know, they program the robot if there's a really stick to look in this program and look, I need to go to this file in this file and then check this, if there is a logic thinking behind the robot is completely the wrong yes tool to use. I never had the idea on

my own to study a robot like, starting in 2018, my team had come to me and said we will try this and also last year people approached me, to help them, I mean the second robot was started from ICA from financial institutions, but I have to do part of the LAMA. The LAMA thing is the excess monitoring and I had to do the PDD there you know, so it was not an active part of myself, it was just people or Department approached me that I should do something or that I should be involved, yes, to be part of this robot.

00:15:00.130 --> 00:15:25.038
OK, and do you think so? When you say that your team came to you or contacted you to get the robot setup, which is understandable, but do you think this kind of automation that has been done by the RPA robot can also be done by normal programming and setting up a new software or something like that?

00:15:26.530 --> 00:15:29.878
I'm not. I'm not an IT specialist, you know?

00:15:29.878 --> 00:15:39.178
Yeah, I mean, is it that kind of automation for which a software can be made? Because obviously I don't know the process, um?

00:15:40.630 --> 00:15:55.032
I would say now as a non-IT professional. I would say yes. But I am not sure for 100% obviously as I am not an IT person.

00:15:59.795 --> 00:19:44.358
Maybe this covers one question, but the main thing I noted down when I got your invitation, yeah, we are living in a very fast world, Things changes and programs. I mean in 2015 we had Gem as the new systems seeing exposure send and accesses send and so on and so on. Now my colleagues are working on LMS limit management system which shall be developed in two years or something like this. And so you know the process to program a robot it does not, It's not finished from today till tomorrow, you know. And here I see the main issue. I mean when I started in 2018 I was on a job rotation in Bulgaria for one month and call extreme efficiency management. Contacted me in October 2018 and take cool life of the robot was in March 2019, So this is a very small process and you can imagine it was like 5 months or something like this and then we started to have a test program and so on and so on, and also the new robots with this booking versus value. It took around six or seven months to go live and here I see the main pain points because it takes a long time. I mean if I put every colleague, a student support and if I would train him or her to do this standardized process. It would take one or two weeks and he/she. She should know this, you know. And if we can do it and then, when it's finished, the robot can do it, but it takes a long time in relation to maybe when the robot knows it, then there are some changes may be in the systems or the main system will be replaced by another one, and then it's starting again, you know, and this is it takes a very, very long time and although in 2018 back it was not really the long process. They had to stop because they had other more important projects there to stop my project and then start again, it was like a time gap in between and I see this is a really major pain point of the robots that the time the robot is learning and it is not in any relation to what then is the outcome and then maybe process changes are done or new programs are online, and so on, and the time the robot is online maybe. Yes, it does not have any effect because processes changes, you know.

00:19:45.030 --> 00:20:26.448
Yes, I get your point, and this is something the problem that you mentioned the delay, because when internal prioritization of different projects this is something very internal and I do understand what you mean, and this should be probably sorted out sometime, because otherwise what I have read and I've heard from other interviews from the development side,

of course, is that it takes not more than two months to set up something like in RPA robot, if the processes are simple, and then because of this waiting time, the setup actually goes up to six months instead of the two months of short time

00:20:26.448 --> 00:23:41.979
In the first robot project we had stopped in between because there are more important things to do, but for this second project there are more departments involved, and as you can imagine, the more departments involved the longer takes, you know. What I'm concerned, but I I think. I mean, I'm glad that I have the robots, but sometimes, what I mentioned before. The most. A pain point is that the robot does not think logical because I had discussions with efficiency management, why I do think the robot is wrong and I always had the conclusion because I have a logical thinking and the robot not and I have also the long year experience behind, you know and this is what no robots can provide you with. It's just like a stupid stick to rules. Don't get me wrong, I understand what you mean. The moment can just follow steps by step you give him or her or it to follow and I mean for one example if there is one account overdrawn, it's an easy thing to do, you know, but we have like customers with thousands of overdraft facilities and maybe not only one account leads to the excess. There are many, maybe four or five or 100 accounts leading to the access and the robot is not able to calculate all the accounts together, this is what? He he does not. It's not possible, or it would be possible on a really yes they have to program again and it's very time consuming and so on and so on and the result would be, because we have to check all excesses above 100,000 Up to yes, there is no up to it can be also 500 million euros or whatever I had excesses from 1 from 2 billion euro, you know and. But if there are 100 accounts each 1000 euros overdrawn, the robot will be, not able to do this, you know.

00:23:45.520 --> 00:24:45.960
So yeah, I mean there I have a point. So basically what you say is correct, but that is why artificial intelligence is there, for example. So when RPA, does a robot process automation? It is definitely like targeted for only manual kind of work without logical thinking and if artificial intelligence comes into picture, for example that the RPA is being done with help of artificial intelligence and then the cognitive thinking that you explained comes obviously comes into picture then don't you think it will be more risk for a job loss of a person? Because with RPA I think it is comparatively less risky because of person at least has to supervise it, and still can do a lot of strategic things along with that particular supervision. But if the cognitive skills are involved from artificial intelligence, then of course the person is not needed anymore, isn't it?

00:24:47.120 --> 00:26:05.770
Um, I think, only one of your questions covers if you can lose your job or something if they robot replaces and real FTE, this could be the case. You know, I mean, but quality will suffer because as I said, I have the robot in place for two tasks, but I'm still checking the robot because I don't trust it 100%, You know. Maybe this is, if you are I don't know if my Department head says OK then maybe 10% or 20% of the excesses will not be identified if the real excess reason or something like this and I take this, you know then it's OK. Then you can say if FTE. So are you know but still I claim that 100% robot cannot replace an FTE or person really, umm, works 100% quality, you know.

00:26:06.660 --> 00:26:06.978
Maybe I understand your point.

00:27:07.768 --> 00:26:56.686
May be some persons are not, but if you are like a long lasting employee for RBI, I am, this year I had my 20th anniversary so yeah, but you know what I mean in general you know so. Maybe a newcomer would, what it can be a very good newcomer and then it's also not this

case, but I think, I really appreciate the robot and this support, but I don't trust the machine 100% if I'm honest.

00:26:58.040 --> 00:28:07.396
Yeah, I mean. I understand your point very well and this brings me to two different kind of thought processes. One yes, RPA is an automation process, but not as much of an automation process which will relieve the human employee completely from a repetitive thing process, but on the other hand it is maybe a kind of positive automation because if it can relieve the human from a total automation, then the risk of job loss is higher and now what happens is if there are three FTES and one person still has to overlook it. To some extent, maybe 2 hours a day, morning evening he is checking if the robot is working perfectly, but the rest of these six hour's he can still work on something really important and the other two FTES have anyways been released from the mundane task, and they're being used for something. You an maybe more strategic or learning developing themselves.

00:28:09.470 --> 00:29:42.070
I only want to find out the disadvantages but also part I agree is that I'm saving, I mean, as I said, um I have more time now for other tasks to do because robot is working on this and that can use for daily work in another direction or something? Um, this I really appreciate. But still it's not 100% um, Um, yes um? What I can, and what I point out that I can 100% rely, used now that the time for other things. And yes I'm not more people involved I cannot tell you what are the other ones doing because for me I did the PDD for the first robot and for the second one and so yes, and also for the second robot other Department I'm involved and I think it's really time saving because they don't have to comment on their tickets as the robot is doing it so they can concentrate on other things, yes.

00:29:43.570 --> 00:30:05.716
Yeah, I mean this is what I meant, so the positive and negative both points. You will really mention right now are very important because it also gives me an understanding from the human perspective how human is being burdened or not burdened or relieved from this kind of an automation.

00:30:05.716 --> 00:31:40.048
I know, honest. I you know. When my team head came to me back in 2018, I was really, not on, I thought then OK, now I'm programming a robot to get rid of my own work you know, I was concerned about yes; you spend a lot of time and then if you finish then RBI says, Thank you very much. We don't need you now anymore, so this is also a point where you think about it. I mean this is not the only task I'm doing, don't get me wrong, but you know. Manager comes to you and says, please, Uh, help to automize the process. Sure, you think about it, do I replace my own? Work, you know. Because I mean, um, this is the point where you are concerned about and what you are thinking about. And I mean I did it cause I have respect to my manager and what he's saying or something but do I have it in your back mind, if it's a point you know because you're thinking too late now, will I loose my job

00:31:42.520 --> 00:32:04.535
But did it actually now, when you tell me this? So when you actually got this feeling OK, maybe I'm automating my work and what will happen were you relieved later when you saw that? OK, it's not completely automating, but you still have to do some parts here. Then it relieved you that, OK, I still needed in the job.

00:32:04.535 --> 00:33:26.500
No, I didn't really think that it's replacing myself. It's just like I thought. You know, shortly because this is not the only task. What I'm doing, you know, but I still see it. It's in there. It's in the opinion of the team, department head, you know now and in times like this you

have so many task and nobody can come to 100% and if now your Department head says the robot does it 80% OK, and then you are replaced, you cannot do anything you know and if your Department head says yes, the robot is OK, but we still need somebody to check as a human being. Then you don't have to be afraid to lose your job, but this is up to your superiors are whatever you know. Um, if you know the budget is tight and if you have like 80% success and then it saves many of money you are OK with people, but you know this is like yes,

00:33:26.500 --> 00:33:47.560
I know what you mean, of course, and this comes into picture with all kind of automation unfortunately, and an as soon as automation is mentioned, I think everybody who is related to that automation or is in connection to that automation I think has the fear

00:33:47.560 --> 00:35:18.802
I have to go a bit away from the robot, but this is also you know, and I believe we have so many students supports, don't get me wrong, I don't have anything about any student or something, but if I see in our Department during our team what student is allowed to do, then my hair is straight from my head, you know, because I don't think that the student supports can do the same quality of work like a long lasting employee. But if the student support is cheaper than a 20-year sticking to RBI. Yes, employee is, for example, is really more expensive, but I think the quality of the work isn't much higher and this is also I mean I cannot change the strategy of RBI with the student supports work, but in my opinion this is the same and then Department head or division head says we rely on the student support work and this is OK for us. Then I cannot change it, you know, I've in my opinion, student support can never, never, never reach the quality of a long-lasting employee.

00:35:20.360 --> 00:35:25.354
Yes, I understand, so, it's also the experience that speaks and maybe also the wisdom of so many years. So yes, of course I agree with you.

00:35:25.354--> 00:35:38.202
Yeah, this is nothing to do with robot, but it's kind of the same. You know, if you get better?

00:35:38.202 --> 00:35:47.594
Yeah exactly. It's all about money, I mean less money is

00:35:47.594 --> 00:35:50.888
If it has to be done, 100% quality can also survive, you know? So yes.

00:35:51.990 --> 00:36:33.630
I mean yes. I mean it was a very good discussion. I will say not, particularly from the questions perspective because we already talked about. It said that all the questions are not relevant to you. But still I got a very good view on your user-side experience, not only from the RPA Bot but also in general from an automation perspective and this really helps me because I will definitely use this for my thesis, and I would like to actually thank you for taking out the time once again. Is there anything that you would like to still add on?

00:36:35.350 --> 00:37:03.680
May be question 8. Is it time taking or quick, It is a time-taking system, you know, as I said, it takes a few months to set it up, it's not done from today till tomorrow

00:37:05.460 --> 00:37:22.290
I mean here the question was meant in terms of a programming software which can take up to two years because the IT team doesn't have any time and the projects are always in backlog.

00:37:22.290 --> 00:39:17.424
In the first robot, what I can tell you from my experience. The team in efficiency management when I worked together, it was excellent. You know, they really. Whatever I told them or whatever, I had an idea to program or what was necessary. They really then made sure that the robot worked. This was really also with Leo, also with Julia Breitsching and Mrs. Kojic and Alexandrs, I mean this is really excellent and whenever got questions or something like this was really a good cooperation so I cannot claim anything to work together with them. There was nothing I can tell you what did not work, it was really excellent. So, in this case I can just say that they really did their job and whatever they needed from me. They then set up to get their robots run, you know? I don't know how they did it and I do not know what it is, but I did not want to change because I just gave my input and they then did their job to make the robot run and I do not know how they did it and whenever I had questions when the daily work or the robot did not run I get feedback within few minutes. So, this is excellent, you know.

00:39:19.980 --> 00:39:29.094
Yeah, OK, perfect. I think that was it, um, I will stop recording the call now.