SMALL BUSINESS ROBOTIZATION WITH RPA (ROBOTIC PROCESS AUTOMATION)

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ABSTRACT

Technological development changes the conditions of doing business, and this applies to every entity in the market world. The report analyses the opportunities that small companies can gain by automating their business processes using Robotic Process Automation (RPA). It also analyses the risks and possible problems with such robotization of the processes.

KEYWORDS: *Robotic process automation, RPA, small and medium-sized enterprises, SME, critical risk factors.*

INTRODUCTION

Digital transformation provides opportunities for companies to apply digital technologies. According to Gartner, "Digital business transformation is the process of leveraging digital technologies and supporting capabilities to create a robust new digital business model" (Gartner, n.d.). One of these technologies is Robotic Process Automation (RPA), which, in addition to supporting digital transformation, makes it faster (Deloitte, 2022). The term "Robotic Process Automation" was coined in 2012 by Blue Prism, a company that provides RPA solutions.

According to the EU (SME Definition - User Guide 2020, 2020), small and medium-sized enterprises (SMEs) defined in Recommendation 2003/361 (Document 32003H0361, 2003) represent 99% of all enterprises in the EU. The main factors determining whether an enterprise is an SME are headcount and turnover or overall balance sheet.

From the scope of the study, the publication excludes the differences in the software of different technology providers, their advantages, and disadvantages. The study looked only at the automation of robotic processes. Other similar automation such as, for example, Artificial Intelligence and Machine Learning are not considered.

1. CHARACTERISTICS OF RPA

Robotic Process Automation (RPA) technology makes it possible to automate repetitive, routine tasks in various business processes using software robots. This software application or software robot can be trained to perform tasks in a business process that were previously performed by a human.

These robots perform human actions at the interface level – they enter and process data and work simultaneously with various applications. Nothing in applications and systems should be changed. The organization has an IT infrastructure on which and with which the software robots work. Technology can also work in conjunction with other technologies, such as artificial intelligence, for example. The people who perform these repetitive, structured tasks have been replaced by software robots. (Ruiz, Ramirez, Cuaresma, & Enriquez, 2022) Software operators follow predefined rules such as, for example, opening a file, reading a record from a file, sending an email, starting or stopping an application, recognizing text from a scanned copy, accessing databases, etc.

Apart from this process of decomposing the processes of predefined rules, work decomposition is done.

From a business perspective, RPA means reducing costs, including for personnel, reducing human errors, and shortening the lead time for operations, increasing productivity. And therefore – focusing on strategic goals and an advantage over the competition.

Here, the focus falls on the existence of the organization of many routine and repetitive tasks and processes. At the same time, these tasks and processes need to be time-consuming and require the participation of multiple employees. Then the implementation of RPA technology would be effective. With these characteristics, the size of the enterprise does not matter. In small businesses, there are also manual time-consuming repetitive processes that are suitable for automation.

In organizations, work is made up of three elements: processes, activities, and tasks. They are interconnected, and their complexity is determined by the scope of work. These three elements are in the following hierarchy:

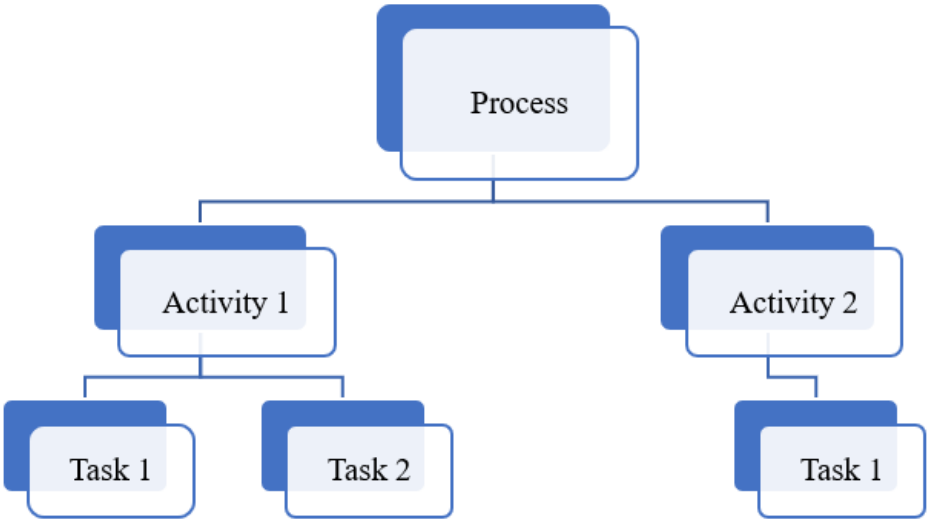

Figure 1. Hierarchy of processes of activities and tasks. Source: Adapted from (Chambers & Associates Pty Ltd, 2024)

A process in business is a set of activities and tasks that, once completed, will achieve an organizational goal. Each step in a business process denotes a task that is assigned to a participant in the organization. It is also the main building block for business process management, process automation, etc. (Team Kissflow, 2024)

Robotic process automation began its rapid development in large corporations in the financial, insurance, construction, and other fields. The transition of RPA solutions to cloud solutions and to pay-as-you-go has led to a reduction in implementation and operation costs and hence to the attractiveness of these solutions for small and medium-sized companies.

2. RISKS TO THE IMPLEMENTATION OF RPA SOLUTIONS

We consider risks as potential obstacles, problems, and challenges that lead to the failure of an RPA project or insufficient added value from the implementation of such a project. The main risks to the implementation of automated robotic solutions in companies are related to several aspects – the people who will use them, the existing systems with which they must work, and access to confidential information.

In small companies, these risks are added to the limited budgets and limited IT resources they have.

In our research, we look at the risks of implementing and maintaining RPA solutions, with a focus on small businesses, and offer solutions to avoid or minimize them.

The main risk for small companies is budget constraints. Building a business case for RPA is the beginning of such a project, and then the budget is also accepted.

Usually, in large companies, when determining the budget for an IT project, parametric estimation is used to calculate the expected number of resources for the completion of the project – time, costs, and human resources. In the case of small companies, in addition to the fact that money is limited, human resources are also limited. Medium and small companies often have smaller IT teams with less specialized skills. Administrators and technical competence to define and automate internal processes are limited. The ability to maintain systems during the transition to and during automation is also limited. Parametric estimation uses parameters based on past projects based on which forecasts are calculated, but in small companies, such past projects may be missing.

An option for small companies, given the limited resources and competence to manage an RPA project, is to seek help from outside the organization – to choose to outsource. This can lead to vendor dependency and potential service interruptions. Another option is to focus on a small number of processes that do not consume much of the company's budget. Automating one process will lead to a completed business case and will allow for clear planning and budgeting of subsequent processes. The benefits of the implemented solution and the return on investment will also be seen. RPA solutions differ and some are more business-friendly/business-friendly – these are the solutions that are aimed at use by citizen developers – employees who know the processes but do not have IT skills.

The second serious risk is the danger of applying software robots to the cybersecurity and privacy of the company's data. The security weaknesses of RPA solutions stem from robots' access to confidential information and hence incidents related to the security of corporate data. Software robots have privileged access to company systems and databases and can be used for unauthorized entry into internal systems. At the same time, the robots' unsecured source code makes them vulnerable to attacks and malicious changes.

A solution to minimize the risks associated with the security of RPA solutions is to constantly monitor what all software robots' access and what actions they perform. Access rights should be set with due care. Encryption and authentication are also measures in this direction.

The risk of loss of competence also exists in large companies, but in small companies, it is very high. When a process is automated, the people who performed it before start doing something else, it is possible to leave the company, and no one can perform the necessary operations manually in the event of a failure of the automated process. Minimizing this risk can be done by documenting instructions for performing operations manually. A person who monitors the progress of the process also minimizes the risk of loss of competence. This risk can also be mitigated through the exchange of knowledge and good practices between the people in the organization.

The risk of improper management of RPA licenses is again stronger in small and medium-sized companies that cannot have special monitoring and management of RPA licenses. On the one hand, specific technical skills are not required to create robots, but on the other hand, it is required to select and monitor the wrong RPA licenses. The solution in the direction of minimizing these licensing risks is monitoring the robotic scenario and logs for the status of software robots.

The risks of implementing software robots can be minimized by mandatory support for the transition from an automated robotic process back to the manual execution of operations. Thus, in the event of a failure of a robotic process or if an error occurs in this robotic process, it will continue to

work, but in manual mode and the only problem for the organization will be the duration of the transition from automated to manual operation of the process.

We can summarize the risks and the directions for minimizing them in the following table:

Table 1.

Risks to robotic process automation in small and medium-sized companies

Risk	**Minimization Directions**
Budget constraints	Focus on a small number of processes and choose business-friendly RPA solutions.
Cybersecurity Dangers of Companies from Software Robots	Constant monitoring of what all software robots access and what actions they perform; control over the assignment of access rights; Encryption and authentication.
Risk of loss of competence – the people who performed the process move or leave the company and there is no one to perform the process manually in case of a problem or failure with the automated process	Documentation of instructions for performing operations manually; a person who monitors the course of the process; exchange of knowledge and good practices between people in the organization.
Improper management of licenses for RPA	Monitoring of the robotic scenario and logs for the status of software robots.

Source: Own elaboration

From the identification and proactive addressing of risks and measures to minimize and avoid them, factors for the success of the implementation of RPA solutions in small enterprises can be deduced. We believe that the success factors of the process robotization project that organizations should focus on are the following:

- Choose a small (or one) process to automate
- Choosing a business-friendly/business-friendly RPA solution to be used by citizen developers.
- Constant monitoring of what all software robots' access and what actions they perform

Following these factors should lead to the successful implementation of process automation in small businesses.

CONCLUSION

This study aims to present an understanding of RPA projects for SMEs to derive factors for the success of such projects. Optimizing and automating business processes in organizations and optimizing routine activities do not depend on the scale of the enterprise. The goals of the enterprises – high quality of the products and services offered, perfect customer service, and cost reduction are not related to the size of the enterprise, nor to the industry in which it operates. There are risks facing RPA solutions that must be addressed and addressed or minimized before their implementation begins. Also, not every business process is suitable for automation. The choice of appropriate automation processes, combined with actions to minimize the implementation risks, is key to the result of robotization.

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