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Strategies for Improving Productivity through Digital Upgrades: Case Study on RPA Technology

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Abstract. *In a time of continuous transformation and driven innovation, where the modern technologies meet the business environment, the technological and cultural shift is highly required. Companies should know how to manage changes of profound impact and how to face modern challenges in order for them to evolve. The Covid pandemic forced companies to compress years of digital transformation into months and adapt very quickly. New technologies have arrived and by adopting them, businesses can improve their processes, reduce their costs, minimizing the errors and attaining increased efficiencies. These are the main drivers in the Automation Economy, where successful automation programs represent a crucial aspect for the high productivity of the modern businesses. Robotic Process Automation can reduce the costs of business processes up to 80% as robots are performing low-level, manual, repetitive tasks. Now, there is no longer necessary to hire numerous employees as one robot can replace from three to eight employees. By 2030, the global RPA market is expected to exceed 13 billion dollars.*
The paper offers an overview of three areas: productivity, digital transformation and disruptive technologies, through a conceptual framework. In addition, the paper discusses three technologies that are part of the productivity increase context, together with their impact: Internet of Things, Artificial Intelligence and Robotic Process Automation. These paramount concepts are further detailed during the paper, generating an accurate, new perspective regarding the topic. The paper is descriptive, explaining the conferred terminologies and the given ideas by using references to related literature and provides a case study from the automation industry.

Keywords: Robotic Process Automation, productivity increase, digital transformation, Internet of Things, Artificial Intelligence, Machine Learning, saved working hours.

Introduction

The first part of the paper has as expected outcomes the following: the main benefits of technological disruptions in "Industry 4.0" and their impact on organizations, the description of the path towards achieving substantial value through these digital upgrades and how organizations flourish their digital potential, which becomes a priority. Further on, the research conducted in the second part of the paper has the aim of analyzing the Robotic Process Automation field and detailing why it is better to use RPA instead of employees, illustrating valuable RPA solutions of a prestigious company in this sector.

The objectives of the paper are the following: the significant savings of worked hours, the reduction of labour costs, the improvements of capital efficiency, together with return on investment and the rise of agility of the company. All these objectives will be highlighted through the case study which contains three processes, each of them illustrated by two cases. The processes belong to a chosen RPA company, from which it results the productivity increase through the explicit benefit of cost per hour saved, by the help of robots. The author will provide detailed information in accordance with the activities of the respective company, together with the "AS-IS/TO-BE" diagrams for the automated processes and further steps.

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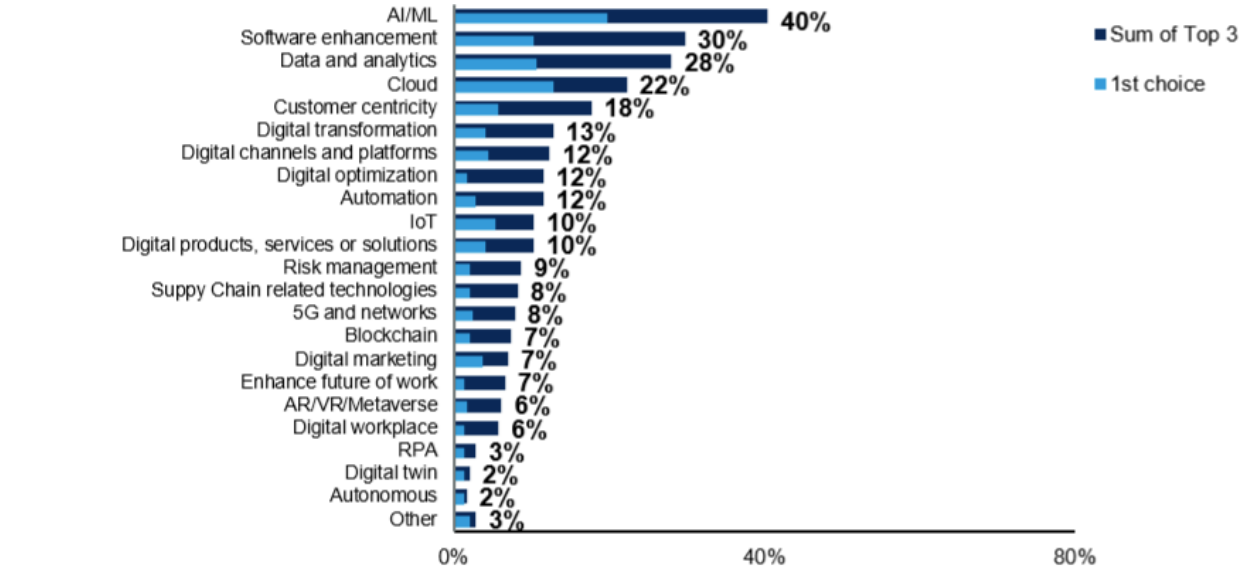
Literature review

Productivity in the digital era

Currently, we are going through the Fourth Industrial Revolution, also known as "Industry 4.0", which is focusing on the automation of processes and on modern technological advancements, evolving in an accelerated rhythm. We are living in the era of technological disruptions, thus we need to keep pace with the overlapping, fast growing digital environment and to acknowledge the need of embracing ideas from new waves of competitive digital upgrades. In the Fourth Industrial Revolution, a great progress is made on the G technologies, Internet of Things, robotics, Artificial Intelligence (AI), genetic engineering etc.

Innovation is a continuous cycle of development, discovery and implementation, that enables companies to *invest in the next generation of industry advancements*. The laggards which cannot cope with the continuous improvement process will be outdated and more rivals will take the lead on the next innovation curve. Thus, companies which are inflexible and innovation averse will become obsolete, being replaced by more efficient competitors, as the Covid-19 pandemic has clearly evidenced. (Borowiecki et al., 2021) The continuous expansion of the digital potential should be a priority, together with incorporating technological innovation into the business culture. The *main benefits of digital technologies on productivity* are: enhanced communication across departments, time-saving processes, real-time updates and improved decision-making. (Reis et al., 2018)

According to Gartner's 2022 survey, 89% of board directors consider that *digital transformation is incorporated into all business growth strategies*, but only 35% of board directors have achieved or are about to achieve digital transformation goals. Below, there can be noticed the directors' preferences in terms of technological advancements. (Gartner, 2022)



Graph 1. Board of Directors' Top 3 Breakthrough Technologies Imperative to Digital Business Success (Sum of Top 3 Choices)

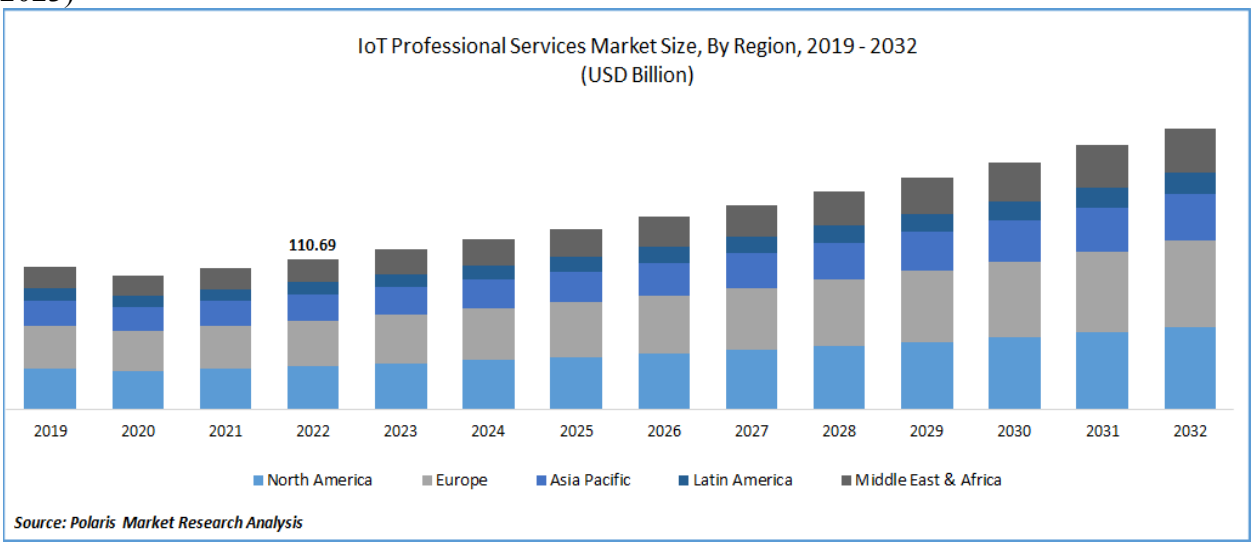
Source: Gartner, October 2022.

IoT - the new production factor in the Digital Economy

Ulyana A. Pozdnyakova determined in her research that IoT not only supplements, but replaces the majority of the traditional factors of production (labour, capital, information, technology). The labour market modernization implies a continuous process for employees' adaptation to conditions of digital economy, thus the accent should be put on mass training. (Pozdnyakova et al., 2019)

The IoT professional services market at global level valued USD 110.69 billion in 2022, being expected to increase at a CAGR of 6.5% in the period of forecast. The main benefits IoT offers are *cost reduction, predictive maintenance and enhanced data analytics*. Polaris Market Research's findings show that currently there are more than 13 billion connected IoT devices around the world, projection that is expected to reach 25.4 billion IoT devices by 2030.

In the following graph, it can be noticed that North America is leading the rank, followed by Europe, also being expected to behave in a similar manner until 2032. (Polaris Market Research, 2023)



Graph 2. IoT Professional Services Market Size, By Region, 2019-2032

Source: IoT Professional Services Market Size & Share Global Analysis Report, 2023-2032, Polaris Market Research Analysis, 2023.

Disruptive technologies

Artificial Intelligence - benefits and trends

Artificial Intelligence is a branch of computer science which uses machines and computers for complex problem-solving and smarter decision-making. In the world where digital technologies are integrating more and more in our lives, AI is one of the most important revolutionary instruments surrounding us. The great automation capabilities, error reduction, excellent predictive analysis and key insights for future trends are all helping businesses at increasing productivity and operational efficiencies.

-*Helping workforce by automating repetitive tasks:* already 30% of global IT sector employees are using automation and AI tools or software to obtain accurate information more quickly, saving valuable time they can, in turn, invest in more complex and innovative tasks;

-*Sustainability:* 66% of organizations already execute or have in plan to apply AI in sustainability purposes, for example to improve the renewable energy efficiency by predicting the energy production required in the next days. In addition, AI can also help at managing the generated

waste more efficiently. A study published in "Nature Communications" shows that 79% of the Sustainable Development Goals (SDGs) can be achieved through this technology that supports the circular economy and smart city building. (Vinuesa et al., 2020)

Of course, AI comes with some *challenges* as well:

-Barriers that hinder the AI adoption by companies: limited AI expertise, skills or knowledge (34%), too high price (29%), inexistence of platforms or tools that develop models (25%), too difficult to scale projects and data complexity (24%);

-Trustworthiness: the majority of businesses have not taken measures to ensure that AI is responsible - for example bias reduction (74%), performance variation tracking, model drift (68%) and last but not least, the fact that the decisions powered by this technology can be explained (61%). (IBM Global AI Adoption Index, 2022)

In the following picture it can be seen how AI is used across the global companies surveyed. It results that 33% of businesses are using AI for *automating the IT processes*, 29% are using it for *security and threat detection* purposes and 28% are using it for *BPA (Business Process Automation)*.

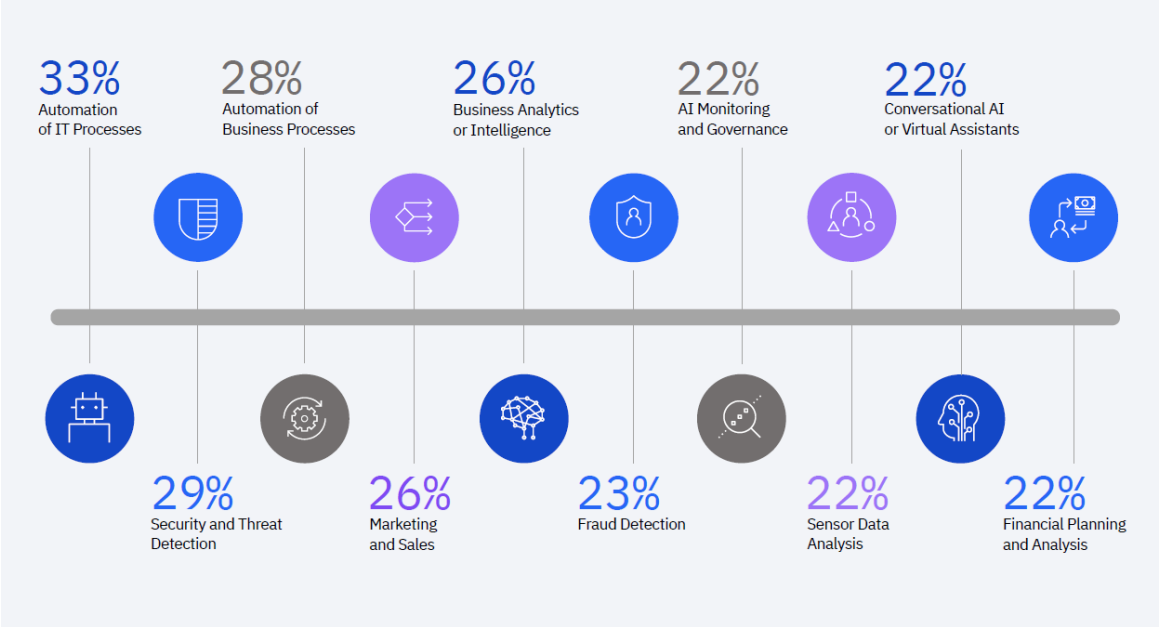


Figure 1. How organizations are using AI today

Source: IBM Global AI Adoption Index 2022, 2022.

Robotic Process Automation

Robotic Process Automation is a technology that configures a software to automate rule-based, repetitive tasks and processes, miming the human behaviour.

The RPA software records the human behaviour that is being mimed into a software script, which can have different executable runtimes. These runtimes are known as "bots". The scripts for bots are built using programming or even low-code or no-code GUIs (graphical user interfaces). The code is stored into cloud and can be permanently delivered to any location. The robots never take breaks and never make mistakes if there are no flaws incurred in their input logic. ("What is Robotic Process Automation - RPA Software | UiPath," 2023)

There are two main types of automations, *attended* and *unattended*, also known as *supervised* or *unsupervised*.

-*Attended automations* involve a human in the loop who is assisting the bot in its tasks (that can either be providing an input, reviewing data for accuracy and validation or receiving an output) with faster, more accurate work and productivity increase as end results;

-*Unattended automations* refer to self-working bots. The process requires no human interaction: bots can move data to or from application systems. The scripts replicate the actions of the human who interacts with documents or systems that most of the time do not have available APIs. Usually, there is a system that triggers the unattended automations, the bots being executed on a server. ("Attended vs Unattended RPA | Software Robot | Automation Anywhere," 2022)

The "Automation Now &Next 2022" report reflects the state of automation at global level, focusing on *how businesses succeed in the Automation Economy.* The survey respondents were considering "now" the last 12 months before May 2022 and "next" the period starting from June 2022. We are living in times in which there is no longer necessary to hire numerous employees, placing them strategically and asking them to work for hours. Now, *one robot can replace from three to eight employees,* highly increasing the productivity of a worker. As stated in the report, *minimum 300 RPA bots are expected to be deployed next year by 42% of companies*. In the following image it can be noticed that top performers achieve 8.5 times higher ROI from automation projects (than 6.3 from last year) and over 70% performance benefits (as compared to less than 50% in the last 12 months). (Automation Now &Next 2022, 2022)

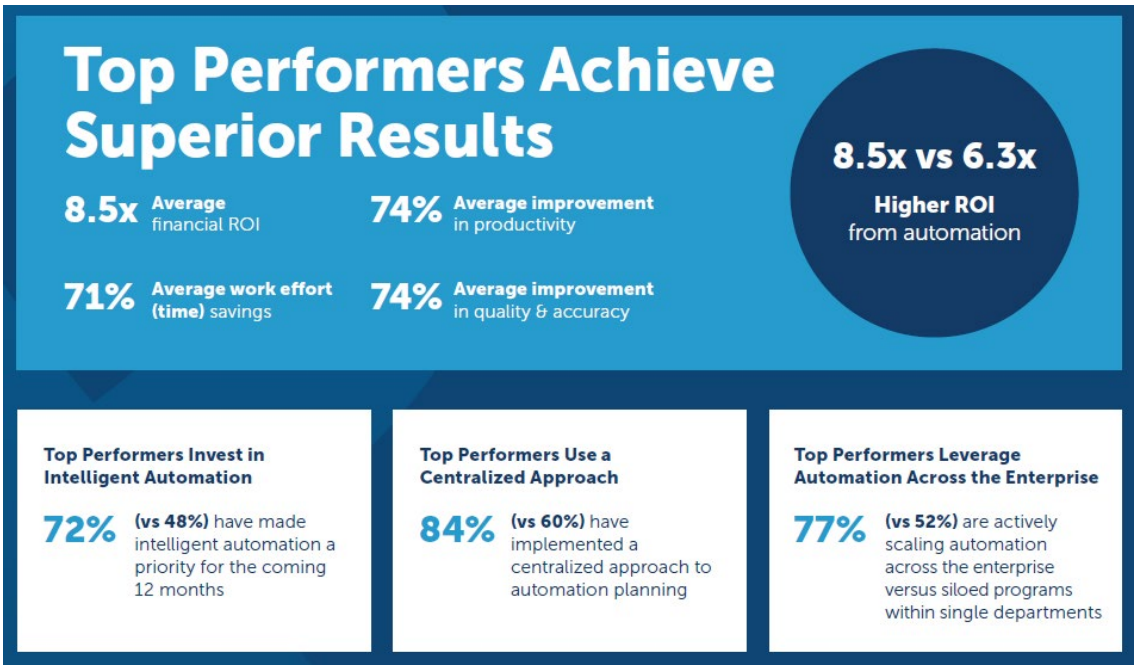


Figure 2. Results achieved by automation leaders

Source: Automation Now & Next 2022 Report, 2022.

The goal of many business processes is *end-to-end automation,* where bots that work on their own can execute a whole task independently. In the *Magic Quadrant,* executed by Gartner, there are evaluated the RPA software providers and not the service providers that use RPA capabilities, but have license from other vendors. It is clear that the leaders are UiPath, Security

Software & Consulting (SS&C)'s Blue Prism, Automation Anywhere, Microsoft and NICE (Neptune Intelligence Computer Engineering). (2022 Gartner Magic Quadrant for Robotic Process Automation, 2022)

Figure 3. Magic Quadrant for Robotic Process Automation

Source: Gartner, 2022.

Methodology

The main purpose of the paper is to assess the impact of the digital upgrades (especially of the RPA technology) on productivity, providing strategies for improvement, supported by the results.

The research is *descriptive*, containing references to related literature used to define the conveyed concepts and the reached conclusions. For the research analysis, there have been collected both *quantitative and qualitative data.*

Primary data refers to data in real-time, gathered by the researcher for the first time. This type of data is original and collected with the scope of obtaining the solution of the problem. The primary data of the actual research is characterized by the collected and analysed information from a distinguished RPA company.

Secondary data refers to analyzing and interpreting the primary data. This type of data is already produced or collected by someone else, being related to the past and gathered with other aims.

The *research instruments* of the paper refer to both quantitative analysis and qualitative analysis.

Quantitative data has been collected based on the information published on the official website of the RPA company. Valuable information was noticed about the evolution of regained labour hours and reduced processing time before and after the implementation of RPA.
With regard to the *qualitative analysis instruments*, there were used public reports to allow the research outcomes, more exactly, explanatory notes from annual reports, journals, white papers, press articles and other sources of public information.

In addition, other sources from which valuable information resulted were the *unstructured mini-interviews*, containing open-ended questions linked with the research objectives. The mini-interviews have been conducted with key management personnel of the company. The type of interviews conducted were in-person, one-to-one. As many details as possible have been tried being collected regarding the approaches used for automation and the processes improved. These details resulted as a discussion with key persons from inside the company, helping at primary data gathering. The discussions were based on certain notions, highlighting the research objectives. The list of questions is displayed in appendix.

Results and discussions

Company A wishes to automate three processes, each of them illustrated by two cases, which are further presented and explained, constructed with the author's own contribution. Each process is described through the use of the "AS-IS" and "TO-BE" phases, showing the state before the RPA implementation, respectively the state after the RPA implementation. Each process benefits from the same licences (both for attended robot and for one time only development). In this sense, the *yearly costs for the licences will be divided to the three processes that are about to be automatized, according to the volume of usage.* Thus, the attended bot licence will be used on Monday for the **onboarding process (P3)**, on Tuesday, Wednesday and Thursday for the **invoice processing (P1)** and on Friday for the **vendor reconciliation process (P2).**

Case 1 highlights that Company A buys a *one-time only development licence.* For this, Company A requests the help of an RPA professional, thus contacting "Company B". More specific, the one-time only development licence is acquired and the RPA professional from Company B offers external help, thus developing the bot for Company A. In addition, an **attended robot licence** is necessary. Case 1 deals with the in-house services of Company A, outsourcing only the RPA professional's work from Company B.

Case 2 establishes that Company A requests the help of an RPA professional from Company B and does not need to buy the **one-time only development licence** because Company B owns it, being considered a service. Company A only pays the working environment, thus the RPA professional and buys the **attended robot licence** on which the robot will be moved after development. Case 2 deals with the outsourcing of Company B's services for development.

In addition to these two cases, a third one may be considered. Case 3 would refer to the situation in which Company A buys all the necessary licences and even has its own RPA professional. For this, Company A should develop an in-house CoE, thus creating internal enablement and preparing its own development team. This situation has not been exploited, being an additional intention, an unexplored plan.

Case 1 – P1, P2, P3

The necessary licences and other elements for the RPA implementation of Company A in the first case are further mentioned, with prices for a year:

Table 1. Elements for RPA implementation – Case 1

	Case 1	
	Licence for attended robot	1,400 €
	Licence for one time only development	3,000 €
	Technical support subscription	2,760 €
65 € /hour	**RPA professional**	10,400 €

Source: Author's own contribution.

Company A needs only **one attended bot licence**, which has a yearly cost of **1400€**. The 1400€ are divided into 840€ for the first process, 280€ for the second process and another 280€ for the third process. If each of the employees worked with different robots, there could have been more than one licence, but the goal is to be as efficient as possible, thus one robot, more respective, one licence is more suitable. Only one computer per department (thus per process) is used for the same licence. For example, every day, one employee supervises the bot in the morning, while the other in the afternoon, benefiting from the same licence.

The annual costs for the **one time only development licence**, in value of **3000€** per year will also be divided to the three processes that will be automated, according to the volume of usage, more specific, a higher usage volume is required for the first process, which is more complex. So, for the first process there are allocated 1800€, while for the second and third processes 600€.

In addition, for the full deployment, there is also needed a **subscription for technical support**, in value of 230 € per month, thus **2760 €** per year (1656€ for the first process and 552€ for the second and the third). All the users will benefit from the same subscription, which is placed on the licensed computers, being ensured by Company B, to which the RPA professional pertains.

*The technical support subscription may have a higher cost in certain cases, for example: the logic of the process or the business rules might change between several steps of the processes, but also application errors or exceptions may occur. The amount may vary also in special situations such as server crashing.

The RPA professional creates the bot in 20 working days, thus in 160 hours, being paid with 65 €/hour, resulting a total investment in the RPA professional of **10,400 €** (4,160 € for the first process and 3,120 € for the other two). It is supposed that only one person works for all the phases of implementation, more specific the RPA professional.

Table 2. Total days for bot development – Case 1

	P1	P2	P3
Total days for bot development	8	6	6
Analysis	2	1.5	1.5
Development	4	3	3
Testing & deployment	2	1.5	1.5

Source: Author's own contribution.

For all the three processes the **RPA professional develops the bot in 20 working days**, all the phases being included, as follows: **8** days for the first process, **6** days for the second process and **6** days for the third process. In hours, this means that for the first process there are allocated 64 hours, for the second process 48 hours and for the third process again 48 hours.

In terms of **full development phases (analysis**, **development**, followed by **testing and deployment)**, for the first process there were allocated 2 days for analysis, 4 days for development and 2 days for testing and deployment. For the second process there were allocated 1.5 days for analysis, 3 days for development and 1.5 days for testing and deployment. For the third process there were allocated 1.5 days for analysis, 3 days for development and 1.5 days for testing and deployment.

These calculations are available for the first year of RPA implementation. Starting from the second year, analysis and development from scratch will not be necessary. The base is already established, thus there will only exist adaptations if changes in processes appear.

Next, the processes pertaining to the corresponding cases are described, one by one.

- **Process 1 Case 1 (P1 C1)** refers to **invoice processing automation.**

The situation before implementing the RPA technology is described through the **AS-IS process.**

AS-IS Process 1 Case 1

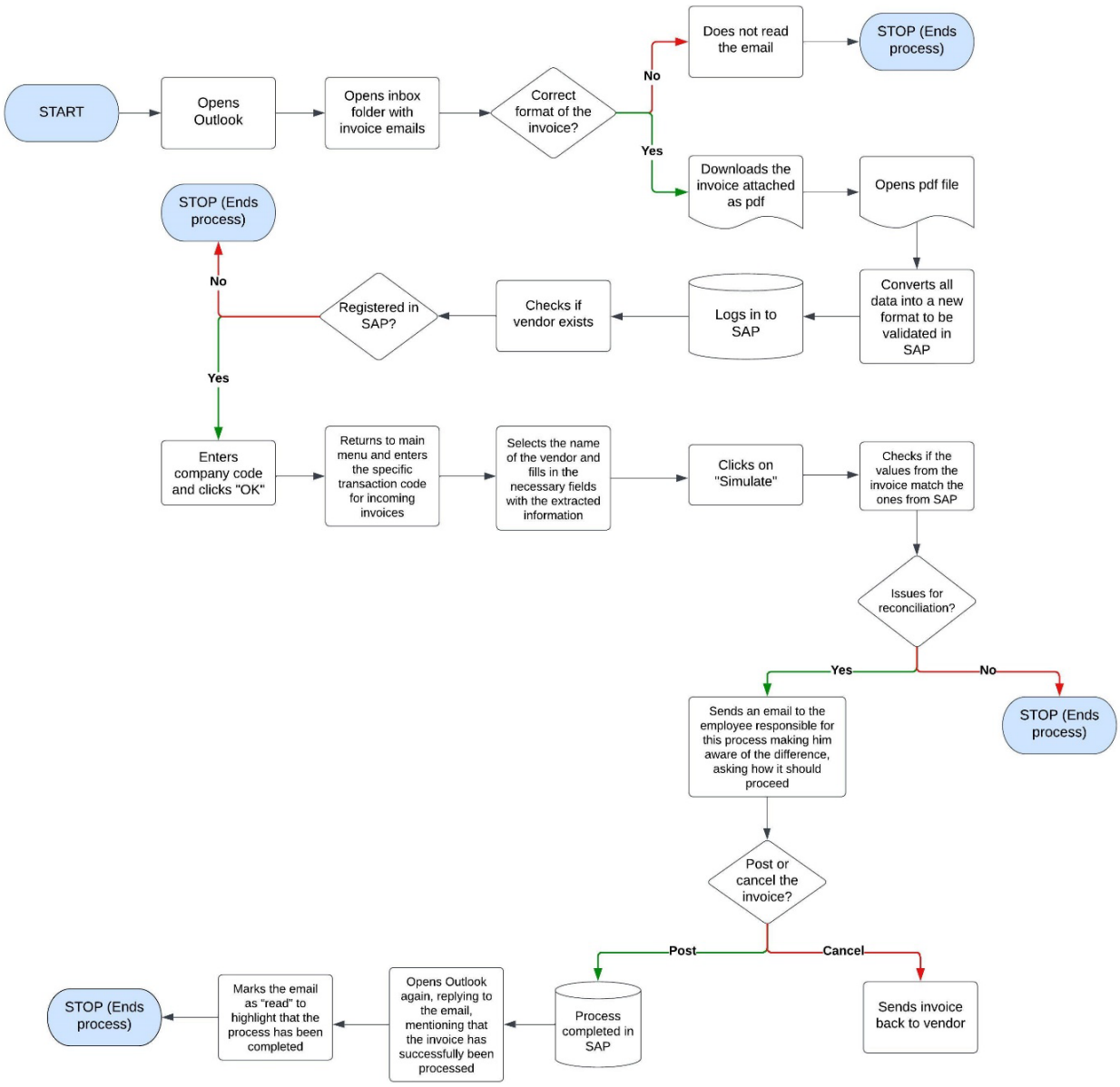
Invoice processing is performed inside the procure-to-pay process from the accounts payable department. The incoming invoices from suppliers are managed through different steps, from the initial receipt, posting it into the ERP system of the organization, to the actual supplier payment. In Company A, the invoice processing is done by **8 employees**, each of them working 8 hours/day, from Monday to Friday and having a monthly gross salary of around **1,925 €.**

TO-BE Process 1 Case 1

The invoice processing automation implementation lasts for **8 working days**, the percentage of the automation being 100%, offering 98% accuracy (the missing 2% may come either from the incorrect format of the invoice received on email, from the fact that the vendor is not registered in SAP or from the fact that the values from the invoice mismatch the ones from SAP).

Below, the flowchart corresponding to the "TO-BE Process 1 Case 1" is represented.

Diagram 1. TO-BE Process 1 Case 1



Source: Author's own contribution.

This process was performed from Monday to Friday by 8 employees. **After the RPA implementation**, there are **only 2 employees left**, responsible for supervising the bot, each of them working on this process only for **1 hour** per day, instead of 8 hours, as before. In the hours left, each employee has other responsibilities.

Below, there is illustrated the before & after situation for the **hours worked by one employee** for this process, together with the **monthly and yearly hours worked, but also the employees' salaries**:

Table 3. Before & After situation for one employee (for P1 only)

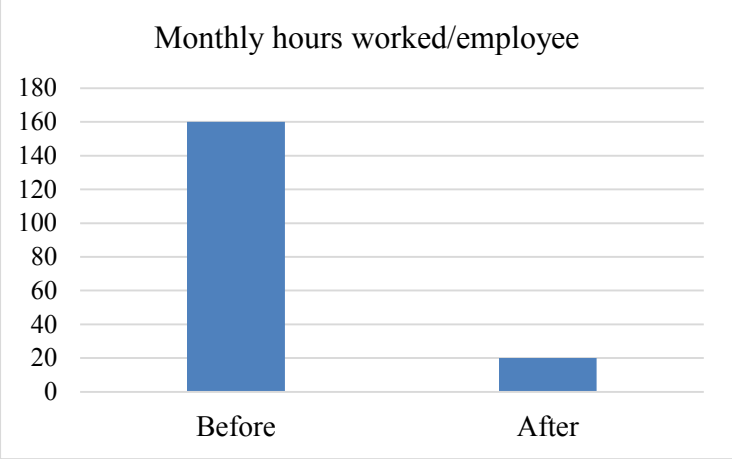
Before &After RPA situation for 1 employee (for P1 only)	Before	After
Daily hours worked/employee	8	1
Monthly hours worked/employee	**160**	**20**
Yearly hours worked/employee	2080	260
Monthly gross salary/employee	**1,925 €**	**241 €**
Yearly gross salary/employee	23,100 €	2,888 €

Source: Author's own contribution.

Before the RPA implementation, the monthly gross salary of an employee was 1,925€, respectively 23,100€ yearly, the hourly salary being 1925€ / 160 hours = 12.03€. After the RPA implementation, one employee earns 241€ monthly for this process (12.03€ x 20 hours = 240.62€). It is interesting to notice that the remaining monthly amount of around 1700€ from this process can be used by Company A for a new process, if invented.

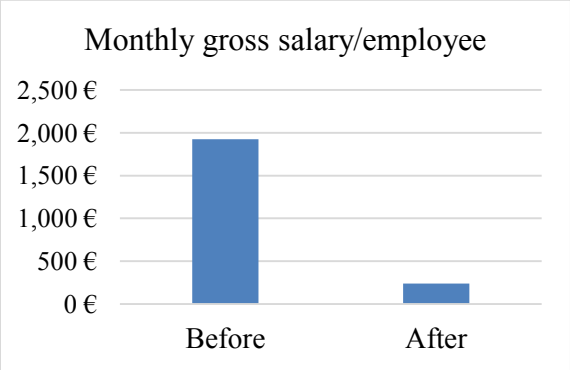
Graph 3 shows a **decrease of eight times in monthly hours worked per employee** after implementing RPA on this process than before implementing RPA, while graph 4 enhances the amount Company A invests in the **monthly gross salary per employee** before and after RPA, the situation afterwards highlighting the **efficiency RPA** brings to the company.

Graph 3. Monthly hours worked/employee – P1



Source: Author's own contribution.

Graph 4. Monthly gross salary/employee – P1



Source: Author's own contribution.

The following table reflects the summary in terms of **RPA efficiency** for the first process, reflecting the annual savings Company A obtains from employees' salaries after implementing RPA:

Table 4. RPA efficiency summary for P1C1

P1	Before	After
Number of employees	8	2
Yearly gross salary/employee	23,100 €	2,888 €
Yearly gross salary/all employees	184,800 €	5,775 €

Source: Author's own contribution.

The conclusion of the above table is that Company A has to invest only 5,775€ yearly in the two remaining employees responsible for this process, as compared to 184,800€ from before RPA implementation, when 8 employees were required.

In the following table there can be emphasized that the costs of the two licences and the subscription reflect the usage of 3 days per week of the licence. This means that the costs for the two licences are divided by 5 and multiplied by 3. As compared to the 8 daily hours worked before by an employee, now it is necessary for the bot to run in total only for 3 days per week, **on Tuesday, Wednesday and Thursday**, so the robot runs fully for 24 hours per week.

Table 5. Yearly RPA development costs (for P1 only)

Yearly RPA development costs (for P1 only)	Costs/ Expenses	Quantity/ Hours worked/ No.of employees	Total costs
Licence for attended robot	840 €	1	840 €
Licence for one time only development	1,800 €	1	1,800 €
Technical support subscription	1,656 €	1	1,656 €
RPA professional	65 €	64	4,160 €
Yearly gross salary	2,888 €	2	5,776 €
Yearly total costs			**14,232 €**

Source: Author's own contribution.

From the two tables from above it results that Company A's **yearly savings after RPA implementation** are in value of 170,568 € (subtracting 14,232€ from 184,800€).

Table 6. Yearly savings after RPA implementation and ROI – P1C1

Yearly savings after RPA implementation	**170,568 €**
ROI	**1098.48%**

Source: Author's own contribution.

In addition, the **ROI** - return on investment for this process equals **1098.48%** (from 170,568 €, the yearly savings after RPA implementation, there are subtracted the yearly total costs of 14,232€ and the result is divided by the yearly total costs of 14,232€).

In conclusion, Company A saves **170,568 €** yearly after automating invoice processing, the increase in productivity being shown through a huge return on investment of **1098.48%.**

- **For Process 2 Case 1 (P2 C1)** regarding the **vendor reconciliation process,** Company A's **yearly savings after RPA implementation** take the value of **160,598 €.** It should be pointed out that the ROI in value of **931.99%** leads to a very high increase in productivity.

Table 7. Yearly savings after RPA implementation and ROI – P2C1

Yearly savings after RPA implementation	**160,598 €**
ROI	**931.99%**

Source: Author's own contribution.

- **Process 3 Case 1 (P3 C1)** corresponds to **the employee onboarding process.** The **rise in efficiency** is enhanced by the value of the **yearly savings after RPA implementation**, in value of 89,408 €, but also from the **high ROI**, of 496.37%.

Table 8. Yearly savings after RPA implementation and ROI – P3C1

Yearly savings after RPA implementation	**89,408 €**
ROI	**496.37%**

Source: Author's own contribution.

Case 2 – P1, P2, P3

In the second case, the **one-time only development licence** is not necessary since the RPA professional builds the robot on Company B's licence, company to which he pertains. Only the **attended robot licence** and the **technical support subscription** (which comes with the professional) are required by Company A.

Table 9. Elements for RPA implementation – Case 2

Case 2		
	Licence for attended robot	1,400 €
	Technical support subscription	2,760 €
120€ /hour	**RPA professional**	19,200 €

Source: Author's own contribution.

Similar to Case 1, Company A requires **one attended bot licence**, with an annual cost of **1400 €**, which is divided into 840€ for the first process and 280€ for the other two processes.

The **technical support subscription** is also in value of **2,760 €** annually, as in Case 1. The **RPA professional** builds the bot in 20 working days, meaning in 160 hours and is paid with 120 € / hour, equalling a **19,200 €** investment (7,680 € from the first process and 5,760 € each from the second process, together with the third one). It is supposed that the RPA professional is the only person who works for all the implementation phases. As in Case 1, the bot is developed in 20 working days, the following phases being highlighted:

Table 10. Total days for bot development – Case 2

	P1	**P2**	**P3**
Total days for bot development	8	6	6
Analysis	2	1.5	1.5
Development	4	3	3
Testing & deployment	2	1.5	1.5

Source: Author's own contribution.

- **Process 1 Case 2 (P1 C2) - invoice processing automation**

Table 11. RPA efficiency summary, before & after situation for 1 employee, yearly RPA development costs, yearly savings after RPA implementation – P1C2

P1	**Before**	**After**
Number of employees	8	2
Yearly gross salary/employee	23,100 €	2,888 €
Yearly gross salary/all employees	184,800 €	5,775 €

Before &After RPA situation for 1 employee (for P1 only)	**Before**	**After**
Daily hours worked/employee	8	1
Monthly hours worked/employee	**160**	**20**
Yearly hours worked/employee	2080	260
Monthly gross salary/employee	**1,925 €**	**241 €**
Yearly gross salary/employee	23,100 €	2,888 €

Yearly RPA development costs (for P1 only)	Costs/ Expenses	Quantity/ Hours worked/ No.of employees	Total costs
Licence for attended robot	840 €	1	840 €
Technical support subscription	1,656 €	1	1,656 €
RPA professional	120 €	64	7,680 €
Yearly gross salary	2,888 €	2	5,775 €
Yearly total costs			**15,951 €**

Yearly savings after RPA implementation	**168,849 €**
ROI	**958.55%**

Source: Author's own contribution.

It results from the tables that Company A saves yearly **168,849 € after implementing RPA for this process** (184,800 € minus 15,951 €). Furthermore, Company A's **increase in efficiency** is demonstrated through the high **ROI** in value of **958.55%.** This was calculated by subtracting the yearly total costs from the amount gained, so the yearly savings post RPA implementation and then dividing the result to the yearly costs.

- **Process 2 Case 2 (P2 C2) - the automation of the vendor reconciliation process**

From the substantial savings of working hours, improved productivity and increased there are resulting annual gains of **158,558 €** and a **ROI** of **800.80%** only from the second process.

- **Process 3 Case 2 (P3 C2) - employee onboarding process**

It is clear that efficiency is attained as well for this process, being noticed from the amount of **87,368 €** annual savings and the **412.96%** ROI, but also from the hours saved.

From all the depicted tables, graphs, calculations and data supplied, the overall conclusion that can be stated refers to the fact that after automating the processes depicted, Company A shows incredibly profitable results, with large decreases in monthly hours worked per employee, also emphasizing the increased efficiency and productivity RPA delivers to the company.

Conclusion

The paper initially reviewed the conceptual framework of the digital upgrades that increase productivity, focusing on the evolution of technologies, but also on the trends from this field, including terms such as Artificial Intelligence, Internet of Things. Next, it has been highlighted **why RPA wins the race over labour force and why companies prefer to implement RPA solutions, thus saving time and costs**. Furthermore, the **primary research objectives** have been evaluated (the substantial savings in hours worked, the increased return on investment, the labour costs reduction). Finally, it has been demonstrated that the research objectives correspond with the results from the data analysis. The analysed case study has confirmed the automation potential

coming from the leading solutions of the company with regards to the **significant improvements in businesses' productivity and efficiency**.

In conclusion, as **technology will always be the biggest disruptor** in multiple domains around the world, RPA plays a key role in easing and accelerating the business processes. Digital transformation represents a crucial factor for business strategies and it represents now a must that should be adopted by every enterprise, either large or small. For sure, technology alone will not bring significant benefits. It is recommended that technological investments would rather be mixed with great contributions to business processes and employees in order to ultimately **drive productivity**. With regards to the field of work, **many jobs will be eliminated and, in the same time, many will be created**. The jobs with low value are about to disappear since they have been generating problems in businesses, such as small salaries, decreased motivation, low retention. As for the costs, it is less expensive to requalify an existing employee than to hire a new one. These aspects will be exploited in the near future, for sure.

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Appendix

List of questions
It is following presented the list of questions addressed to the key management personnel of Company A, in form of unstructured mini-interviews, with the aim of gathering primary data and shaping the notion about the power of automation once with implementing the RPA technology.

1) What's your opinion about a company wishing to automate some processes requiring the help of an external RPA developer?

2) In your opinion, are there situations in which all the users can benefit from the same technical support subscription, being placed on a licensed computer?
3) How many days are usually allocated for robot development and which is the most important phase of development?
4) Is the RPA developer working exclusively on the development phase or are there cases when he also deals with analysis and testing?
5) How much does it take an RPA developer to create a bot and how much is he usually paid?
6) Which are the main components of Company A's architecture and which are the most used products or tools?
7) What's the most frequently encountered productivity outcome after implementing Company A's RPA solutions?
8) What further improvements in the RPA solutions of Company A do you consider there can be brought?

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