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Digital transformation with RPA: how automation can reduce your manual processes

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1. Introduction

Institutions, such as the European Union and its member states, seek to drive digital transformation to **increase business productivity, strengthen economic growth and improve the quality of life of all citizens.**

Focusing on the business sphere, **RPA can be applied in various areas of a business,** such as human resource management, data management, accounting and inventory management or customer service, among others.

This technology stands out for its attractiveness to SMEs. **RPA automates repetitive processes in a company**, processes that before its implementation required complete human intervention. Therefore**, this freeing up of tasks allows the workforce to concentrate on less routine and higher value-added functions.** RPA can automate, for example, processes such as data collection and processing, reporting and invoicing.

In short, it is about **introducing 4.0 technology in a simple way, achieving great cost savings, improved productivity, greater process efficiency and the elimination of human error.**

An X-ray of the level of digitalisation of companies in our country, made by the National Observatory of Technology and Society, shows that "31.8% of Spanish companies make use of cloud computing, 13.9% analyse big data and 11.8% have implemented artificial intelligence. In addition, 7.8% of companies use robots in their business processes and 30% make online sales".". **[REF-01]**

However, the progress of digital transformation is marked by the size of companies. According to the latest data published by the ONTSI, in 2022 the percentage of companies with AI technologies was 11.8%, 3.5 points higher than in 2021. In microenterprises (fewer than ten people employed), the percentage was 4.6% in 2022, up 1.1 points on the previous year.[REF-01]

Moreover, as far as robotisation is concerned, its use remains a minority and sectoral: "7.8% of companies (more than 250 people) and 1.4% of micro-enterprises use robots. They are more present in industrial sectors such as metallurgy or the chemical and oil extraction industry.". [REF-01]

It is clear that the initial investment possibilities of large companies are different from those of an SME, so digital disruption is more widespread in larger companies. However, the cost of investment in RPA has decreased over the years, and it is essential for SMEs to join the wave of using disruptive technologies to take advantage of all the opportunities they offer.

In other words, it is about democratising automation processes, so that SMEs can benefit from the economic growth they make possible.

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2.What is RPA

RPA stands for "**Robotic Process Automation**", this technology was born in the 1990s for a specific purpose, which was to carry out mass automatic tests on new computer development programmes. Later, in the 2000s, its main use was driven by the banking industry to automatically manage large amounts of data. In the 2010s, its use by all types of companies, especially large ones, began, and it is now being extended to SMEs. **[REF-02]**

The type of SME where its use is most developed are financial services companies, management companies, customer service companies, technology companies and logistics and transport companies, although many other SMEs can benefit from process automation.

RPA is a software-oriented technology that aims to reduce human intervention in the use of software applications, especially in repetitive tasks that vary very little at each iteration. **Software created with RPA can perform, with the same applications and the same user interface, the same actions that people perform on a daily basis.**

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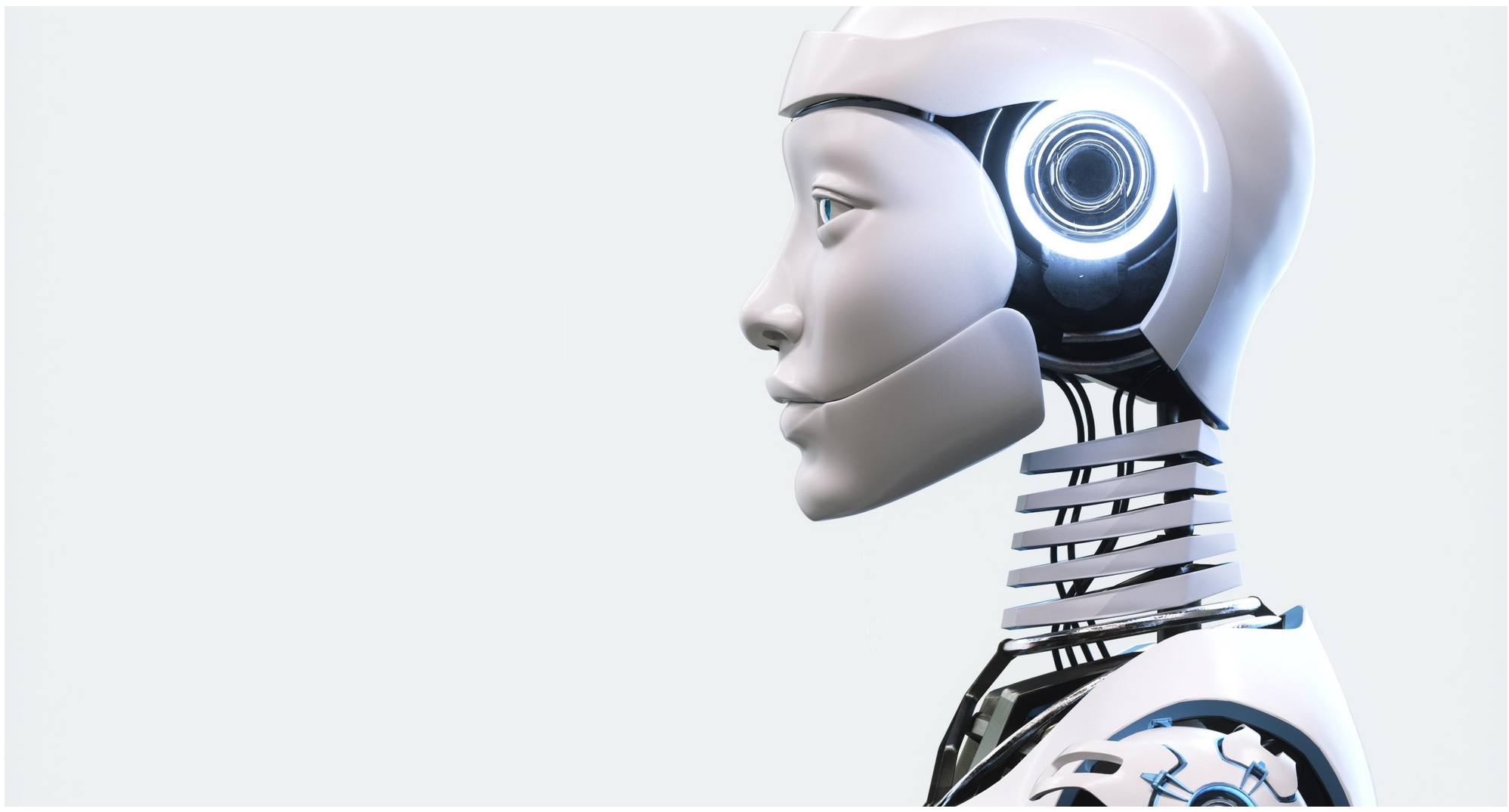
We have to differentiate between automation and hyper-automation:

- **Normal automation** can only perform tasks that have very clear predefined rules, so it presents a higher limit to the type of tasks that can be automated. They have to be **mechanical or repetitive tasks**, i.e. **based on simple decisions** (e.g. yes/no based), **with clearly established rules**.

- **Hyper-automation** is an evolution of RPA, where RPA is combined with Artificial Intelligence, Machine Learning and Big Data. In this way, **robots can make non-predetermined decisions, adapting to new information they receive and processing it**. According to Gartner's 2022 Top Technology Trends Report, **hyper-automation is one of the leading and growing trends among pioneering companies.** Gartner surveys show that by 2021, "more than 80 percent of organisations consistently report increased or continued investment in hyper-automation initiatives." [REF-03]



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3.RPA cases for SMEs

First of all, it details the type of automated tasks that RPA can do for any organisation or company:

What kind of tasks can RPA perform?

- Web access / other business applications
- Statistical data collection for reporting purposes
- Copy and paste actions
- Opening e-mail and attachments
- Filling in forms
- Making calculations
- Extracting data from different types of documents
- Reading and writing to databases

Secondly, we will see how these automatic tasks can in turn be translated into more complete "use cases" to be implemented by SMEs: **[REF-04].**

- Customer service

(Specially for SMEs in customer service)

- The use of writing and, sending e-mails is widespread
- Typical costumer responses can be categorised and answered immediatly or costumers can be referred to the necessary customer service department in each case

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- Monitoring functions
  - Allows monitoring statistics on the company, which facilitates decisión-making
  - It enables the management of inventories with relevant information for the company

- Reporting
  - Reports of various kinds, not just tracking reports, can be produced and redirected where appropriate (inside or outside the company).

- Invoicing and Accounting

(Particularly for SMEs in management or finance, although they are functions that work for all)

-Allows to automate the processing of invoices. -It also simplifies the sending of bank details.

-You can automate the accounting books and make an analysis of this data.

- Streamline sales

(Of great help to all smal business)

- You can carry out collection and payments processes, for example with suppliers
- It also allows the management of sales orders, their invoicing and updating in the corrresponding databases..

- Price comparison
  - Thanks to RPA it is eady to compare prices for competitors as well as prices of different suppliers in order to analyse quality/Price, providing data for final decisions

- Salary management
  - Payroll management of emplyees can be automated, saving on administrative or human resources procedures.

- Optimisation of data store

4.Advantages of using RPA

RPA has the following **advantages**:

- **Productivity:** robots work 24 x7, 365 days a year, improving delivery times and freeing workers to focus on higher value-added tasks.

- **Cost reduction:** derived from increased productivity and reduction of risks and errors.

- **Better service:** minimises potential errors and duplication of a service or process and, in turn, speeds up process completion time, resulting in an increase in service quality.

- **Greater management capacity**: it provides greater data security and better risk management control.

- **Agility**: faster implementation of processes and adaptation to change.

- **Scalability and flexibility:** new robots and new automations can be easily incorporated. For example, in a first phase it is possible to automate only a part of a process, and in a second phase to automate it completely.

- **Non-invasive technology**: it is a low-risk technology that is easily compatible with more complex developments..

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- **Insourcing:** allows you to regain control of processes previously outsourced tc suppliers, thus achieving greater autonomy for the company and added cost savings.

- **Auditing:** 100% of robotised actions can be recorded and audited.

- **Control and analytics:** linked to the previous point, it allows a great reporting capacity, improving the monitoring and analysis of the processes.

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5.RPA implementation methology

It is advisable for the implementation of RPA in an SME **to have experts** in the field. **The time it takes to automate a process using RPA can vary widely** depending on several factors such as the complexity of the process to be automated, the number of steps involved, the number of systems or applications used and the data structure available. It can vary from days to weeks for simple processes to months for more complex ones.

The **main phases** for the implementation of RPA are as follows:

1. **Identify the processes that can be automated**: a detailed analysis of the company's business processes must be carried out and those that are repetitive (for example, those linked to accounting, invoice management, inventory, etc.) must be listed. In addition, to prioritise them, you can analyse which take more time and require the intervention of more resources.

2. **Assessing the feasibility of automation**: this mainly involves assessing whether the rules to be applied are clear and whether the data are sufficient and well structured. This analysis will be discussed in more depth later.

3. **Choosing the RPA tool:** within the catalogue of possible tools, it will be necessary to select, with the help of experts, the one that best adapts to the needs of the process and, depending on the company, has an adequate cost and is simpler to use. This monograph includes a section on the most popular tools for RPA.

4. **Designing the workflow**: this involves detailing the workflow of the automatic process, i.e. detailing the activities to be carried out automatically by the process.

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- Workflow example: if we wanted to automate the sending of e-mails, a simple high-level workflow could be 1) Registering a new customer on the website 2) Sending a welcome e-mail verifying their e-mail account 3) Sending promotions and special discounts on dates such as birthdays.

5. Design the implementation plan: there should be a concrete step-by-step plan, including the configuration of the RPA tool for the development of the automation and the final testing of the automated process for review. .

6. Process development: before the automation is finally implemented, the tools work in a test environment, from which the automated flow will have to be created and executed.

7. Testing: consists of verifying that the necessary tests are carried out to certify the complete process flow.

8. Execution of the pilot and scheduling of the process: Process launches are carried out in a controlled environment to test the operation of the process in a real environment. As soon as the tests are validated, the process is programmed for unattended launch..

9. Monitoring and continuous improvement: automated processes generate reports and data on their operation, and it is important to monitor this data to find areas for improvement and optimise the automation if necessary.

10. Manage change: transversal to these phases, "change management" must be taken into account, i.e. that the transformation is understood and accepted. To this end, employees must be involved so that they are aware of the automation process, redefine the tasks to be implemented by those most involved in the part that has been automated and communicate the advantages obtained with the change, as well as provide the tools and training necessary for adaptation.

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Assessing the feasibility of processes to be automated

This is a phase in which, although experts are needed, the role played by the company's own managers is key. In order to understand more about how to analyse the possibility of automating tasks, below are a series of key aspects to consider when analysing a company process with the potential to be automated

ROBOTISATION EFFORT	Standardisation	Consider the number of steps and screens needed to execute the process, as well as the functionalities required in the process to be robotised.
	Stability	Consider whether there are any planned changes to the process, existence of process documentation and whether it shares dependencies with other processes.
	Accesibility	Measure the difficulty of accessing enterprise applications and integrating the robot with that technological environment.
	Inputs	Count the number, type and variability of incoming documents to the robot.
	Testing	Availability of "datasets" with all casuistries
EFFICIENCY	Volumetry	Sizing the volume of the process in terms of the number of times it is executed monthly, execution times,...
	Time reduction	Measure the time savings of the activities that would be reduced if the process were robotised, excluding the part of the process dedicated to cognitive activities that require a part of human intervention.
BUSINESS IMPACT	Impact	Analyse the criticality of the process for the organisation's operations and the possibility of risks during the implementation process.

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6. RPA tools

There is a wide variety of software tools that can be used to apply RPA, although it is advisable to use them with the help of experts. For its application by SMEs, the following stand out [REF-05] :

UiPath is one of the best known and leading RPA software on the market. It offers price plans that adapt to companies of different sizes and budgets. It also has a free version that allows you to try the tool before deciding to purchase it. It offers a complete automation platform that includes everything from the study of robots to their implementation. que incluye desde el estudio de robots hasta su implementación.

Automation Anywhere is another market-leading tool with affordable prices for SMEs. Like the previous one, it enables complete automation of business processes, with a variety of functionalities.

Blue Prism is characterised by its ease of use, which is very visual, which can be an advantage for SMEs. It also allows a free trial period to evaluate its use.

WorkFusion is an RPA solution that is more focused on more complex automation processes, with more advanced uses of AI, so it may be suitable for certain processes. It has flexibility in its pricing plans for smaller companies.

Kofax is a more complex tool than the previous ones, because it is an intelligent automation platform that combines RPA, machine learning and data analysis. It allows both process automation and more elaborate data analysis, as well as the possibility of integrating with other business systems. It has customisable subscription plans, which is an advantage for SMEs to make use of it.

Pega is a solution designed to achieve fast automation but with scalability possibilities. It stands out for its customer service and classes to use the tool.

Linx is a Low Code tool that allows greater ease in the automation process and integration with other systems.

There are many options and with increasingly affordable prices. It is therefore necessary to evaluate which one best adapts to the needs of the company and the investment budget set.

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7. Conclusions

Digital transformation is a constant in the world we live in, and the advance of RPA is unstoppable.

RPA represents an **effective digitalisation opportunity** for SMEs. On the one hand, it is a technology that is relatively easy to implement and with an **increasingly accessible investment cost**, and its use has become more widespread. On the other hand, it offers **multiple advantages** such as increased productivity, reduced time in the execution of tasks, freeing up employees' workload so that they can devote their time to more value-added functions and cost savings.

Implementation requires a multi-phase plan, such as analysing the processes that can be automated, choosing the tool and designing the new workflow and implementing it, and it is advisable to have RPA experts on board. However, it is an affordable transformation for SMEs.

Companies that adapt to technological changes are the ones that gain the most in competitiveness, so it is key that SMEs are open to change and innovation and take advantage of their potential to grow.

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