AI
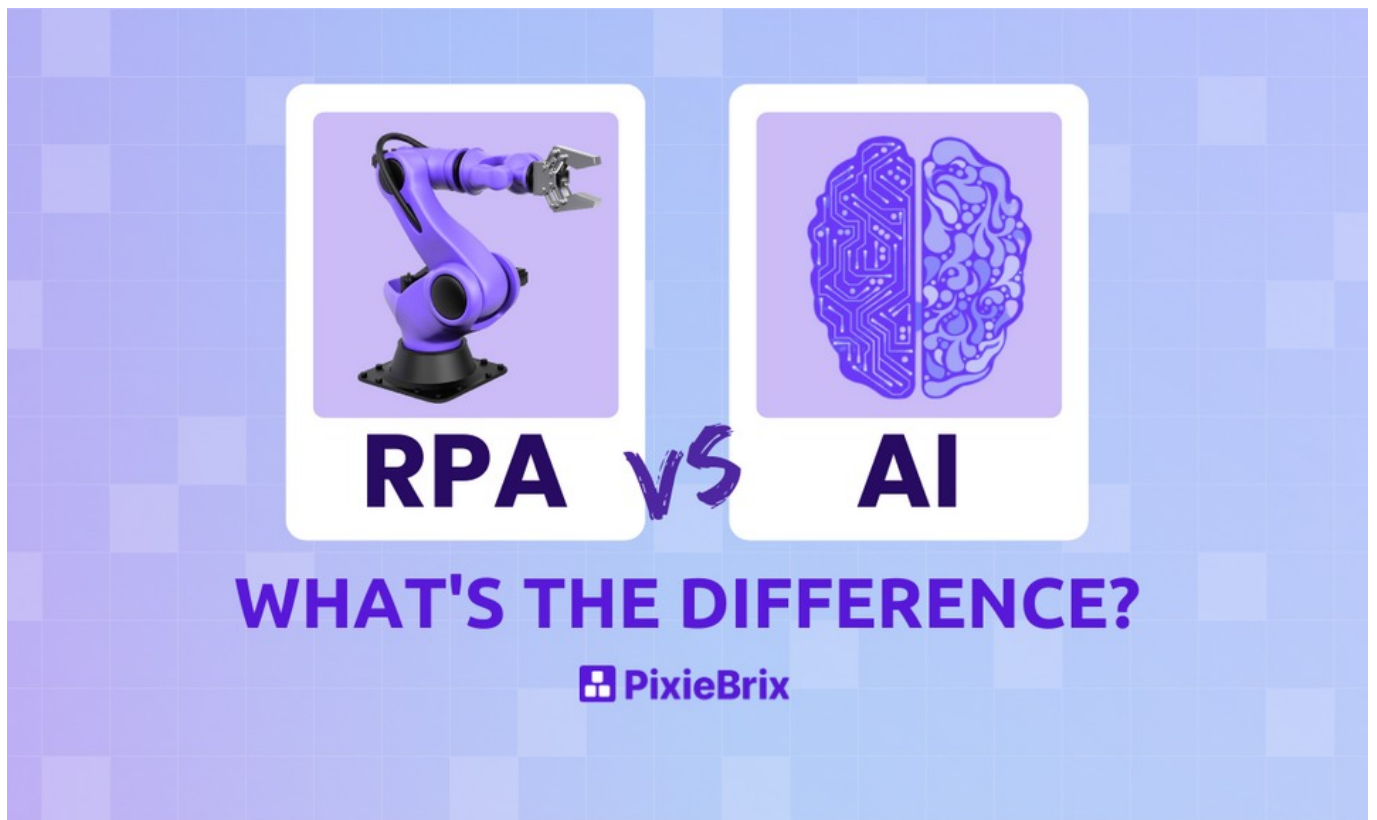
RPA vs AI: What's the Difference?

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While Robotic Process Automation (RPA) and Artificial Intelligence (AI) have been on the rise for some time, the popularity of these software technologies accelerated rapidly during the pandemic as companies pivoted to automating work due to a rise in remote workers, growing demand, or budget cuts.

In Deloitte's first insight report on robotic process automation in the workplace, they found that only 13 percent of organizations reported plans to increase automation by investing in RPA and AI. Just six years later, Deloitte's survey shows th_____ of survey respondents are already implementin_____ implement AI in the next three years. Low-c____

2020, Deloitte reported 24 percent of respondents had already implemented low-code. In 2021, the figure rose to 40 percent.

What does this mean for your organization? While some speculate that the rise of RPA and AI in the workplace could mean [losing jobs to robots](#), the core intent of these technologies is to automate tasks so people can focus on the higher-value (and distinctly human) tasks of creating and delivering better products and services.

Some of the benefits of RPA and AI include:

- Increased productivity and efficiency
- Customer satisfaction gains
- Improved employee morale
- Reduced operational cost

But what exactly is the difference between RPA and AI and when should you use them? We answer that for you here.

What is RPA?

Robotic Process Automation (RPA) is a software technology that uses "robots" to automate work processes. These bots are sent out to collect, gather, or manipulate data, as well as control or feed data into desktop applications. The purpose of this tool is to dramatically improve the efficiency of work processes and workflows.

Often considered the backbone of automation and AI-powered automation tools, RPA is ideal for rules-based processes that are clearly defined and well-documented.

Organizations use RPA to automate dull and time-consuming tasks — think repetitive actions like data entry, form-filling, or data scraping. By automating processes based on structured data, RPA takes the 'manual' out of labor in the digital workplace. For individuals, that means one advantage of implementing RPA tools is eliminating the infamous (and dreaded) task of hopping through multiple tabs at once — use RPA tools and say goodbye to your computer crashing because you have 18 million tabs open just to complete one task. For organizations, implementing RPA means eliminating tedious tasks that contribute to work burnout and human error, which in turn improves employee morale, increases customer satisfaction and reduces operational costs.

Sounds great, right? But what about AI and what's the difference between RPA and AI?

What is AI?

Artificial Intelligence has been a hot topic pretty much since the advent of science fiction reaching the mainstream. But self-driving cars and humanoid robots aside, AI is already very much a part of our [everyday life](#) and it's reshaping the way we work as well.

While RPA is an automation of rules-based processes that utilize UI to perform repetitive tasks, AI uses technologies like machine learning and natural language processing to enable the processing of unstructured data and automation of specific tasks that historically required human judgment. Things like generating meaning from images, text, or speech. Or detecting anomalies, making recommendations, predictions, and even decisions.

One of the biggest differences between RPA and AI is that AI grows smarter the more data you feed it. So, whereas RPA is a form of automation that works in tandem with people to automate repetitive tasks, AI analyzes your automation end-to-end and figures out process loops that will make it even more efficient.

More complex work processes in the supply chain, e-commerce, and customer service industries can benefit from using AI to analyze and automate their automation. But if AI is often the engine for automation, what really is the difference between AI and RPA?

What is the difference between RPA and AI?

As Chief Operating Officer of [Automation Anywhere](#) Mike Micucci explains, AI and RPA are two parts of the same spectrum. Both RPA and AI qualify as automation technology, which Micucci [describes](#) as:

> "A combination of low code helping you understand a process, looking at processes, and helping you organize them...like a map, and then using AI so it can get smarter all the time."

To put it simply, RPA excels at task execution while AI has the ability to analyze and learn from task execution and other work processes. Ask Micucci about AI and he'll tell you that:

> "AI is helping accelerate the world of automation."

In layman's terms, RPA can get you to where you want to go quicker and AI can suggest new ways to get you there even faster.

As Micucci explains: your organization might already have a set of tools, then you add even better automation tooling like RPA. All of the sudden, everything becomes more accessible, easier to build, and easier to understand what your company does day to day. Add AI into the equation and you enable continuous improvement.

By combining both software technologies, RPA and AI can be an organization's key to better customer services, improved employee morale, and lower operational costs.

How do RPA and AI complement each other?

The reason these two technologies complement each other so well is simple... one makes the other better. RPA helps you understand, organize, and automate your work processes so that AI can come in and accelerate them further. It may sound cheesy, but RPA and AI really are the perfect marriage of automated technologies.

For example, RPA captures data on a screen, writes the steps, then executes said steps to help locate trends that can help make larger investment decisions. AI comes in and analyzes these steps, and then automates the automation to create loops that make the entire process smarter.

By combining RPA and AI, organizations can automate workflows for faster, more efficient processes.

When and why should you use RPA and AI together?

With the rise of cloud computing, the emergence of AI, and the accessibility of massive scale, an "automation economy" — meaning a world where anybody can

implement automation — is emerging. Basically, what science fiction dreamed of is now a reality.

As more and more organizations adopt RPA and AI into their work processes, Mike Micucci explains that it's important to remember an automation economy is all about embracing the implementation of automation across many different sectors and processes so that we can focus on the higher value tasks.

RPA leader, Ema Roloff explains [change management is an important component of RPA programs](), "when looking at bringing automation into an organization, you need to be thoughtful in how you present the idea to your team. Start with addressing why you are taking on the initiative, answering questions, dispelling myths, and helping your team understand why automation is to THEIR advantage."

Senior IT leader and RPA expert, Doug Shannon stresses that [building a center of excellence (CoE)]() is key for companies working towards automation or digital democratization. A CoE can look like a team of people that provide guidance on process improvement. Or, you can build out a robotic CoE that plans out your automation journey. Leading RPA software, UiPath suggests that a [good rule of thumb]() to help you determine whether a process should be handled by RPA or AI is to first start automating processes that you can easily build a map of. Then, consider adding AI to workflows that are too complex for RPA alone. This approach will help you build a strong automation foundation that can later scale with AI.

Using PixieBrix for attended automation

To make your automation journey even more efficient, consider using a tool like [PixieBrix](), a low-code platform that allows you to customize the user experience (UX) of any web page by adding UI elements like buttons, context menus, information panels, and more.

Adding these UI elements means you can interact with RPA in the web browser from any web page. For example, the [PixieBrix UiPath integration]()offers four joint solutions that can [multiply the ROI of your UiPath deployment]():

1. Display queue item status in the PixieBrix Sidebar

2. Manage access to data via RPA

3. Update data in multiple applications from your web browser

4. Use highlighted text as an input to RPA

By allowing users to interact with RPA from any web page, PixieBrix offers an even more seamless attended automation experience.
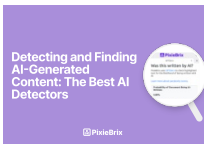
Visit the [PixieBrix marketplace](#) for more RPA and AI content including specific bricks for [UiPath](#) and [Automation Anywhere](#).
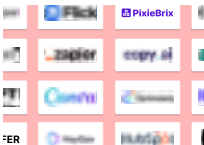
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