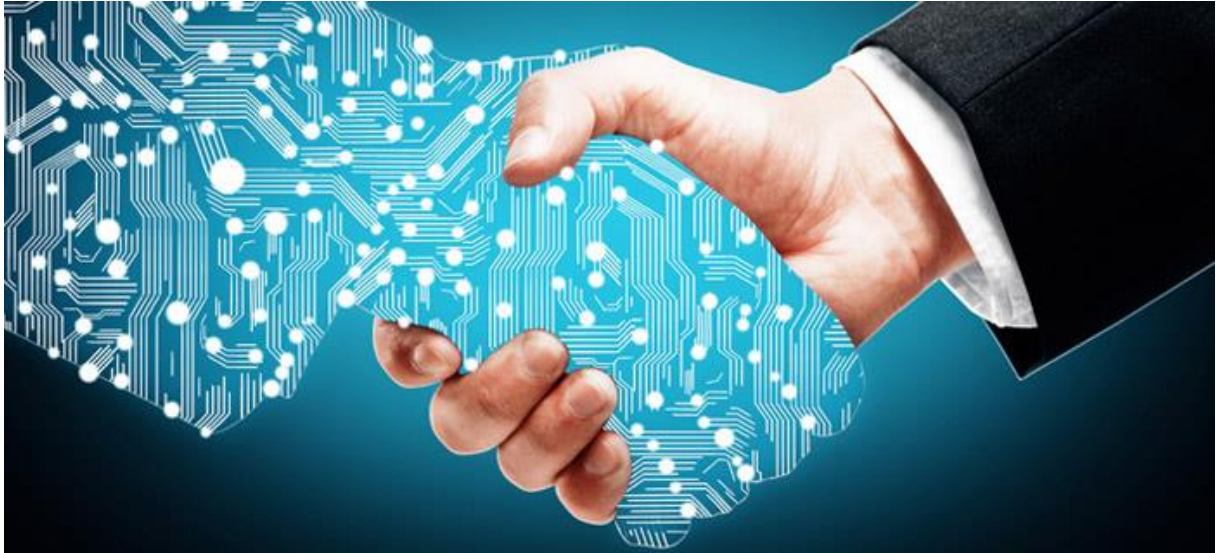# Robotic Process Automation

Introduction

More people are turning to an emerging technology practice called robotic process automation (RPA) to eliminate tedious tasks, freeing corporate workers to focus on higher value work. But RPA requires proper design, planning and governance if it's to bolster the business.

With RPA, businesses can automate mundane rules-based business processes, enabling business users to devote more time to serving customers or other higher-value work. Others see RPA as a stopgap route to intelligent automation (IA) via machine learning (ML) and artificial intelligence (AI) tools, which can be trained to make judgments about future outputs.

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What is robotic process automation?

RPA is an application of technology, governed by business logic and structured inputs, aimed at automating business processes. Using RPA tools, a company can configure software, or a "robot," to capture and interpret applications for processing a transaction, manipulating data, triggering responses and communicating with other digital systems.

 RPA scenarios range from something as simple as generating an automatic response to an email to deploying thousands of bots, each programmed to automate jobs.

How does it work?

As industrial robots transformed the factory floor, RPA bots transform back offices. RPA bots replicate employee actions like opening files, inputting data, copy pasting fields in an automated way. They interact with different systems via integrations and screen scraping, allowing RPA tools to perform actions like a white-collar employee.

If you have just imagined a robot sitting in front of a laptop getting your work done for you, then the image you have in your head is not quite right, but it will help you get an impression of how RPA works – rather than a physical robot, it is a "software robot" that executes your business processes.

Benefits of RPA

Robotics drives efficiency benefits, along with improvements in quality, scalability and resiliency in a cost-effective way

Higher Quality	Human errors eliminated Improved compliance Higher staff satisfaction	Capacity increase by robotics virtual workforce and refocus of staff on customer service
Productivity Boost	40% **Average Handling** Times reduced	24/7 **Monitoring** around the clock
Cost Saver	80% **Processing costs** Reduced by up to	**Payback** in up to 3 months
Implementation Speed	**Fast Implementation** of new processes	**Re-usable** process elements

In reality RPA software has huge potential to eliminate the most time-consuming and repetitive manual processes that make up an accountant's day-to-day work. Robotic Process Automation can improve efficiencies to deliver more accurate intelligence data and also provide real-time access to financial data with reporting and analytic capabilities.

Here are the top 5 benefits of implementing RPA software for your company:

1) **Reduced cost:** By automating tasks, cost savings of nearly 30% can be achieved. Software robots also cost less than a full-time employee.

2) **Better customer experience:** Deploying RPA frees up your high-value resources to be put back on the front line ensuring your customer success.
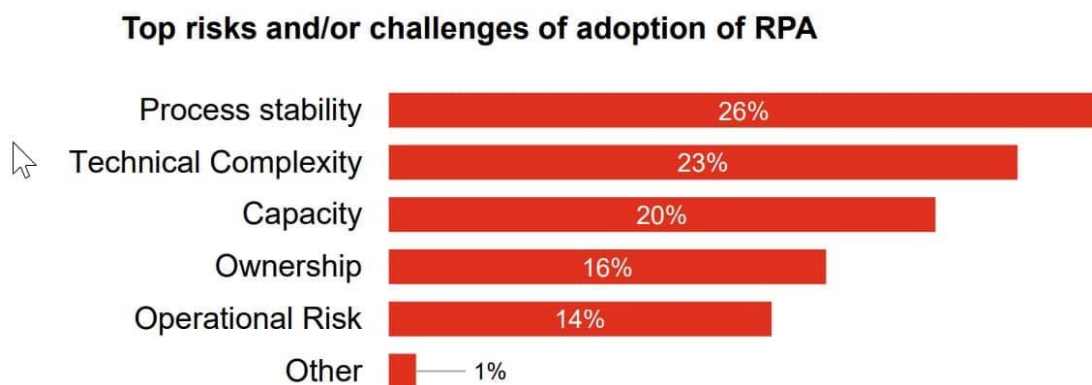
3) **Lower operational risk**: By eliminating human errors such as tiredness or lack of knowledge, RPA reduces the rate of errors thereby providing a

lower level of operational risk.

4) **Improved internal processes**: In order to leverage AI and RPA, companies are forced to define clear governance procedures. This, in turn, allows for faster internal reporting, on-boarding and other internal activities.

5) **It does not replace existing IT systems:** One of the biggest advantages of using a virtual workforce, or an RPA bot is that it does not require you to replace your existing systems. Instead, RPA can leverage your existing systems, the same way a human employee can.

Pitfalls of RPA

Top risks and/or challenges of adoption of RPA

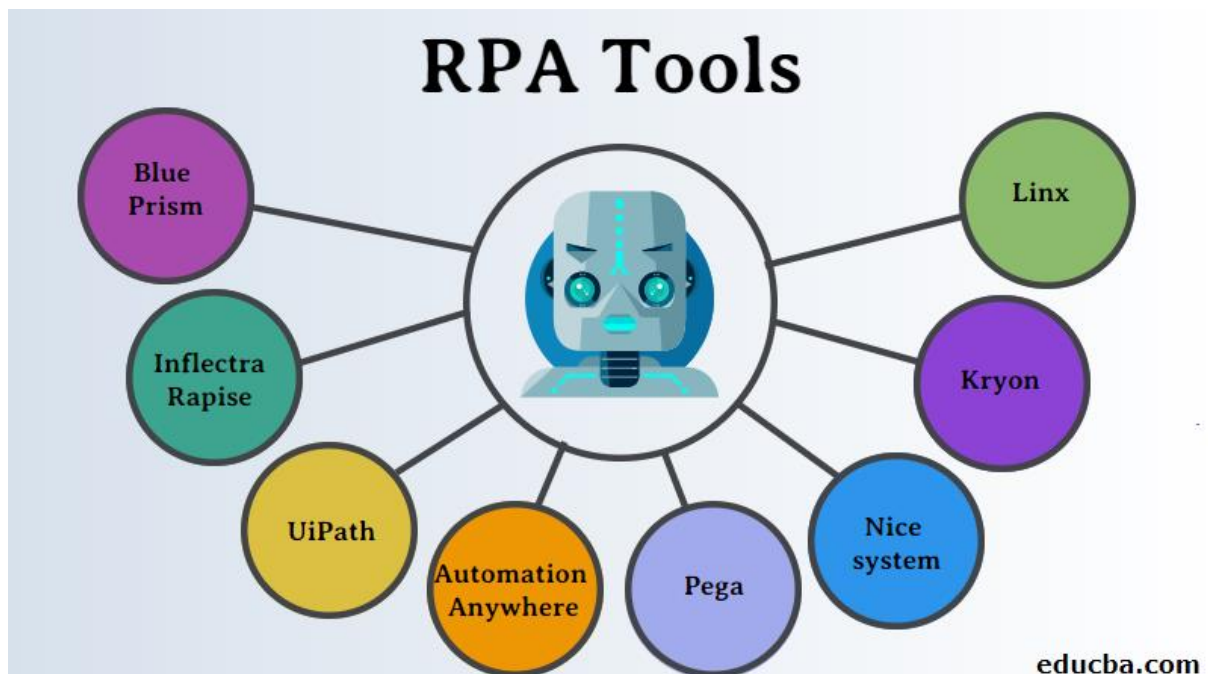| Category	Percentage
Process stability	26%
Technical Complexity	23%
Capacity	20%
Ownership	16%
Operational Risk	14%
Other	1%

 A recent survey showed that more than 40% of RPA projects fail to deliver expectations in terms of:

- **LACK OF A MATURE STRATEGY**: Understanding the need for and benefits of automation isn't enough to successfully implement a tool like robotic process automation. If you are considering adopting RPA, it's critical that a detailed strategy be developed well in advance of doing so. What tasks, processes and workflows will be turned over to technology and how will that roll-out work? Planning ahead can help avoid potential bumps in the road, making for a much smoother implementation.

- **LACK OF ADEQUATE GOVERNANCE:** One of the greatest things about robotic process automation is that it never deviates from its course, which is why RPA is credited with lowering and/or eliminating error rates. The problem is, when and if any part of a particular

process is changed, unless it's properly communicated, documented and applied, the RPA will inevitably fail. This is why a strong governance framework must be in place.

- **OVERLY OPTIMISTIC APPROACH:** While the newer robotic process automation products are certainly being designed to be as user-friendly as possible, it's important to remember that there will still be a learning curve and that software is innately inhuman. That means that unless it is properly programmed, it will not necessarily work without issue right out of the gate. Keep a more conservative perspective and you will be prepared to handle any glitches that may occur.

- **NOT DEFINING NEW ROLES:** As tasks and workflows are transitioned to automation, the roles of employees will inevitably change as well. Remember, RPA isn't meant to replace human workers, but make their jobs easier. Still, many of the duties that were once handled by people will no longer exist as part of the day to day activities. As this shift occurs, be prepared to adapt and transition employees into new roles within the company.

RPA tools

In any organization, there are a lot of tasks that are repetitive and time-consuming in nature. While doing these types of tasks, there is always a huge possibility for error occurrence because of repetition.

 In order to avoid these errors and save time, a lot of RPA Software is

available in the market.

The most popular RPA tools are:

UiPath: This is the tool we will be using in our project, it provides all core capabilities. It provides support for Citrix. It is user-friendly for non-developers too. It can handle complex processes. And this tool is perfect for any size of business.

Features:

- It provides security by managing credentials, providing encryption and access controls based on the role.

- It can automate faster. Eight to ten times faster automation through Citrix too.

- It provides an open platform.

- It can handle any process, in any number, irrespective of its complexity.

Pros:

- No programming skills required.

- Ease of use through drag and drop facility.

- It provides good features, free of cost.

Another Monday: offers a complete automation Ensemble that covers the automation journey from end to end.

Features:

- Provides automatic documentation of process logic with AM Muse.

- Drag & Drop workflow configuration: no developer knowledge needed.

- Text recognition with OCR.

Pros:

- Quick scaling: Unique ability to pull tasks from database, task transparency due to data collection..

- Increased efficiency through standardization of process parts. Change of elements centrally and with no need for access to systems.

Blue Prism RPA: provides all core capabilities. It can work on any platform with any application. For using this tool you should have programming skills but it is user-friendly for developers. This tool is perfect for medium and large organizations.

Features:

- It supports multi-environment deployment model.

- Security provided for network and software credentials.

- It can be used on any platform.

- Can work for any application.

Pros:

- High-speed execution.

- Platform independence.

Automation Anywhere: provides all core capabilities. It provides on-premise and cloud services. This user-friendly tool is perfect for medium and large organizations.

Features:

- Provides Bank-grade security.

- Provides security through authentication, encryption, and credentials.

- Real-time reports and analytics.

- Provides platform independence.

Pros:

- User-friendliness.

Pega: is a Business Process Management tool. It can be used on desktop servers. It provides only cloud-based solutions or services. It can work on Windows, Linux, and Mac. This tool is perfect for medium and large businesses.

Features:

- It will help you in the deployment of your solutions to the customers.

- It provides a cloud-based solution.

- It doesn't store any execution data in a database, rather everything gets stored in the memory.

- With this tool, you can distribute the work to desktop, server, and employees as well.

Pros:

- Because of the event-driven approach, it works faster.

- It is a robust and reliable tool.