

## **The Impact of Robotic Process Automation on Financial Services**

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### **ABSTRACT**

As technology continues to advance at a rapid pace, financial institutions all across the world are under intense pressure to improve efficiency, reduce costs and boost productivity. Indeed, there is now a considerable global need for the financial-services industry to evolve comprehensively from traditional, age-old business models. In response, automation has come to represent a hefty chunk of that evolution, with robotic process automation (RPA) in particular set to play a pivotal role in task execution within financial institutions during the next few years. Combining robotic automation and artificial intelligence, RPA is the process of automating across applications and systems to perform repetitive tasks that were once performed by humans. It is sometimes also known as “smart automation” or “intelligent automation” and thus refers to any software system that can be programmed to perform tasks that previously required the input of human intelligence to be successfully completed. “RPA is at the forefront of human-computer technology and provides players in the financial services industry with a virtual workforce that is rule[s] based and is set up to connect with your company’s systems in the same way as your existing users,” Accenture stated. “With robotics, automate and build an automation platform for your front office, back office and support functions.” And with several repetitive, often mundane tasks currently being completed by employees now set to be carried out by this automation platform, RPA clearly has profound implications for the financial-services industry in terms of transforming the nature of work within banks, delivering significant gains in customer experience as well as reducing costs and allocating scarce productive resources more efficiently. Some of the key benefits of handing over such tasks to robotics include cost savings; time savings, with RPA freeing up time for employees to work on more complex tasks; a reduction, or perhaps even elimination, of human error; and scalability, with robots capable of performing tasks at speeds unmatched by any human.

**Key Words:** Robotic Process Automation, Smart Automation, Artificial Intelligence, Intelligent Automation.

### **INTRODUCTION**

Robotic process automation (also known as RPA) refers to the use of software robots (or similar virtual assistants) which are programmed to complete repetitive and labor-intensive tasks. This makes them ideal for numerous applications in banking. “RPA-friendly” tasks include sending emails, opening applications, and copying and pasting information from one banking system to another. Implemented effectively, RPA can drastically reduce manual work, so that human employees can focus on more complex banking operations work, human interaction, and decision-making. In fact, robotic process automation in banking

can reduce the need for repetitive manual work tasks, data reconciliation, and transcription—up to 70 percent.

Today, RPA is poised to change the way banks conduct business—and to make this change faster than any other technology currently available. That’s because robotics in banking represents the “consumerization” of banking automation: Instead of being forced to rely on complex codes and IT department intervention, front-line banking employees can automate their own work, once trained properly.

**ROBOTICS PROCESS AUTOMATION IN BANKING**

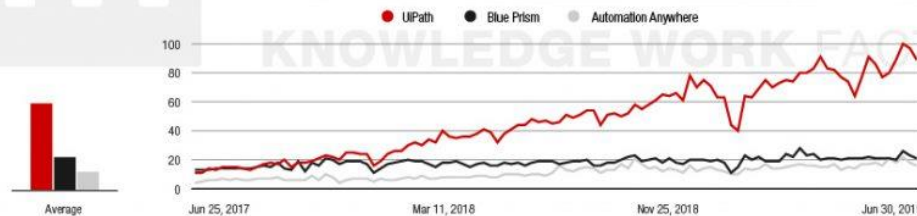
Robotics in banking is defined as the use of robotic process automation software like UiPath, Automation Anywhere, or Blue Prism, to install desktop and end user device level software robots, or an artificial intelligence workforce, or assistants, to help process banking work that is repetitive in nature. Once set up and implemented, banking robots take control of mouse and keyboard actions such as opening applications, clicking, copying and pasting information from one banking system to another, sending emails and other labor-intensive “low-value add” tasks. These robots work at the individual data field level and act similar to an Excel macro across banking software systems.

**"Robotic Process Automation is the fastest growing segment of enterprise software with 63% growth in 2018." - Gartner**

**Robotic Process Automation Market Share & Growth by Company - UiPath is the New Leader!**

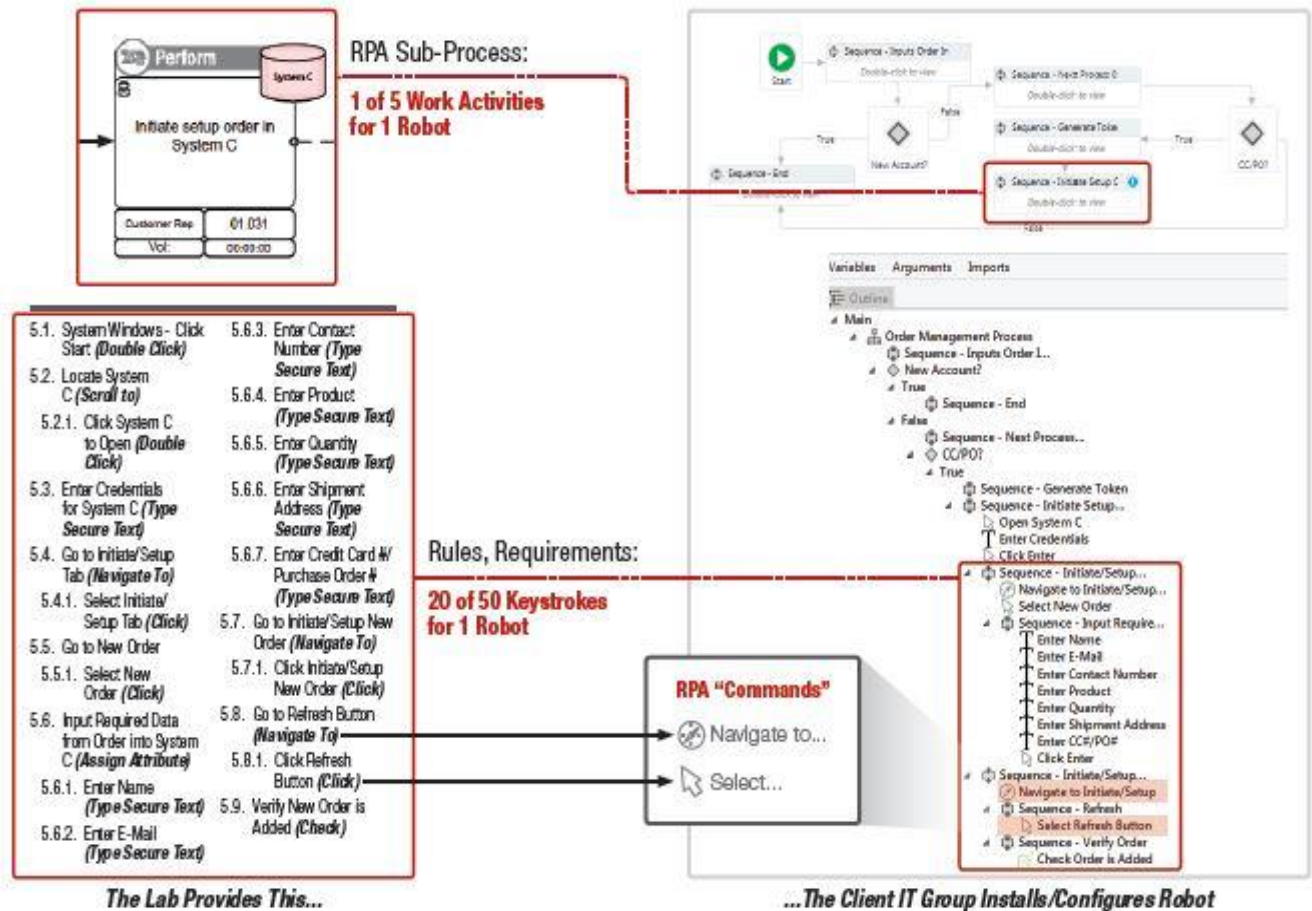
2017 Rank	2018 Rank	Company	2017 Revenue	2018 Revenue	2017-2018 Growth %
5	1	UiPath	\$16M	\$115M	629%
1	2	Automation Anywhere	\$74M	\$108M	47%
3	3	blueprism	\$35M	\$71M	105%
2	4	NICE	\$36M	\$62M	71%
4	5	Pega	\$29M	\$41M	42%
8	6	Kofax	\$10M	\$37M	257%
11	7	NTT	\$5M	\$29M	481%
6	8	edgeverve	\$16M	\$21M	30%
7	9	OpenConnect	\$15M	\$16M	5%
9	10	HelpSystems	\$10M	\$14M	34%

**Google Search Trends of UiPath vs. Blue Prism vs. Automation Anywhere**



Established banking institutions have historically relied on multiple legacy core systems. But the operational benefits of these systems were typically oversold at the time of acquisition; more often than not, the implementation under-delivered and fell short of automation promises. The result is a banking industry in which large amounts of manual work still must be performed daily within, outside of, and in between multiple core banking systems, all in an effort to reconcile and transcribe data to process transactions. Thus in an industry rife with large-scale white-collar work processing, the result tends to

snowball, as banks and their IT departments struggle to merge different legacy systems into a coherent workflow.



Robotics enables the banking industry to integrate “the last mile” across business units like never before. RPA in banking use cases apply to a wide range of processes, including retail branch processes, commercial lending, consumer lending, loan processing, underwriting, and anti-money-laundering.

There are numerous RPA banking use cases that show how surprisingly easy it is to implement robotics—provided do the required front-end process analysis and work standardization first.

**TOP 7 BENEFITS OF ROBOTIC PROCESS AUTOMATION IN BANKING**

Retail and commercial banks alike are facing increased pressure from management, shareholders, and external competition (such as fintech companies) to reduce costs, increase product quality, and accelerate the processing of back-office work. When paired with the right type of process analysis, robotics can help banking operations management tackle most large-scale and routine data-movement tasks. They can also implement it with unprecedented speed—on the order of weeks, not months or years.

The financial benefits of robotics in banking are matched by the improvement it yields in both back-office processes and the customer experience. In short, banks can save money on labor—while doing more with less—with RPA.

- **Banking RPA does not require new core IT infrastructure change or upgrades.** To the contrary, it’s a low-cost layer that sits on top and across all currently-installed banking applications.

- **There is no coding requirement.** Robotics in banking does not require coding experience.
- **Implementation is fast.** RPA for the banking industry is nimble; robots can be tested in short cycle iterations.
- **It's easy to change.** A banking robot can be installed or updated in less than a week when banking processes change.
- **Minimal IT intervention is required.** Front-line employees can be trained to maintain and “manage” their own banking robots.
- **RPA boosts morale.** Contrary to popular opinion, banking robotics can actually increase (and not decrease) the morale of human workers by reducing the burden of boring data-entry work.
- **Robots don't need breaks.** Banking robots can work 24/7—365 days per year. Banks don't have to pay robots overtime or health insurance, or worry about them quitting.

### **RPA USE CASE IN BANKING**

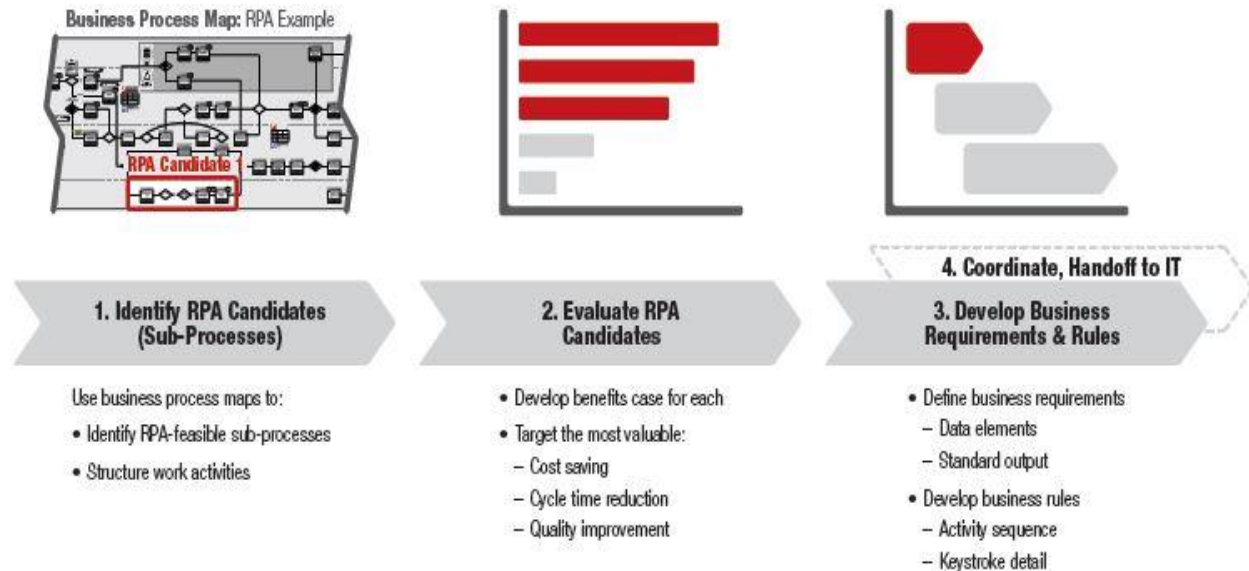
A banking robotic process automation use case is defined as the process of documenting a list of banking operations actions or steps that take place on front-line employee level computers, or other electronic devices, that is used to automate information movement across banking applications. Banking RPA use cases are used as process “blueprints” by IT consultants (or your own staff) to implement automated scripts that run across multiple data-processing IT systems simultaneously.

**Three-step process is detailed in the infographic below.**

**RPA in Banking Use Case Implementation Step 1:** Identify sub-processes on process maps where banking robots can be implemented.

**RPA in Banking Use Case Implementation Step 2:** Prioritize and evaluate all of the banking sub-processes, targeting those candidates which will yield the most benefits.

**RPA in Banking Use Case Implementation Step 3:** Develop and document the use-case requirements, rules, and keystrokes that the banking robot must perform.



### THREE EXAMPLES OF ROBOTIC PROCESS AUTOMATION USE CASES IN BANKING

RPA in banking yields the most benefits when led with deep front-line process analysis and a desk-level work standardization plan across the organization. RPA in banking yields the greatest value when preceded by deep front-line process analysis and a desk-level work-standardization plan across the organization; consider these three high-level examples of RPA in banking:

Three high level examples of RPA in banking are below:

- **Robotic Process Automation Use Case 1:** Consumer loan-processing time can be reduced from 30 minutes to just ten minutes by eliminating the copying-and-pasting of customer information from one banking system to the next.
- **Robotic Process Automation Use Case 2:** It is now possible to boost the accuracy of new-bank-account-opening requests, replete with reduced downstream errors, and improved system data quality. All of this can be achieved by eliminating data-transcription errors from inbound new-bank-account-opening-request emails into the core banking system.
- **Robotic Process Automation Use Case 3:** Banks can radically boost the speed of customer verification during the processing of auto loans by automatically validating customer data on government websites such as DMV, tax payment, or property-appraisal sites.

### A DETAILED USE CASE OF ROBOTICS IN BANKING OPERATIONS—RPA IN CONSUMER LOAN PROCESSING

In this robotics-in-banking use-case example, follow Cathy, a consumer loan processor getting ready to do her daily job: handling the application from a prospective borrower.

Normally, this takes Cathy at least 20 minutes, per customer, per loan application. That's because 80 percent of the work she does is manual: She needs to copy and paste information between email, multiple

loan-processing systems, credit bureaus, and several government websites. It's difficult, demanding, time-consuming, and tedious work; consider the pre-RPA banking use case process:

- When a customer requests a new consumer loan or line of credit, a call center representative, branch employee, or website captures the data into Loan Processing System 1.
- Once Cathy receives the information, she runs a manual credit check. She does this by transcribing data from the loan-processing system into an external website to pull the credit report.
- Cathy then saves the credit report as a PDF and attaches it to Loan Processing System 1.
- Cathy then copies and pastes the credit score into a field in Loan Processing System 1.
- Once the credit check is complete, Cathy transcribes the data from Loan Processing System 1 into two other core banking systems.
- Cathy then logs into a government website to the validate customer address and appraisal from supplied documents. She does this, not surprisingly, by copying all of the information from Loan Processing System 1 and pasting it into the website to validate the address of the customer requesting the credit.
- Once the information is confirmed, Cathy prints it as a PDF, attaches it to Loan Processing System 1. Again, all of this is done by hand. Cathy runs through these exact same steps about 20 times a day: that's her maximum capacity. Of course, 80 percent of her capacity is spent—or perhaps “wasted”—on manual copying-and-pasting. Now consider the exact same scenario, upgraded through the implementation of banking robotics. The banking RPA use case is transformed, almost magically, for a diligent worker like Cathy:
- Cathy receives the loan package in the system just as she did before.
- Cathy launches her UiPath robot. It then logs into Loan Processing System 1 and automatically pulls all the information needed to process the credit check.
- The robot opens the credit-reporting website. It runs the credit check by pulling the information out of Loan Processing System 1.
- The robot creates a PDF copy of the credit report, attaches it to Loan Processing System 1, and copies the credit score into the “Credit Score” field in the system.
- The robot then pulls the loan data received in Loan Processing System 1 and transcribes it into the other two core banking systems.
- The robot logs into the government website, enters the necessary data to run the address check, and validates the property appraisal and customer address.
- Finally, the RPA saves the address check and appraisal PDF to Loan Processing System 1.

What used to take Cathy 80 steps to complete now requires a single mouse-click. What used to eat a full 20 minutes of her day now takes just five. Importantly, Cathy is not only faster; she's now free to focus on delivering an exceptional banking customer experience—instead of just moving data around. It's little wonder that loan processors like Cathy consider robotics in banking to be such a boon to their productivity, and a morale booster, too.

## **ROBOTIC PROCESS AUTOMATION IN BANKING CASE STUDY**

## **BNY MELLON**

### **Clearing trades, boosting accuracy**

- \$371.8 billion in assets
- More than 30 professionals with RPA experience, per LinkedIn

BNY Mellon is among the more outspoken proponents of robotic process automation in the banking industry. The bank began adopting RPA in 2016; as of 2017, it reportedly had 250 bots in production.

BNY bots are being used, for example, to streamline the firm's trade-settlement procedures. Tasks include clearing trades, conducting order research, and resolving discrepancies. While human staff require five to ten minutes to reconcile a failed trade, the BNY bot can perform the same procedure in a quarter of a second.

Other RPA benefits noted by the bank include an 88-percent improvement in transaction-processing times and account-closure validations—across five different systems—with an impeccable accuracy rate of 100 percent.

The deployment of the RPA bots at BNY Mellon has allowed banking employees to devote more time to operational quality control and outliers; consider this quote from the bank's 2017 annual report:

“We have been improving our processes and applying automation tools, such as robotics for routine processing... these tools are increasing efficiency, reducing costs and improving speed and accuracy, which benefits us and our clients. And, our work progresses as we continue to invest in our technology platform and capabilities to advance and enhance our client service.”

## **CONCLUSION**

Time is money people value time more than anything so with the advent of robots in the financial sector it will ensure better quality of services at minimal time with minimum wastage of resources. It is likely that the use of RPA and AI will be on an uptrend and people will try to implement in many other aspects of the financial sector. I would like to give an example of Amazon Go store that is been opened in Seattle a city in Washington D.C the main attracting concept in this store is that while we enter the store we need to open the application. Later on whatever we buy there are cameras everywhere that scans the barcode and the amount to be paid is directly deducted from the amazon go account. When we are at the checkout counter we need to tap our mobile and the amount will be deducted from our account. There is no need for the customers to stand in the long queues for billing such kind of innovative technology if introduced in the finance domain then there would be smooth flow of transactions. According to current research it is shown that AI is unable to surpass the human behaviour and thinking. However, steady gradual improvements in AI could reach a point where AI exceeds current expectations. It is difficult to determine where this technology might create new jobs in the future, yet easier to see which tasks AI might take from humans. It's likely that any routine, repetitive task will be automated. It's likely that we will adapt to technological changes by inventing entirely new types of work, and by taking advantage of our uniquely human capabilities. So we can conclude our topic by saying that robots is a boon in this sector it all depends how we look upon it and how we react to the changing environment and upgrade ourselves.

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