Robotic Process Automation (RPA)

This article is an extract of our CH&Co. Fintank yearly publication on Innovation for Financial Services. The 2018 edition addresses ways for incumbents to collaborate with Fintechs, Insurtechs and Regtechs through technologies driving the industry's digital transformation.

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Robotic Process Automation (RPA)

With the proliferation of computer processing power, technology has reached a point where it is now capable of performing human-like tasks. Most people think of robots as physical humanoids acting as humans and interacting with humans, or big machines with steel arms making car parts (like in Toyota factories). Other robots, less known to the general public, are called "bots" which refer to non-physical robots, such as software like "Chatbots" that are designed to simulate an intelligent conversation with one or more users via auditory or textual methods.

RPA = MORE BOTS THAN ROBOTS

When we talk about robots in service industries, we are essentially talking about bots. There are various names being used for robotics in service industries such as Rapid Automation (RA), Autonomics, Robotic Process Automation (RPA), Intelligent Process Automation (IPA) and Artificial Intelligence (AI), but all these terms essentially refer to the same concept: allowing organizations to automate tasks as though a real person was performing those tasks across applications and systems. Functional trained robots are virtual workers and they execute rule-based information processes, improving accuracy and efficiency.

RPA in the Financial Services industry can extend the creative problem-solving capabilities and productivity of human beings and deliver superior business results.

Interest over time

● robotic process automation
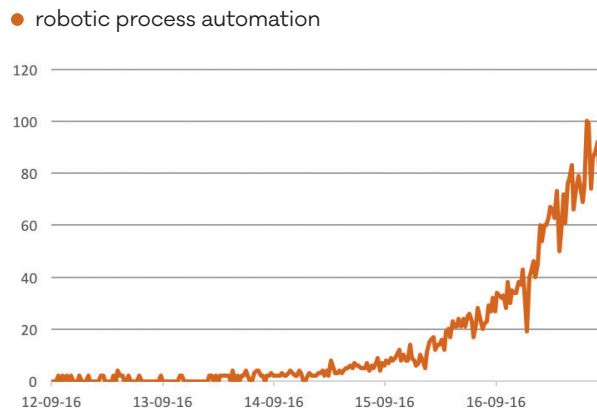
Worldwide. Past 5 years.

Source: Google Trends

What many leaders currently regard as "automation" is most likely driven by core IT investments (i.e., the implementation of specialized enterprise apps such as ERP, CRM or BPM); all of these can drive automation – but not at the level that RPA can.

So, RPA refers to the use of computer software to control and automate manual, rule-based, repetitive tasks or processes without the need for human supervision:

- Compared to traditional automation, RPA has low technology impacts with neither change in the existing infrastructure nor complex integration
- Robots are able to mimic the human actions at the software presentation layer, also known as the graphical user interface (GUI), and interacting with multiple applications, just as a person would and can follow instructions
- RPA robots can be fully audited, recording all the changes and accesses
- Robots can free up the employees for value-added cognitive processes in departments, can collect knowledge that can be built up and extended to other new robots

RPA IN THE FINANCIAL SERVICES

RPA in the Financial Services industry can extend the creative problem-solving capabilities and productivity of human beings and deliver superior business results. Thanks to RPA, employees have the potential to attain new levels of process efficiency, as they leave the repetitive, time consuming and low value-adding tasks to robots, thus reducing operational costs and increasing speed, accuracy and throughput volume for the organization.

In addition to obvious cost savings, the benefits from implementing RPA include:

- Reduced operational risk with higher quality and lower error rates
- Time savings due to automation of repetitive tasks
- Scalability by improving standardization of process workflow
- Reduced friction (straight-through processing)
- New processes/products launched
- New technologies explored but with non-intrusive integration by reducing reliance on multiple systems/screens to complete a process
- Improved customer experience

Also worth noting, the amount of initial investment needed to start benefiting from RPA is low, especially when compared to IT integration or outsourcing strategies. Investment in RPA usually has a short payback period since it costs approximately only $20k to build a robot (with the assumption that an average project would require a 4-man-week effort at a daily rate of $1,000, and this excludes any running costs such as licenses for maintenance, server costs and any virtual desktop costs).

In addition, RPA is quick to implement and in some instances, the development of a robot can be done in as little as just a few hours.

RPA IS NOT ONLY ABOUT CHOOSING TECHNOLOGY

RPA is more of a process and change project than a technology alone. Automating an inefficient or poorly controlled process only amplifies the issue.

	Description	Sample key performance indicators / metrics
A Process Quality	• Measure the elimination percentage of human error when performed by bots compared to the tasks performed by the FTEs • Reduction in operational risk arising due to human error	• % of reduction of errors • # of reductions in manual steps • % of process steps automated
B Performance	• Measure the amount of work performed and time consumed by the bots as compared to the FTEs • Enhancement of operational efficiency	• % amount of time (cumulative time by entire team) saved
C Availability / Reliability	• Measure the reliability of the bots in terms of complying to the agreed service levels and timely availability of the bots	• Number of exceptions handled with human intervention for the in-scope tasks

Effectiveness of RPA	=	**A** Process Quality	X	**B** Performance	X	**C** Availability

HOW IS RPA BEING USED BY FINANCIAL INSTITUTIONS?

In India, ICICI, the country's largest private lender, was the first in the country to deploy robotics. The bank has re-engineered 200 business processes with software robots that are configured to capture and interpret information from systems, recognize patterns and run business processes across multiple applications to execute activities including data entry and validation, automated formatting, multi-format message creation, text mining, workflow acceleration, reconciliations and currency exchange rate processing among others.

BNY Mellon has a dedicated RPA team using Blue Prism® to program bots with rules that let them perform research on orders, resolve discrepancies and clear trades. It takes a human 5 to 10 minutes to reconcile a failed trade. A bot can do it in a quarter of a second. In addition to faster speed, bots can work at night, saving employees from having to work night shifts. They can handle overflow when a stream of work outpaces the available staffing.

A European insurance group processes automobile insurance applications that are delivered as 4-page documents featuring 60 parameters. These forms had to be manually entered into the Back Office systems. Thanks to an RPA project, the average handling time was reduced by 40%.

SAMPLE USE-CASES FOR RPA IN BANKING

Finance & Accounting	Regulatory & Compliance	Financial Risk Management
Record to Report (GL): • Record journal entries • Perform GL account reconciliations • Record intercompany transactions • Maintain accounting master data **Travel & Expenses:** • Audit expense reports **Fixed Asset Accounting:** • Calculate asset depreciation	**Personal Account Dealing:** • Periodic disclosure of attestations with changes • Review of account openings with paper statements • Paper trade entry • Paper statement upload to accounts • Transfer disclosures **KYC:** • Collection of client information • Risk scoring / due diligence level information • Account set-up **Licensing and Registration:** • Data entry and validation for U4 Form and other jurisdiction forms • Transfer amendments	**Credit Limit Management:** • Perform margining calculations and identify causes behind margin deficits • Recommend remediation based on analysis **Data Quality:** • Execute timelines, accuracy, and comprehensive checks, and initiate remediation actions where required **Risk Reporting:** • Aggregate and segment data for standard reports (e.g. Top 50 Counterparties Report)

OVERVIEW OF THE RPA LANDSCAPE

Below we present a non-exhaustive list of companies providing RPA solutions:

Company	Description
AUTOMATION ANYWHERE	• The global leader in Enterprise Robotic Process Automation • The company has added more than 60 large enterprises to its family of over 425 worldwide enterprise customers, including large financial institutions (the company also deployed over 800 bots at Australia's largest bank) • Their new product, Bot Farm, allows companies to buy RPA tools on a usage basis rather than on a capacity or license basis
blueprism	• Gartner has recognized Blue Prism as one "Cool Vendor", acknowledging their vision and leadership in world of Robotic Process Automation (RPA) • The have been featured in a number of articles in major publications about the disruptive technology of RPA and its potential impact • They have been making steady inroads in markets that include: Financial Services, Energy, Telco, BPO and Healthcare
UiPath Robotic Process Automation	• Founded in 2005 by Daniel Dines, UiPath has developed a rich set of Robotic Process Automation software products • Their mission is to "eradicate tedious, redundant tasks" by using software robots to take on that work • They focus on providing a robust set of capabilities for developing an "agile robotic workforce" • Their products work within an industry standard enterprise architecture enabling them to be integrated within IT environments that comply with security requirements
IPSOFT	• Founded in 1998, IPsoft initially focused on the automation of the Data Center • With the development of Amelia, a robotic cognitive agent, IPsoft has expanded its reach into the automation of almost all of the typical enterprise processes • It strategic partnership with Accenture will extend its market presence beyond that of today's impressive customer list
assistedge edgeverve Infosys Finacle	• Infosys Technologies Ltd. has been ranked by Forbes 19th among the top 100 most innovative companies • So, it should not be surprising that in January of 2013 Infosys launched AssistEdge a call center automation tool that includes robotics • Since its launch it has been successfully deployed in 350+ contact centers across 40 countries • Finacle, Infosys' banking solution from EdgeVerve Systems (owned by Infosys), offers FS
genfour your back office. automated.	• Provides end-to-end services to clients by evaluating, implementing, maintaining and operating automatic processes • They help their clients analyzing existing processes, designing and mapping the automatization of processes, developing the automation within their Autonomic Platform, and implementing the solution
Celaton	• Calling their services inSTREAM, its technology uses sophisticated algorithms, including artificial intelligence and cognitive learning to streamline labor intensive clerical tasks and decision making • Celaton works also in partnership with Genfour
NICE	• As part of their solution, NICE allows organization automating back office services using Robotic Process Automation technology

FINAL WORD

Over the past few years, businesses in North America and Europe have been seeking to reduce their operating costs and increase their overall efficiency by standardizing, centralizing and sometimes outsourcing a wide range of processes. Over time, more complex and sensitive processes became candidates for "industrialization". RPA is the next step in the ability for companies to reduce costs while increasing accuracy and control. The use of robotics also brings along changes in the organization: the need to monitor robots ("Control Tower"), how to handle the Business Continuity Plan, and how to repurpose jobs and rewrite job descriptions to fit these new roles.

Overall, we can anticipate that the adoption of robotics in banking will be evolutionary. While its rapid adoption is almost inevitable, leading firms will use it as a way to not just reduce costs, but also to improve controls and the effectiveness of their staff, making them more productive and valuable within the organization.

Even though RPA adoption comes with some inherent challenges such as misplaced expectations and resistance from employee unions, it is emerging as a major game changer and will likely only gain in popularity as more and more successful use-cases are published.

Acknowledgements & Contacts

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