

BDO IN SOUTH AFRICA | FINANCIAL SERVICES

AN INTRODUCTION TO ROBOTIC PROCESS AUTOMATION

RPA

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WHAT IS ROBOTIC PROCESS AUTOMATION (RPA) ?

RPA is the application of programmable software that is customised to automate routine, low-complexity and repetitive tasks without the use of additional human input. RPA has a unique approach to automation as it is versatile in any organisations' environment.

RPA aims to increase efficiency by eliminating those manual tasks, thus allowing employees to focus on more customer-centric activities. This does not mean RPA will replace the role of humans, but it will open the doors for employees to upskill themselves and focus more on offering clients' better value through empathy, emotional intelligence, creativity and contextual insight (Willcocks, 2016).¹

There are ultimately three branches of RPA: Attended RPA, Unattended RPA and Cognitive RPA (known as Intelligent RPA/ Intelligent Automation).

Unattended RPA: These solutions, or 'bots', are able to work alone, without the need for human involvement in the processes that they perform because they are automatically triggered by specific events. The bots typically handle task-heavy back-office activities that are long-running. Such as batch operations, where new client information needs to be entered into an organisations system that requires client data. Unattended RPA aims to streamline documentation and data management at an enterprise level. (CiGen RPA, 2019)²

Attended RPA: Contrary to Unattended RPA, Attended RPA requires human involvement in the decision-making process, thereafter the bot does the rest. This is typically applied to front-office activities. The telecom sector and call centres, benefit most from Attended RPA solutions as it enables the integration of data across various fields of associated systems using a single entry by call centre agents. (CiGen RPA, 2019)³

Front-office activities that benefit from Attended RPA include⁴:

- Billing Data
- Creating Invoices
- Issuing Refunds
- Employee Data Management
- Data Migration
- Report Preparation

Intelligent RPA: "This typically refers to the use of RPA in concert with complementary technologies such as more cognitive branches of AI" (Casey, 2020). Machine Learning and Artificial Intelligence will be able to observe the processes an organisation aims to automate. Historical data will be mined and collected and based on a cognitive decision by the AI tools, a solution will be hypothesised. This solution can simulate the current automated process as well as give insight into the increased ability to improve productivity and make more insightful business decisions.

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¹Leslie P. Willcocks, co-author of *Service Automation, Robots and the Future of Work*, Steve Brookes Publishing, UK, 2016.

²CiGen RPA, 2019, <https://www.cigen.com.au/cigenblog/attended-vs-unattended-rpa-robots-what-you-need>

³CiGen RPA, 2019, <https://www.cigen.com.au/cigenblog/attended-vs-unattended-rpa-robots-what-you-need>

⁴ <https://marutitech.com/rpa-call-centers/>



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WHAT IS NOT ROBOTIC PROCESS AUTOMATION (RPA)?

It's important to note the common misconceptions of RPA:

RPA is not a humanoid robot; people tend to hear the word "bot" or "robotic" and immediately think about a physical robot. RPA is more to the automation of tasks using software and not a humanoid robot. The "bot" or "robot" refers to the software performing the task and not a human being.

RPA is not something that can entirely replace human. Although RPA can be used to automate high-volume, repetitive tasks with a low error rate, it cannot entirely replace human. What RPA does, it now allows the human to focus more on customer-centric tasks which require human emotions. RPA can only be used to automate known processes and does not have a brain of its own and cannot perform human-like emotions like showing empathy.

RPA is not artificial intelligence or machine learning. At its core, RPA is simply rule-based technology whereby you automate a known existing manual process using a set of rules and criteria. The bot doesn't learn or get smarter over time. It just knows how to do the repetitive task it was taught to do. However, Artificial Intelligence and RPA are intrinsically linked through their shared history. AI can be merged into RPA to allow the bot to perform non-routine human-like activities over time. This is called cognitive RPA or Intelligent Automation.

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THE USES OF RPA IN FINANCIAL SERVICES TECHNOLOGIES

45 percent of work activities could be automated using already demonstrated technology. – McKinsey & Company

Financial & Regulatory Reporting: RPA mitigates the tedious undertaking of financial close and reporting processes – from finalising ledgers to creating and delivering regulatory reports that involves many systems, business units and data points.

Loan Processing: "Finezza is a lending automation software tool that adequately fulfils the borrowers' need for convenience while offering the lending firms many new opportunities for growth, both top line, and bottom line. It serves the loan origination and credit assessment requirements of lenders through digital automation or robotic process automation (RPA)"⁵

Client Onboarding, Compliance Monitoring & Fraud Detection: "Onboard more customers with less friction while remaining compliant and competitive. Integrate SEON with your banking or insurance platform for a solution that does a lot more than just reducing fraud rate close to 0%"⁶

Financial Risk Management: "Clari5, the ML-driven cross-channel enterprise financial risk management suite, leverages RPA-integration to automate risk assessment and fraud investigation solutions end-to-end. It can pull data from multiple channels (Credit, debit, loan, mortgage etc.) in real-time and trigger instant alerts to manage cases with minimal human oversight"⁷

Robotic Enabled Audits: "The advent of Robotic Process Automation (RPA) has the potential to disrupt the traditional audit model. With its capability to automate rules-based tasks that are repetitive and manual, RPA is expected to repurpose the role of the auditor by replacing perfunctory tasks and emphasizing higher order thinking skills that will eventually lead to enhanced audit quality" (American Accounting Association, 2018)⁸

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⁵<https://finezza.in/blog/how-rpa-boost-loan-origination-process/#~:text=The%20technology%20uses%20software%20robots,notifications%2C%20data%20synchronization%2C%20etc.&text=RPA%20accelerates%20loan%20origination%20at,robust%20audit%20and%20control%20benefits.>

⁶https://seon.io/industries/banking-and-insurance/?utm_term=%2Bfinancial%20%2Bfraud%20%2Bdetection&utm_campaign=%5B%5D+Fraud+detection+industry+%5BGlobal%5D&utm_source=adwords&utm_medium=ppc&hsa_acc=7557865958&hsa_cam=6452604235&hsa_grp=76286709799&hsa_ad=379018126027&hsa_src=g&hsa_tgt=kwd-298152866795&hsa_kw=%2Bfinancial%20%2Bfraud%20%2Bdetection&hsa_mt=b&hsa_net=adwords&hsa_ver=3

⁷<https://www.clari5.com/blogs/banking-on-rpa-to-combat-financial-fraud/>

⁸"Journal of Emerging Technologies in Accounting", Vol.15, No. 1, Spring 2018, pp. 1-10



INTELLIGENT AUTOMATION

"AI, in different guises, such as Machine Learning (ML), Natural Language Processing (NLP), computer vision or voice recognition, working in hand with RPA, increases the scope and scale of process automation a great deal" – Sarah Burnett, Vice President of Everest Global Research Group.

Early adopters of RPA are quickly realising that due to the maturity and variable nature of their data, traditional RPA is becoming redundant. Thus, they are adopting Intelligent Automation (IA), which takes advantage of the collaboration between RPA and AI.

A journey to IA consists of the following steps:

1. An initial implemented RPA solution is required that currently removes the "bot" out of the human by automating the rule-based, low complexity manual tasks that occur mainly in the back office.
2. Incorporating simple machine learning with the RPA solution to make simple decisions based on collected and mined data from the past.
3. Variable, unstructured data is introduced and incorporated into the machine learning algorithm, this introduces a deeper level of understanding to the bot. The aim is to automate processes that occur from the back-office to the front-office. Technologies such as Deep Learning (a branch of Machine Learning) and Natural Language Understanding (NLU) are incorporated with the RPA solution.
4. The RPA solution now deals with structured and unstructured data and can automate both standard and non-standard processes. The new Intelligent Automation system makes use of more technologies such as Big Data Analytics, expert systems and semantics, which enables it to make decisions and further automate processes.

The benefits of IA include⁹:

- Data processing time is halved: "A healthcare provider that used IA to process insurance claims reduced its average handling time by 50%"¹⁰
- IA operates almost error-free 24/7: "A major telecom company was able to use IA to centralize its accounts payable system. It scanned, digitized and indexed 1.6 million documents in a year with a very small 2% error rate."¹¹
- Improved scalability than manual workforces: IA solutions can easily be scaled up or down in order to read, respond and report to higher volumes of data.
- Cost Efficiency: "International food giant Mondelez International deployed an array of Intelligent Automation solutions in 2018/2019. It was able to reduce the time for one customer function from 12 hours to just one. In five months, it had saved so much in employee hours across the company, that it had already covered the cost of implementation."¹²

⁹Swiss Post Solutions, 2020, "Intelligent Automation – Fast Lane to Boost Customer Experience"

¹⁰Swisspostsolutions.com. 'Robotic Process Automation in healthcare.' Accessed August 2020

¹¹Swisspostsolutions.com. 'Telco business.' Accessed August 2020

¹²MITSloan, 'Mondelez International's Intelligent Automation Journey: From Cost Savings to Value Creation.' Accessed August 2020

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RPA TECHNOLOGY RISKS

Like all innovative technology initiatives, RPA comes with disruption and risks¹³. BDO identifies key technology risks to consider when implementing an RPA solution:

Operational Risks: The convenience of RPA is its ability to process large volumes of transactions within a small-time frame.¹⁴ However, without an effective RPA operating model (which defines the bot's functions and performance capabilities), processing errors are magnified due to the concentration of operational risks.

Intelligent Process Automation risk: Further risks emerge when RPA is incorporated with cognitive technologies such as AI and ML. Since the algorithms are written by people, algorithm bias can occur as there is now a transfer of human decision-making boundaries to the software and machines.¹⁵

Information Security Risk: Attackers could gain remote access to an organisations network through the exploitation of code vulnerabilities within the RPA software where there is potential for manipulation of valuable and sensitive¹⁶ data.

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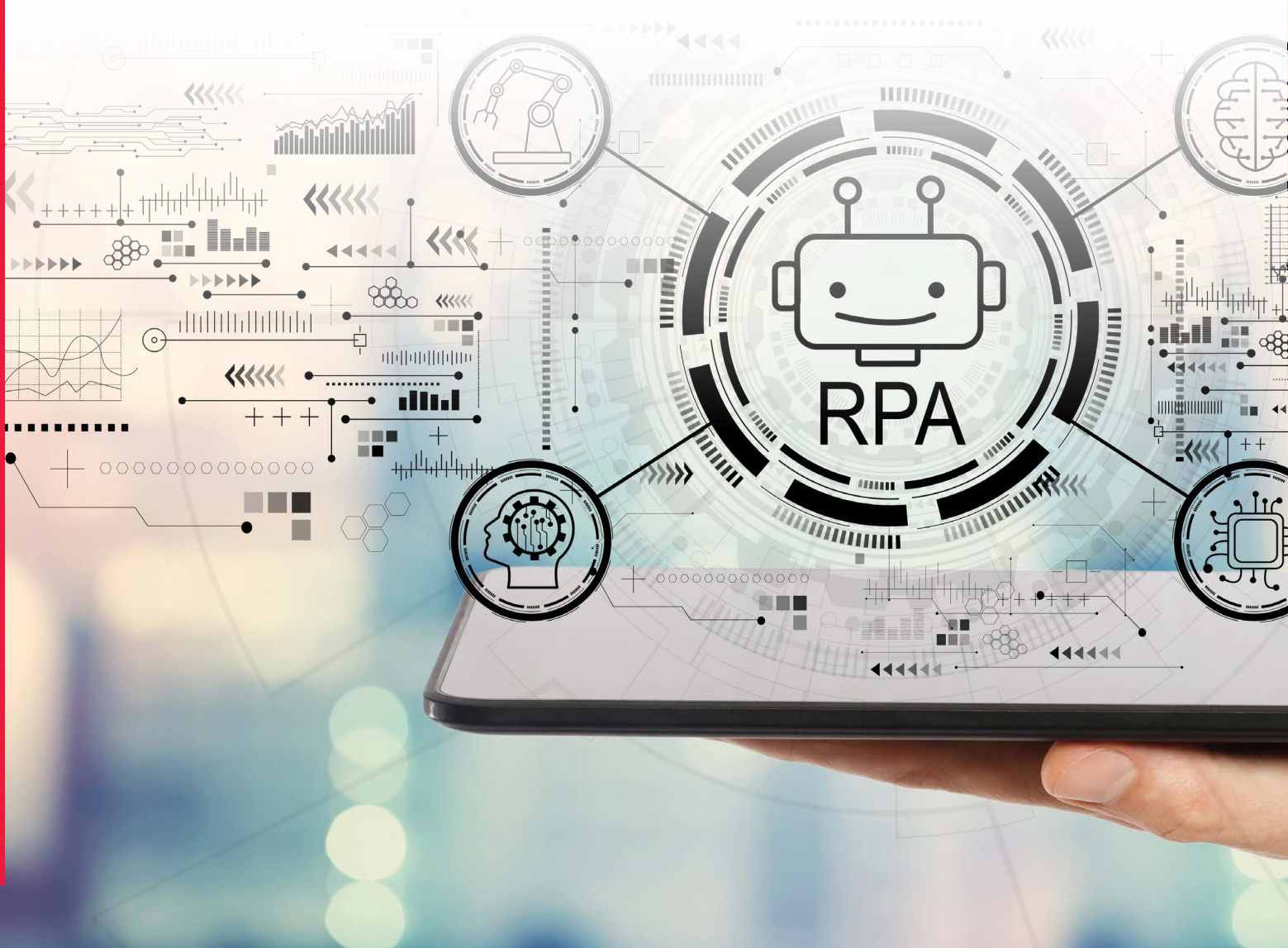
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¹³<https://isg-one.com/articles/don-t-overlook-the-risk-posed-by-robots>

¹⁴Accenture Technology Vision 2016

¹⁵<https://www.uipath.com/blog/when-rpa-meet-ai>

¹⁶<https://www.cyberark.com/what-is-robotic-process-automation/>



RPA AND COVID19

Massive shifts in customer demands during the COVID-19 pandemic highlighted the need for RPA in various organisations¹⁷. Early adopters of RPA have a significant competitive advantage due to:

RPA's scalability: From medical labs processing COVID-19 tests to the Swiss Financial Services Sector processing large volumes of transactions, RPA can be deployed at scale to help absorb the surge in customer demand.

Cost Efficiency: An RPA solution, if implemented correctly, is able to keep organisations afloat in times of economic pressure due to the decrease of operational costs.

24/7 Productivity: RPA solutions can work 24/7 and five times faster¹⁸ than the human workforce. Tasks are completed faster which enables the capacity for more work to be done.

However, due to the risks involved with RPA and the current financial climate, many organisations are either maintaining their RPA solutions or refraining from implementing and expanding new and existing solutions. Rinat Malik, former RPA specialist at BMW Financial Services, explains that Attended RPA solutions are most beneficial as these solutions augment human performance¹⁹. Malik also explained that organisations utilising existing RPA solutions needs to have logging systems implemented to provide real-time bot performance, automated error-handling and troubleshooting in the event a bot breaks down.

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¹⁷<https://www.nice.com/engage/blog/rpa-rpa-and-covid-19-2570/>

¹⁸<https://www.nice.com/rpa/rpa-guide/the-benefits-of-rpa/>

¹⁹<https://www.processexcellencenetwork.com/rpa-artificial-intelligence/interviews/the-impact-of-covid-19-on-rpa-implementation-and-deployment>



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CONCLUSION:

Robotic Process Automation as an emerging technology is highly scalable and adaptable with other emerging technologies. It is important for businesses to understand the technology and the risks associated with the adopting the technology. This will allow businesses to not get left behind in this ever-changing, fast paced world.

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