

Attended, Unattended and Hybrid

6 flexible automation deployment
models to get the most from RPA



Contents

Section 1	03	Introduction
Section 2	04	Understanding automation types
Section 3	06	Automation model 1: Fully Unattended
Section 4	07	Automation model 2: Partially Unattended
Section 5	08	Automation model 3: Human in the Loop
Section 6	09	Automation model 4: Attended, Interval
Section 7	10	Automation model 5: Attended in Tandem
Section 8	11	Automation model 6: Hybrid Deployment
Section 9	12	Releasing the power of RPA



Introduction

Process automation has been around for some time. However, traditional process automation solutions can be cumbersome, costly and complex to maintain. They can take a good deal of time to implement and prove difficult to revise should the underlying process change. In addition, they can struggle with older, legacy systems where integration is tricky and APIs aren't available.

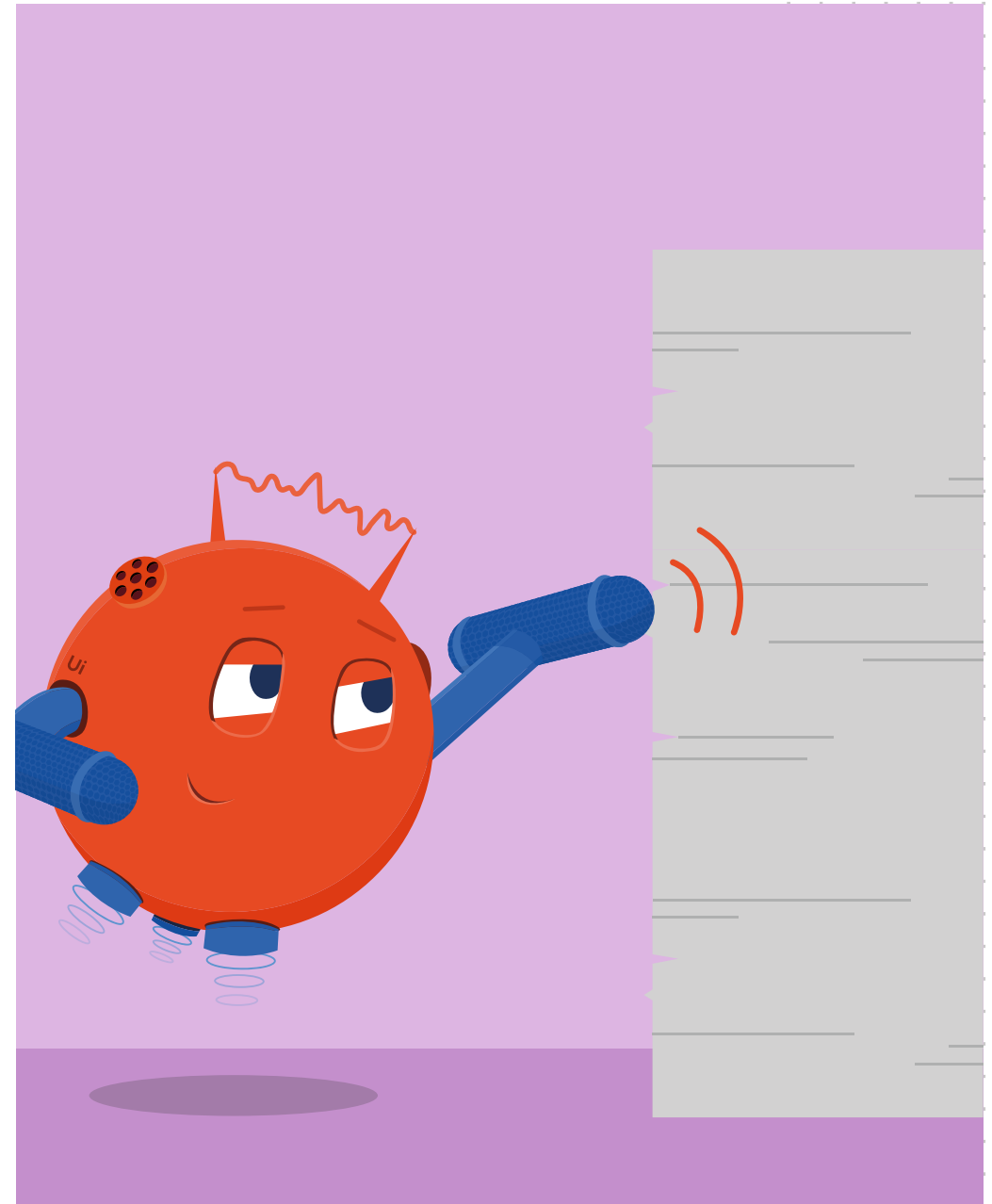
Robotic Process Automation (RPA) takes a different approach to automating your business processes and workflows. Rather than attempt to remove the person from the process, it understands that, in virtually every case, an automation will involve some combination of human and robotic input for successful execution.

The secret to RPA is its ability to let you identify that optimum combination of human and robotic collaboration for any specific

workflow or process. The robot does exactly what the person would do – only much quicker and without making errors. By breaking down the tasks within a workflow you can see which ones the robot can execute, the tasks where the robot needs some human support, and, conversely, tasks where the human benefits from robotic support.

In addition, RPA doesn't require you to change either the business process or the IT infrastructure that underpins it. The result is an automation that has the flexibility to evolve as the process changes. As systems are updated or new technologies added, the robot can be quickly and cost-effectively updated to incorporate new capabilities with minimal or no business disruption.

This quick guide identifies six automation deployment models that help RPA to meet a wide range of your process automation needs.

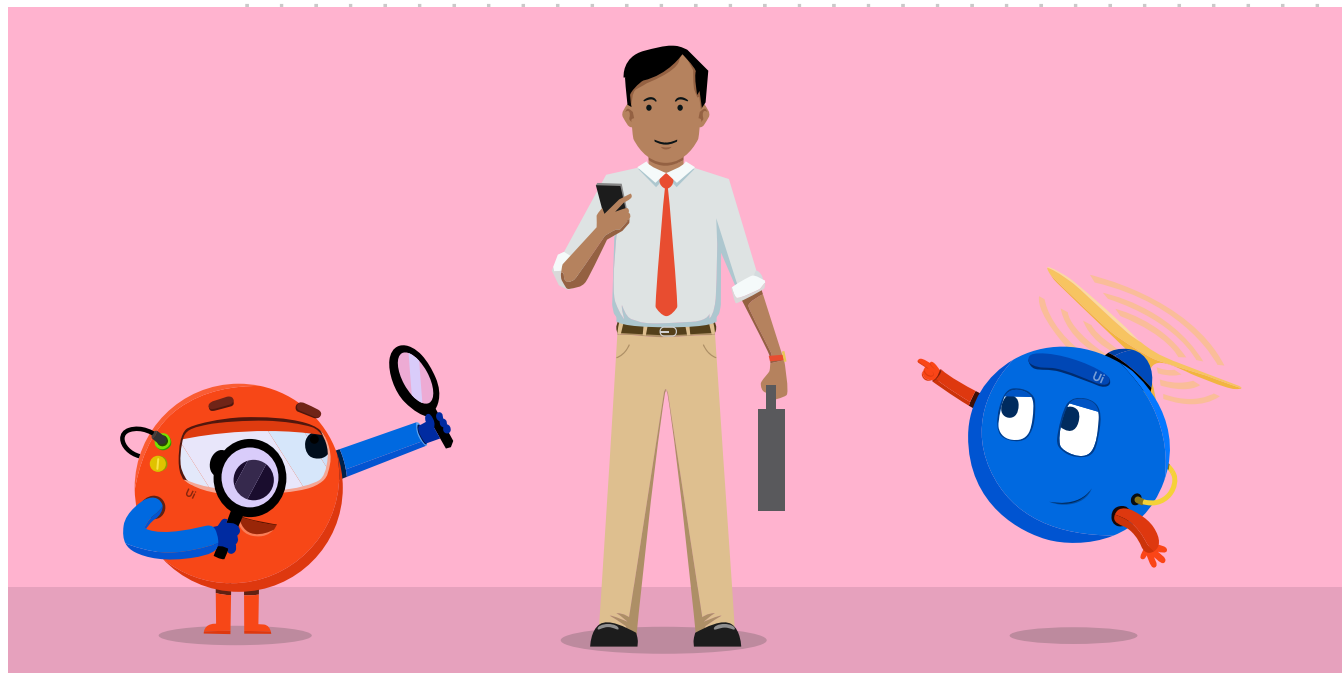


Understanding automation types

A robot is a robot, right? In some ways, that's true. The capabilities of the different robot types are very similar. However, two main types of software robot have developed: attended and unattended. It's more about how they're applied within your business that determines the type of robot you need for a specific process automation.

Robots perform repetitive or rules-based tasks such as the searching, multi-system look-up, aggregation, sorting, mapping, analysis and distribution of your corporate data. **Different automations apply these capabilities differently:**

- **Attended robots** act like a personal assistant residing on the user's computer to take a series of user-triggered actions to complete simple, repetitive tasks to streamline a workflow.
- **Unattended robots** require very little – in some cases, non-human intervention to intensive data processing and data management capabilities needed to complete back-office functions at scale.



- **Hybrid robots** are a combination of attended and unattended robots that provide user support and back-end processing in a single solution that moves closer to the potential of the end-to-end automated execution of complex business workflows such as invoice processing.

Attended and unattended robots allow you to look at the different tasks that make up a process, how they relate to the activities of employees and how they interact with other processes and systems. You can,

then, identify which tasks are best suited to automation and which type of robot is suited to that task.

As robots are not mutually exclusive, you have the power to easily bring all these automations together into a single, secure and scalable integrated automation platform. This gives you the flexibility to use the deployment models that best suit your business requirements.

Automation Types

	Unattended	Attended	Hybrid
Automation overview	Requiring little or no human intervention, this automation type performs fully automated high-volume transaction-based processes. This is generally in task-heavy back-end environments.	Running on the user's computer, the robot works alongside the person to improve quality and productivity. It handles the routine tasks involved in the process and delivers the information when the user needs to speed up the task. It can also be programmed to deliver guidance and recommendations.	Combining both attended and unattended robots, this automation is best suited to applications where there is a good deal of user interaction. The attended robot supports the user and automatically kicks off the unattended robot to complete the back-end processing.
Where it resides	On a dedicated workstation, server, mainframe or web service	On the user PC, laptop or departmental server	Both
How it's triggered	<ul style="list-style-type: none"> • Activity or event triggered • By another robot • Via an orchestrator/workflow management facility • Scheduled/time-based activation 	<ul style="list-style-type: none"> • By the user • Event triggered • Condition triggered 	<ul style="list-style-type: none"> • By the user • Event triggered • Condition triggered
Key benefits	<ul style="list-style-type: none"> • Fast • Zero error • Batch data processing • Scalable • 24x7 operation • Rapid ROI • Employee & customer satisfaction • Regulatory & data compliant 	<ul style="list-style-type: none"> • Fast • Accurate • Tailored to requirements of the user • Quick implementation • Employee and customer satisfaction • Regulatory & data compliant 	<ul style="list-style-type: none"> • A combination of both • End-to-end process automation • End-to-end process visibility
Key use cases	<ul style="list-style-type: none"> • Application processing • Claims processing • Invoice processing • Automated call center response • Data and documentation search and retrieval 	<ul style="list-style-type: none"> • Contact centre • Field sales • Retail • Service engineers • Insurance agents 	<ul style="list-style-type: none"> • Customer support and engagement • Service delivery • Sales management • HR management • End-to-end application processing • End-to-end invoice processing

Automation model 1:

Fully Unattended

The need to process massive amounts of data is one of the major use cases for RPA. For most organisations, data is stored across multiple systems and data stores – some legacy and some modern – requiring staff to frequently move data between systems.

Data is amended, updated and verified as it passes through the process. Manual data processing on this scale is time consuming and prone to error. Other forms of automation can be difficult because many systems don't have APIs that allow for easy integration. Once programmed, there is very little need to involve a human in the process.

An unattended robot can:

- Launch automatically based on scheduled, event or activity triggers
- Be managed centrally by a workflow 'orchestrator' to function 24x7
- Complete the same process in the same way every time
- Only notify a human if an exception arises

Typically, one or more robots will sit on virtual machines or on back-office servers and execute the unattended automation. An administrator will set the schedule in their RPA platform and allocate the optimal number of robots to the process. With full auditability, data integrity and regulatory compliance can be assured.

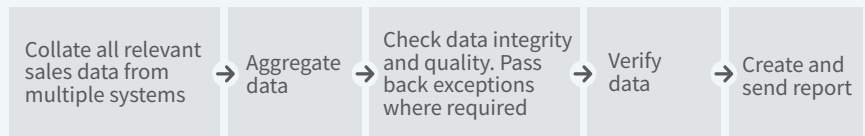
Fully unattended in action

Creating better sales reports

USE CASE:

Once a month, a large Financial Services company collates all the sales figures from across its global organisations. The process involves accessing multiple systems, such as ERP, CRM and sales database. The data has to be collated, aggregated, verified and consolidated into the final report that's sent to senior management. The unattended robot is able to complete the entire process end-to-end improving the accuracy and timeliness of the report.

WORKFLOW:



ORGANISATION TYPE:

Central Government¹

OVERVIEW:

One of the largest government departments in the UK found that many of its key processes were heavily manual. They were slow and error-prone leading to a major backlog within its pension claims process. It would've taken thousands of staff and several thousand hours to remove the backlog. Deploying unattended robots reduced process time to seconds and cleared the backlog in a matter of weeks.

BENEFITS:

- Pension claims processing cut from 2.5 minutes to 15 seconds
- 12 robots can each successfully process 2,500 claims per week
- Backlog of over 30,000 claims cleared in two weeks
- Estimated ROI of 15:1

Automation model 2:

Partially Unattended

Some processes need the involvement of staff at the beginning. After this, the process is a series of slow and repetitive tasks that can be automated. With RPA, organisations can involve humans only when they're necessary. Humans can focus on high-level thinking, knowing that robots will guarantee the process is completed successfully with best-in-class documenting and notifications.

You can do the preparatory work and then trigger the unattended robot to take over and complete the task. The time taken to complete the task is returned to you allowing you to concentrate on higher value activities. Often, this means that employees can accomplish the tasks that they're skilled in rather than being bogged down in administration and data crunching.

An unattended robot can:

- Take over the task when scheduled or instructed to do so by the user
- Collate all the preparatory work and begin processing
- Complex business rules can be programmed into the robot
- Provide data assurance and validation as part of the process
- Only notify the user if an exception arises

By taking over the mundane parts of the process, RPA improves speed, efficiency and quality. However, the real benefit comes from freeing staff to move on to tasks that will drive business value and customer satisfaction.

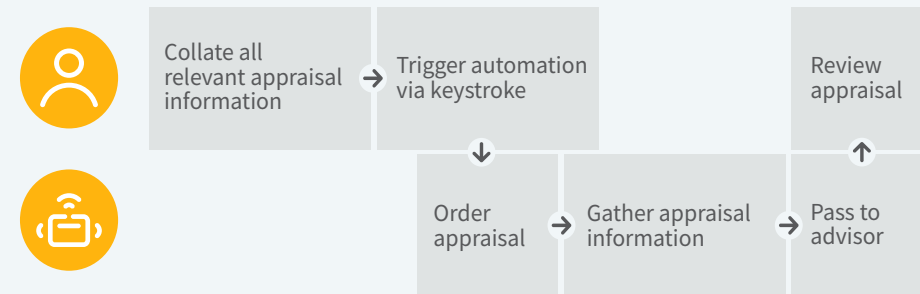
Partially unattended in action

Speed up new mortgage appraisals

USE CASE:

To ascertain a property's value, lenders order mortgage appraisals. Despite their importance, ordering appraisals is repetitive and prone to mistakes, which can lead to penalties from regulators. While a human is needed to start the process – select the appraisal company, set what's covered in the appraisal, select when the appraisal is ordered – the robot can then do the rest. This cuts appraisal time down to minutes and the lender can make huge savings by reducing mortgage escalation through delayed appraisals.

WORKFLOW:



ORGANISATION TYPE:

Telecommunications²

OVERVIEW:

Manual processing was beginning to impact service delivery for B2B customers of a telecoms company. When a customer change came, it had to be manually entered which was time consuming and prone to error. The customer sends through a massive Excel spreadsheet that includes all their services, subscription and business details that need to be checked, updated and validated. An unattended robot now compares information in the spreadsheet against the data in the back-end system and automatically marks up changes for the delivery department to approve. With hundreds of customer changes every day, this marks an impressive gain in time and efficiency.

BENEFITS:

- 10fold increase in process performance
- 100% data accuracy
- Released time equivalent to 25 FTEs back into the business

Automation model 3:

Human in the Loop

One of the most difficult process types for traditional automation tools is where there are a number of steps that include intermittent, but extremely necessary, points which require human decisions before the process can continue.

The amount of human input makes the process inefficient but determining where the decision points are – and when they need to be invoked – requires complex business rules. RPA allows the business rules to be built into the automation so that the robot is able to dynamically prompt human input when needed.

This is often called a ‘human in the loop’ (also referred to as ‘human in the middle’) automation where an unattended robot can:

- Automatically launch process based on a schedule or event trigger
- Signal to the human when their input is required
- Resume the process once informed that the human has completed their task
- Repeat this step as often as required within the process

The complexity of intermittent processes has previously made them practically impenetrable to automation. However, RPA is ideally suited and can respond to the most sophisticated of business rules. In effect, this type of automation can reduce human input to simple validation, wherever in the process it’s needed.

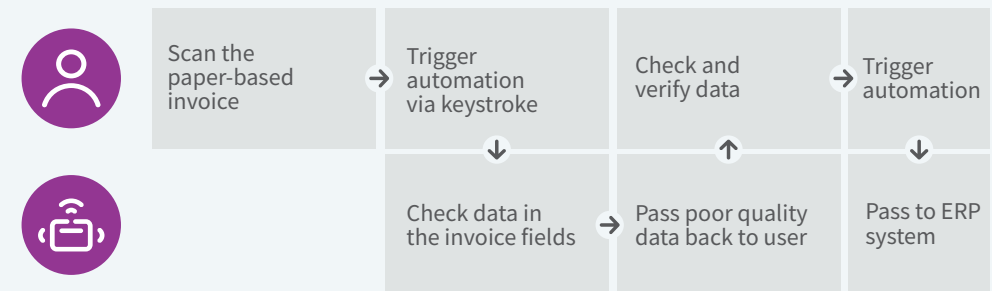
Human in the Loop in action

Improving invoice processing

USE CASE:

Invoice processing often begins with capturing the information in paper-based invoices before uploading to the ERP system. Optical Character Recognition (OCR) technology is used but the data quality can be low. RPA can route the information to a human where its confidence in the data is low. Modern systems are combining RPA with AI so that as the human clarifies the information and validates that the data in entering the ERP is correct, the automation learns from this reducing the need for human input in the future.

WORKFLOW:



ORGANISATION TYPE:

Insurance³

OVERVIEW:

A large insurance company sought to streamline its operations by adding virtual assistants in end-user processes. The process involved the receiving and interpreting the information and attachments from 1.5M emails every year. It required accuracy, timeliness and complete compliance with Service Level Agreements (SLAs) and specific regulatory and statutory provisions. Now, an attended robot accesses the email source. It interprets the content contextually, classifies and files all the necessary documentation, extracts relevant data and updates necessary systems. When required, it interacts with the human users to complete specific instructions before finally delivering confirmation once the process is complete.

BENEFITS:

- 2,000 hours/month saving in processing time
- 98% fully automated
- 600% reduced mean time to execute
- 91% reduction of cost/transaction
- Improved employee satisfaction

Automation model 4:

Attended, Interval

For many individual employees a great deal of their time within a process is consumed in accessing, compiling, reformatting, reviewing and validating data. They may well have to visit a number of systems both internal and external to the company. These activities are always time-consuming and labour intensive. More importantly, boredom and fatigue quickly become factors that drive up error rates – even amongst the most diligent.

Working alongside the employee, all monotonous and repetitive tasks are offloaded to the attended robot. The user triggers the robot when it's required. It takes control of the keyboard and mouse to complete the task in a fraction of the time and without error.

An attended robot can:

- Launch on-demand using mouse-clicks or hot keys
- Run the process directly from the robot tray (App)
- Complete the task in exactly the same way as the employee
- Complete the task and return the process to the employee

By making portions of processes more efficient, an attended, interval automation brings cumulative benefits. The individual employee becomes more productive and as the automation scales so does the specific team, and business function.

However, this automation takes over the employee's machine so that it can't be used for the duration of the process. The employee must plan their time to perform offline tasks that maximise the time freed.

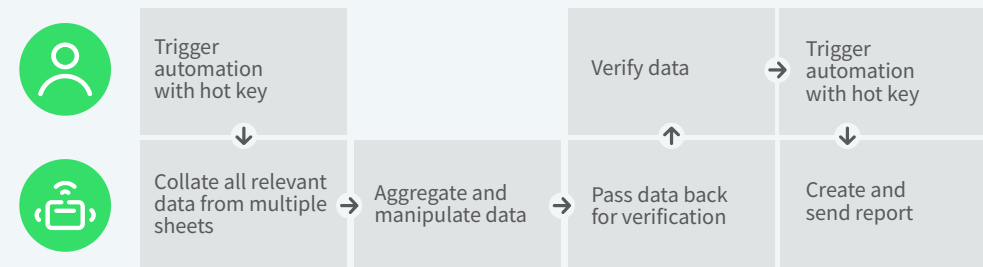
Attended, interval in action

Better profit and loss reporting

USE CASE:

All companies need to make regular profit and loss updates, but the process is manual and slow. The process can easily involve a dozen compiled sheets where data has to be manually imported, manipulated and verified. An attended robot can be told when it needs to take care of the laborious, repetitive tasks. Once completed, the robot returns the process to the employee for verification and any further cognitive work that has to be performed. This also frees the finance team to focus on higher value activities.

WORKFLOW:



ORGANISATION TYPE:

Banking / Financial Services⁴

OVERVIEW:

For this bank, debit cards can be declined for 81 different reasons. Customer experience depends on how well the bank staff handle the call with customers explaining the reason. However, staff had to navigate to five different screens, write-down and then calculate data in order to provide an answer. The attended robot performs these tasks within seconds and presents the employee with a clear description of the reason the card was declined.

BENEFITS:

- Average hold time (AHT) reduced by 30 seconds per call
- Time saving across 9.6 million calls per year brings back 80,000 hours into the business each year
- 8% improvement in non-FCR (First Call resolution) interactions

Automation model 5:

Attended in Tandem

There are occasions where it's not practical or efficient for a robot to gain control of the user's machine. A contact centre agent, for example, may need to retrieve information from multiple systems when dealing with a customer query. Putting the customer on hold while retrieving the data leads to poor customer service. An attended in tandem automation allows the robot to handle some tasks in the background while the user is able to continue working.

The division of labour means that the robot handles the repetitive tasks – such as system access, data retrieval and data aggregation – while the employee can talk to a customer or make decisions based on the information the robot has supplied. An attended robot can work in tandem with you to complete tasks such as connecting directly to a database, accessing multiple systems and applications, automating an application in the background, or connecting to systems through an API.

In this automation, an attended robot can:

- Run processes when triggered by the user
- Monitor user activities and automatically launch process
- Run the process directly from the robot tray (App)
- Execute process while user continues to work on the machine

Timely and accurate information provision is only one of the benefits of this type of automation. By implementing business rules within the automation, the robot can begin to offer guidance and recommendations – such as next best action – to improve employee performance. Adding AI to this type of RPA automation allows for guidance to continually improve over time.

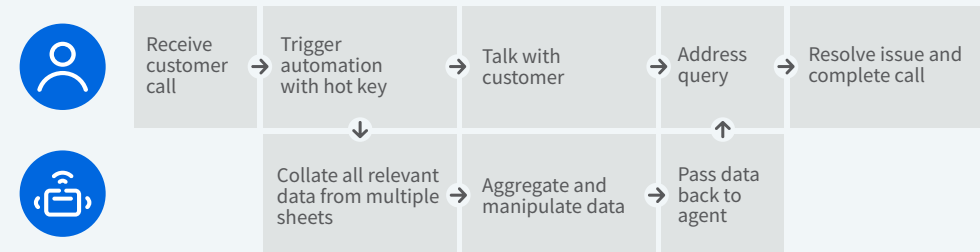
Attended in tandem in action

Enhancing the call centre experience

USE CASE:

When a customer calls, a contact centre agent often needs to rummage through a few different systems to make notes, collect information, verify regulations, or any number of other activities to complete the call. This causes delays and frustrations at both ends of the line. With this automation, the agent continues their call while the robot works in the background to access, collate and present all the relevant information. The agent can now more quickly and effectively handle the customer query leading to increased productivity, reduced resolution times and enhanced customer satisfaction.

WORKFLOW:



ORGANISATION TYPE:

Government Healthcare Agency⁵

OVERVIEW:

The agency was overwhelmed by 15 million calls per year that had to be supported with manual, repetitive processes at their call centre. Previously, agents had to manually check caller information, match it with additional details from several platforms, and help guide the customer through the menu and account options. Using attended robots, most of the tasks are automated with the robot automatically flagging where human judgement is required saving agency staff time and improving the service to customers.

BENEFITS:

- Implementation in 6 months
- 38% reduction in average handling time
- 80% increase in human labour utilisation rate
- 49.6% reduction in labour cost

Automation model 6:

Hybrid Deployment

While attended robots help with customer facing processes and unattended handle heavyweight back-end processing, hybrid automations bring both together in a single integrated platform. This enables you to automate much more of your business processes end-to-end.

Combining attended and unattended robots bring flexibility and scalability. You're able to identify across an enterprise-wide process – HR recruitment, say – which tasks are prime for automation and be able to deploy the ideal robot for that activity. Hybrid automations are suited to processes that will always involve a high degree of human intervention but also include a good deal of back-end processing.

With a hybrid automation, you can:

- Kick off an attended robot from your machine
- Chain attended and unattended robots together
- Enable the attended robot to trigger the unattended robot when required
- Allow both the attended and unattended robots to return the process to you where further action is required
- Allow attended and unattended robots to function together automatically where no human intervention is required.

In addition to the efficiency and productivity benefits of hybrid automation, it enables an organisation to increase visibility into their key business processes to build enterprise automation that help make the processes more robust.

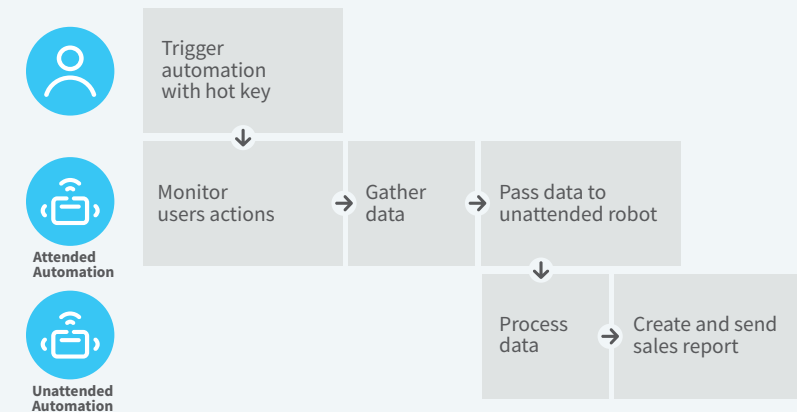
Hybrid automation in action

Improving sales team performance

USE CASE:

Sales teams often spend excessive amounts of time on data entry rather than actual sales. Using attended automation, a robot monitors the sales person's activities and captures all relevant actions and data. At predefined intervals or in real-time, the attended robot can automatically hand off that information to an unattended robot for further processing. The unattended robot can also collate and create sales reports based on this information. The hybrid automation works to support individual sales people while increasing the productivity of the entire team.

WORKFLOW:



ORGANISATION TYPE:

Healthcare Provider ⁶

OVERVIEW:

The goal was to achieve a zero-touch customer experience by simplifying self-service and orchestrating omnichannel requests. This required the automation of front-to-back case creation and improving the hand-offs between departments with attended and unattended automation. Agents had to be empowered with the right information, at the right time to resolve issues faster with greater precision. The solution involved an attended automation that provides pre-validated, consistent and personalised content with triggers to execute next best actions. In addition, the fully integrated front and back office robots ensure end-to-end processes orchestrating and automating both human and AI workflows.

BENEFITS:

- Boost customer loyalty
- Reduce average handling time (AHT)
- Improved first call resolution (FCR)
- Reduced overhead and training costs
- Assured compliance

Releasing the power of RPA

Digital transformation is one of the biggest priorities for organisations worldwide. Yet, Forbes reports that an incredible 70% of transformation initiatives fail.⁷ Implementing new digital processes and solutions across an entire enterprise is far from straightforward. RPA provides a low cost, fast and effective means to achieve many of the goals of digital transformation.

RPA enables you to create more efficient digital workflows that improve data quality and free your staff to focus on more cognitive and higher value activities. By sitting on top of your current IT infrastructure, it offers a frictionless approach to digital

transformation that can enhance collaboration and innovation within your organisation – and with your customers and partners.

RPA has become a fundamental first step on the digital transformation journey. Properly implemented, the benefits are phenomenal. Organisations that deploy RPA across their processes – especially in support of the many small task inherent in most workflows – can achieve up to 200% ROI in the first year, according to McKinsey.⁸

The six automation models set out in this guide can help you to tailor an RPA solution to meet your specific business needs.

About UiPath

UiPath is leading the ‘automation first’ era – championing a robot for every person and enabling robots to learn new skills through artificial intelligence (AI) and machine learning (ML). Through free and open training, UiPath brings digital era skills to millions of people around the world, improving business productivity and efficiency, employee engagement, and customer experience.

The company’s hyperautomation platform combines the #1 Robotic Process Automation (RPA) solution with a full suite of capabilities, including process mining and analytics, that enable

every organisation to scale digital business operations at unprecedented speed. The company has already automated millions of repetitive, mind-numbing tasks for businesses and government organisations all over the world, including more than 50% of the Fortune 500 and 8 of the Fortune 10.

UiPath was recently recognised as the top company on **The Deloitte Technology Fast 500 for 2019**, a ranking of the fastest public and private technology companies in North America, and #3 on the **2019 Forbes Cloud 100**.

UiPath
90 Park Ave
20th Floor
New York, NY 10016

www.uipath.com
  @UiPath