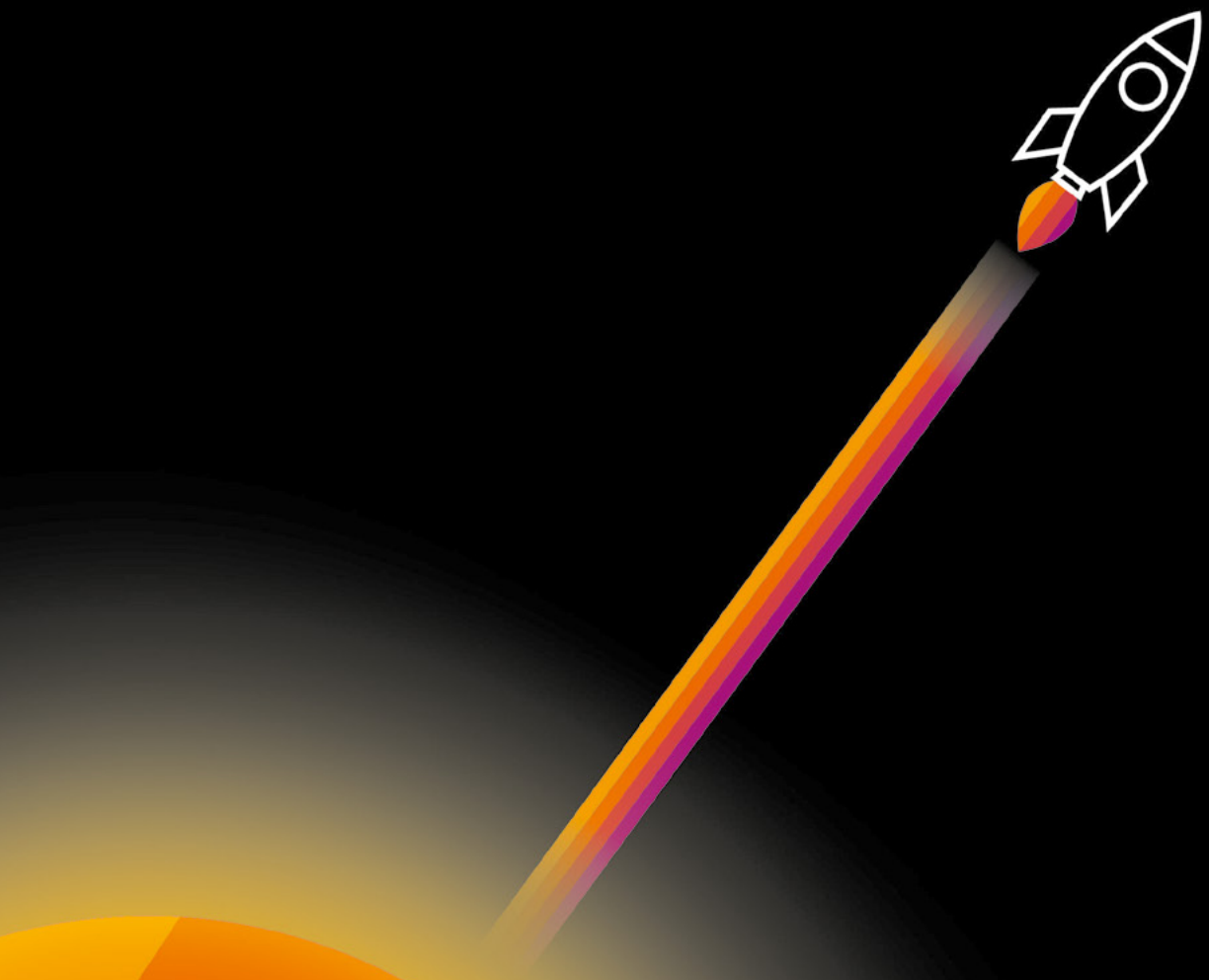
Launch Business Productivity into 2020

Get started with Intelligent Robotic Process Automation and add Artificial Intelligence to your automation.



THE BEST RUN SAP®

Table of Contents

What Is Robotic Process Automation?

Today's office workers spend a lot of time moving between different applications. They often have to reenter or copy and paste the same data – such as a customer's name and address details – from one application to another to complete a specific task. Such manual work is laborious, time-consuming, and prone to error. Robotic process automation (RPA) uses software robots to emulate human users and automate – as far as possible – these tedious, mundane tasks.

Automation improves the user experience for both employees and customers. RPA boosts productivity and can typically free up between 15% and 30% of an employee's time to focus on tasks that deliver greater value to the organization and improve the customer experience.[1]

This simple and nonintrusive adoption of advanced technology in an employee's day-to-day tasks enhances employee well-being and satisfaction. It can also make an important contribution to a company's change management as it seeks to accelerate its digital transformation.

WHAT ARE THE DIFFERENT TYPES OF RPA?

A company's data will typically be distributed across diverse information systems and accessible from a range of business applications and devices. Different types of RPA robots are available to help with a variety of tasks. The most common types are 'Attended RPA' and 'Unattended RPA'.

Attended RPA or Digital Assistants

Attended RPA (previously known as robotic desktop automation) runs on the desktop. The robot acts as a software assistant for the human user and interacts with a desktop application while respecting applicable business logic. It reads an application window's contents, identifies the fields containing useful data, copies them into another window, and launches a transaction, for example. While performing these tasks, the robot will, if required, hand control back to the user for decisions requiring the user's experience and knowledge. The robot can carry out checks on the data it handles to provide additional guarantees regarding regulatory compliance, data quality, and results.

1. Based on business transformation studies of SAP customers.

Deployment of attended RPA is very fast. It has no impact on existing information systems and requires no modifications to applications, which continue to function unchanged. As a result, attended RPA projects are short and ROI is rapid. It takes only a few weeks to set up an RPA robot that can save a significant percentage of time for tens – or even hundreds – of employees. And as the desktop will not change significantly in the short term, attended RPA solutions will benefit the company for many years to come.

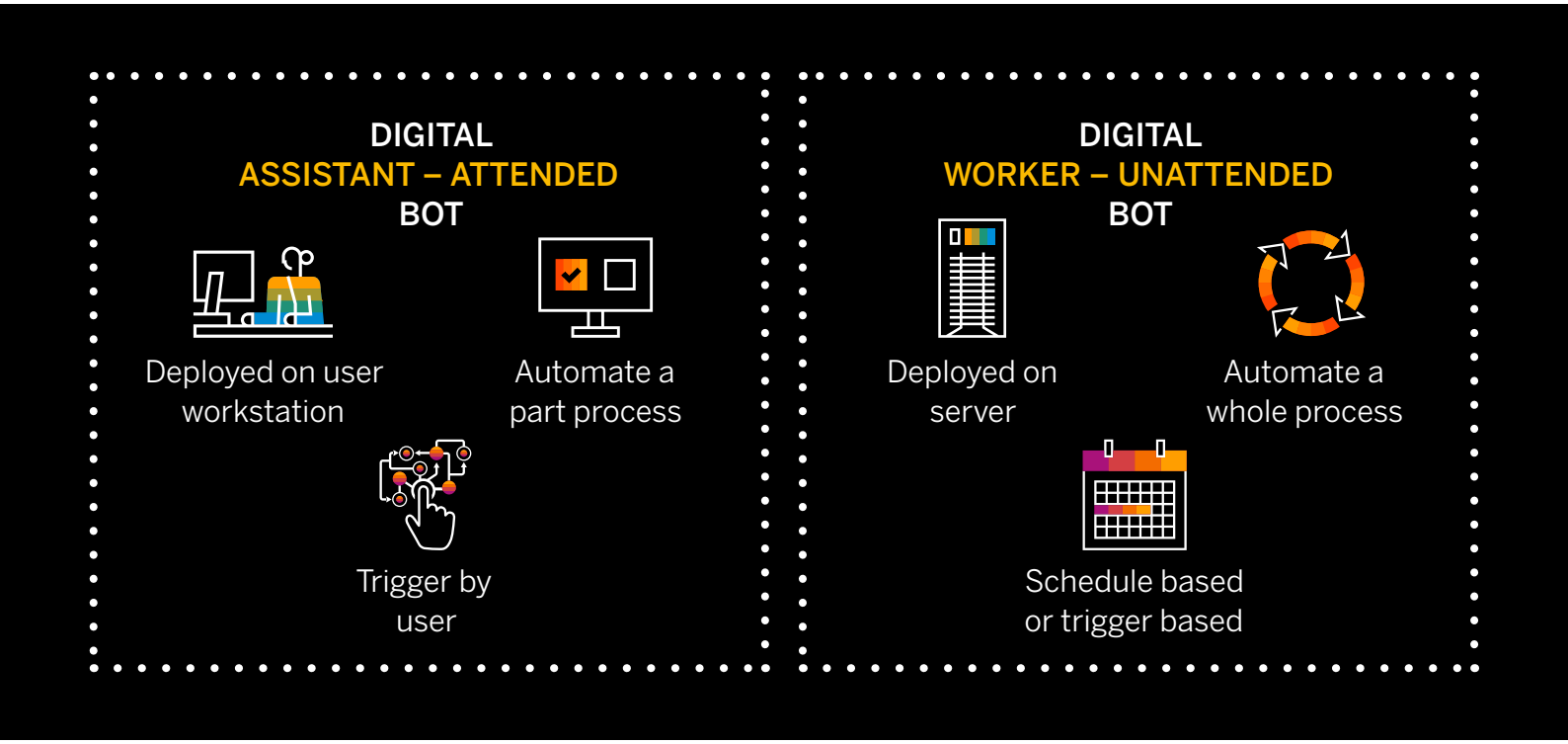
Unattended RPA or Digital Workers

Some processes can be automated end to end by using robots installed in server clusters. Known as unattended RPA, autonomous software robots work on their own at the heart of the information system or in the cloud (see Figure 1).

They can autonomously connect to databases to retrieve information, apply business rules, perform processes that produce new data, and inject that new data into other applications using their own application programming interfaces (APIs). These autonomous robots complete their tasks without human intervention. However, they remain under human control: processes are monitored to ensure they are executed properly and a "robot supervisor" will identify and correct any anomalies or problems.

As they are installed on servers and are therefore inside the information system, unattended RPA robots require some infrastructure. And because they act directly on application data, they need to use APIs, which requires programming work. As a result, unattended RPA projects are likely to be more complex and take a little longer.

Figure 1: Attended and Unattended Robotic Process Automation



THE BENEFITS OF A HYBRID APPROACH

To maximize the benefits of RPA, companies can take a complementary approach. They can start on the desktop with attended RPA, focusing initially on the most repetitive and time-consuming processes. This will deliver the quickest ROI and help employees embrace the company's digital transformation. Then the RPA journey can be extended by implementing unattended RPA on servers to handle complex processes. Some business processes can also gain from a hybrid RPA approach from the start, mixing attended and unattended robots to maximize the benefits.

Here are some real-world examples from different industries.

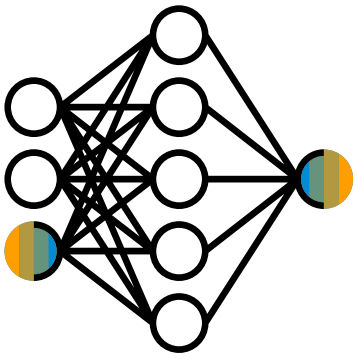
Contextual Guidance for Better Work Experience for Employees

Utilities: An RPA bot analyzes data from several data silos across multiple systems (for example, for previous energy usage or contract details). It then suggests to a utilities customer service agent the "next-best action" to take for the customer they are talking with on the phone.

More Personalized Service for Enhanced Customer Experience

Telecommunications: An RPA bot automates repetitive processes for telecom employees to help them discover if a customer is eligible for a specific promotion. It helps them onboard new customers, sending them a personalized contract in minutes instead of hours.

As they are installed on servers and are therefore inside the information system, **unattended RPA robots require some infrastructure**.



Top Operational Excellence and Business Process Efficiency
Finance: An RPA bot automatically extracts account payables–related e-mail messages from an accountant's mailbox. It analyzes the PDF in the attachment using machine learning and injects the relevant extracted data into an ERP system.

Faster Time to Market for New Offers Through Greater Agility
All industries: RPA rapidly sets up a new online service or mobile app based on data stored in several silos across the information system. If a mobile app needs to consume data from legacy systems that have no APIs or Web services, the development project can take several months. Using an RPA bot to consume legacy data from the UIs of applications to feed the mobile app, the project is shortened to a few weeks.

Mitigated Risk as a Result of Improved Compliance
Banking: RPA accelerates eligibility checks (for example, for a loan or credit) and guarantees the traceability of mandatory "know your customer" processes.[2]

An RPA bot can automate repetitive processes for telecom employees to help them discover if a customer is eligible for a specific promotion.

2. Also known as KYC, "know your customer" requires customers to provide detailed information to verify their identity and ensure they are not involved in illegal activities, such as corruption, bribery, or money laundering.

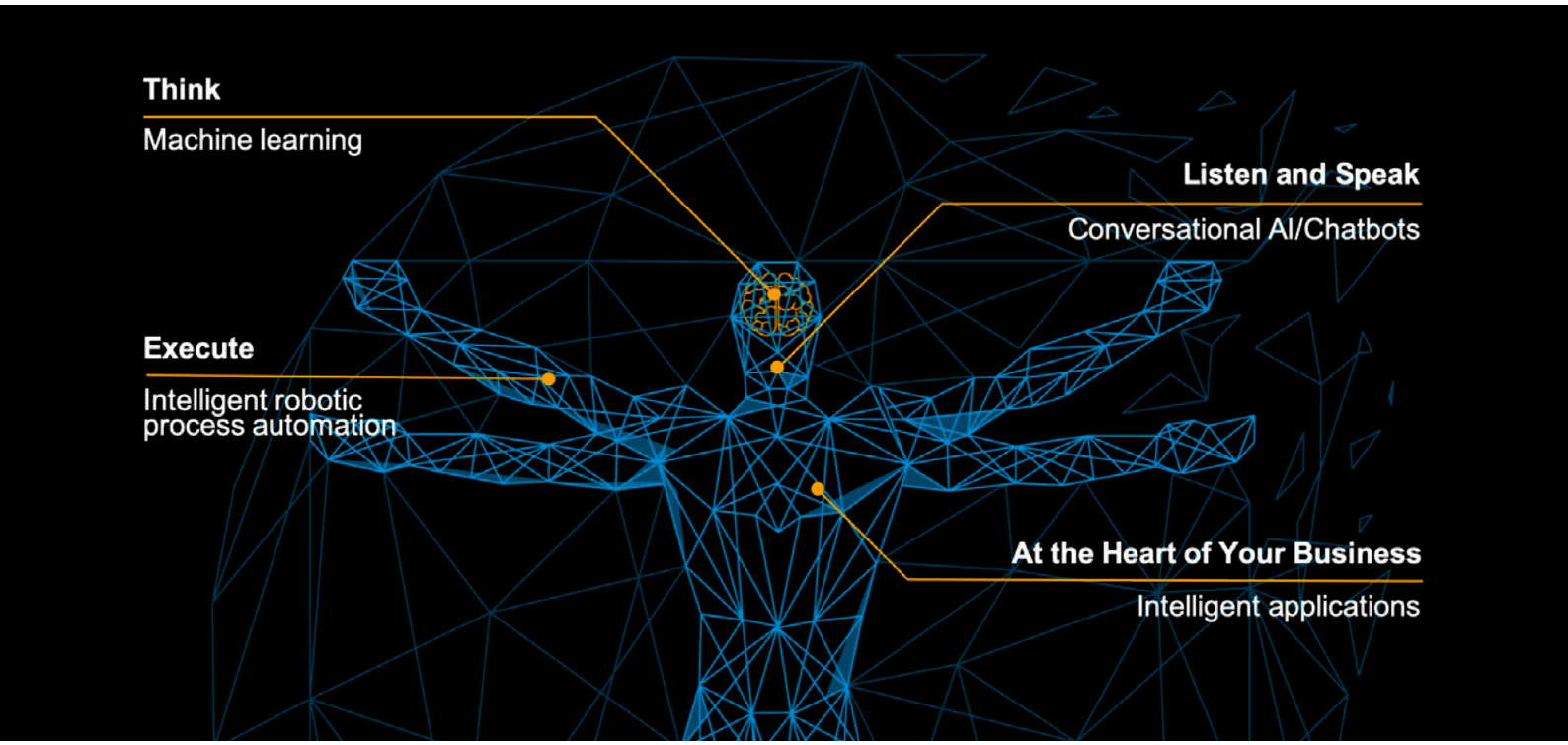
Add AI to Create Intelligent RPA

RPA robots can make business processes more efficient and employees more productive by taking advantage of structured data stored in various databases and application silos. But what about the increasing number of business scenarios involving unstructured data such as images, text, and speech – often coming from mobile devices?

For these types of specialized cognitive tasks, the answer is artificial intelligence (AI). AI has advanced rapidly in recent years. Thanks to the huge amounts of data now available to train the models, machine learning and deep learning algorithms have reached very high levels of confidence, beating human cognition in many cases.

Providing RPA robots with AI capabilities could deliver unprecedented levels of business speed and efficiency – and it doesn't stop there. Within a few years, AI could help to bring self-learning capabilities to RPA robots. By understanding what a human user is doing, bots could replicate some tasks and even adapt themselves to minor changes in their working environment, such as handling exceptions or updates in the applications they interact with (see Figure 2).

Figure 2: Combine and Integrate Intelligent Technologies and Business Applications to Achieve Intelligent Robotic Process Automation

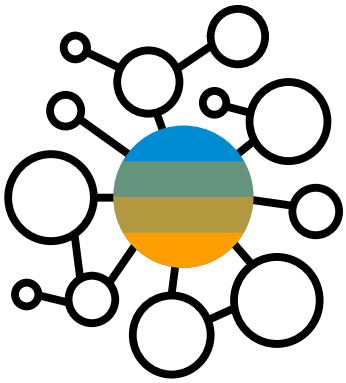


Conversational AI is another area developing rapidly. Instead of interacting with a user through a regular UI, an RPA robot can act as a digital assistant that provides a high-quality service experience by handling a normal conversation made up of questions and answers. Best-in-class chatbots leverage machine learning to be fully language agnostic. Preconfigured chatbots for specific industry sectors reduce integration time and speed up deployment.

Intelligent RPA (sometimes referred to as "cognitive automation") has a myriad of potential uses. It can recognize and compare images, automatically classify documents, and extract keywords and metadata from an invoice or purchase order. Intelligent RPA can convert speech into text to feed business systems or identify the tone and the intention behind a customer's e-mail to the service department.

Below we describe some of the ways that companies are applying intelligent RPA today.

Some **processes can be automated end to end by using robots** installed in server clusters. These are known as unattended RPA.



How Intelligent Robotic Process Automation Is Being Used

Intelligent RPA is being rapidly adopted across a range of industries. In the experience economy, this powerful combination of robotic process automation, AI, and chatbots is particularly relevant to those service industries with multiple, repetitive interactions with customers. These include banking, insurance, telecom, utilities, and the public sector (including local governments). Finding new and more efficient ways to deliver an excellent customer experience while keeping productivity up and costs down is becoming essential – not just to compete, but to survive.

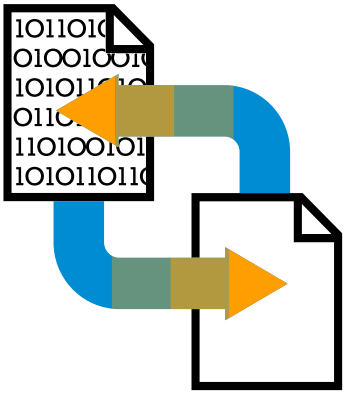
Here are three real-life examples, based on customer business transformation studies, to give an idea of what can be achieved with intelligent RPA.

A BANK: ONBOARDING NEW CUSTOMERS

A French bank launched a new online banking service. Opening customer accounts through a website triggered a complex process involving checks, validations, and administrative steps in back-office IT systems.

The onboarding process involved seven regulatory verifications that required copying and pasting the last name, first name, and date of birth of the potential client into various regulatory websites. In addition, there were five data and document checks and 17 data processing actions performed by different applications.

The average processing time for a new customer was 25 minutes. Using **robots designed and deployed in a few weeks** on 200 PCs, the average processing time is now only five minutes.



With the intelligent RPA solution, bank employees are now assisted by software robots that carry out all the control tasks and ensure the quality of data, the consistency of information, and the eligibility of subscribers. Creating a context-based banner on the desktop made it easier for users to learn the process. It resulted in fewer human errors and boosted employee performance by significantly reducing the number of clicks required and the need to switch between applications. An example shows the dramatic improvement intelligent RPA can introduce: Processing a new customer took employees an average of 25 minutes. Using robots designed and deployed in a few weeks on 200 PCs, the average processing time was reduced to five minutes.

SHARED-SERVICE CENTERS: AUTOMATING FINANCIAL OPERATIONS

Finance shared-service centers have to process hundreds of account receivables per day. Each e-mail notification must be read, the details checked carefully, and then reconciled with the invoice sent to the customer. The transaction then must be entered into account receivables in the accounting software.

If a company receives 200 payments per day and each takes five minutes to process, these tedious and repetitive tasks would consume 1,000 minutes per day. This is the equivalent of occupying two full-time employees for an entire business day whose skills could be better deployed to more value-added financial activities.

This whole **process now takes just a few seconds**. Instead of wasting valuable time entering data into their ERP system, accountants only need to spend 10 minutes per day checking that everything was entered correctly after the bot has done its job.

Combining various intelligent RPA technologies, an unattended robot now opens the mailboxes, parses the incoming e-mails to identify payment-related e-mails, and opens the notification of payment in an attached PDF file. Using advanced machine learning capabilities, the bot then extracts all the data required and logs the information in the accounting system of the company's ERP system. The process takes just a few seconds. Instead of wasting valuable time entering data into their ERP system, accountants spend only 10 minutes per day checking that everything was entered correctly after the bot has done its job.

UTILITIES: IMPROVING CLAIMS MANAGEMENT

For energy providers, claims management can be expensive and time-consuming. Bills are usually based on predicted usage and can therefore be inaccurate. They can also be complicated and vary according to different tariffs and changing seasons. Many customers do not understand their bills and call their supplier to challenge the invoice total or seek clarification.

However, when the customer calls, the agent may have to complete up to 100 fields by copying and pasting information from a variety of legacy systems that are often very old. This takes too long to be completed during the customer call, so the agent has to take note of the query and promise to call back with their response. The delay can cause great frustration among customers.

RPA digital assistants now automate the data entry process, enabling the agent or advisor to provide an immediate and accurate response to the customer and resolve the issue. As a result, 90% of customer inquiries are processed within minutes on the very first call.

Not getting an immediate and accurate response to their request for information causes great frustration among customers. Now, **90% of customer inquiries are processed in minutes** on the very first call.

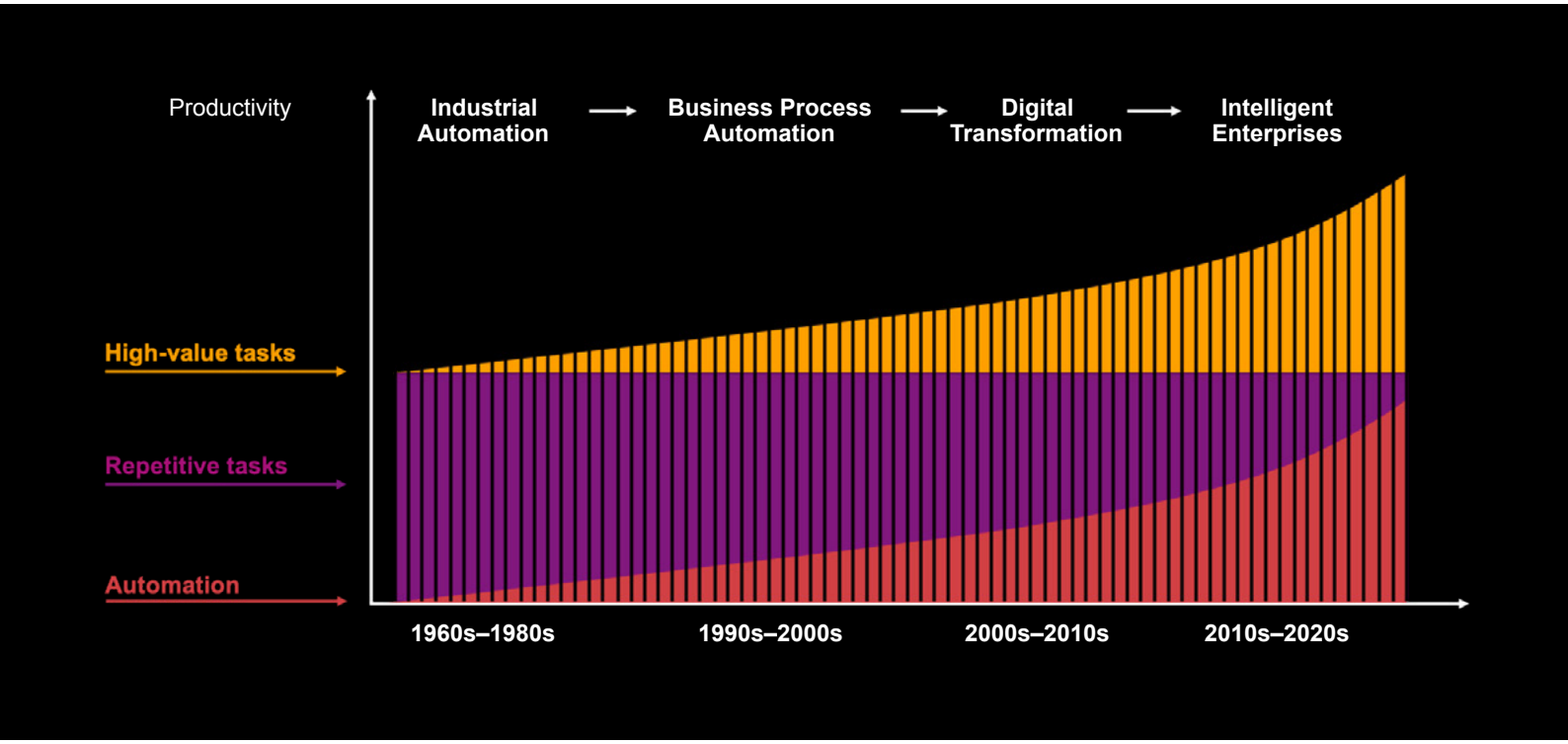
How Can You Get Started with Intelligent RPA?

Companies of all sizes are moving aggressively to automate as many of their processes as possible through artificial intelligence, machine learning, and robotic process automation. According to a recent Forrester guide*, "In 2019, robotic process automation and artificial intelligence will join forces to create digital workers for more than 40% of enterprises."

As well as delivering a vastly improved experience for customers, automation liberates employees for higher-value cognitive tasks, enables a step change in productivity, and opens up new career opportunities, ranging from programming to training.

3. Source: "Predictions 2019: Transformation Goes Pragmatic," Forrester Research, Inc., November 2018.

Figure 3: Intelligent Enterprises Elevate Employees to Focus on Higher-Value Tasks



But automation cannot simply be inserted into business processes and operations without considering the wider impact. Here are some key factors you must take into account when planning your next steps.

UNDERSTAND THE BIGGER PICTURE

Automating a specific process can have implications – sometimes negative – for other related processes. For example, automating a business process that is time sensitive could throw out workflow timing by moving things along too quickly. Or if a bot is processing sensitive or regulated information, the appropriate security controls must be in place to prevent an army of bots managing and manipulating information without human supervision and intervention.

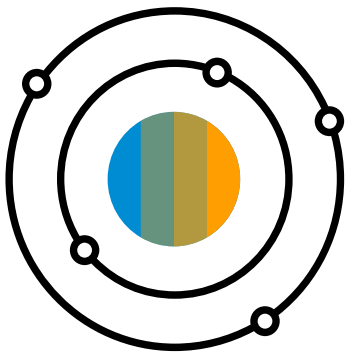
REFINE FIRST, AUTOMATE SECOND

RPA automates processes, but it doesn't necessarily improve them. Processes that have been used in organizations for years may be inefficient, even antiquated. Before considering automation, evaluate the process for potential optimization by consulting all stakeholders and considering how the process could be refined – particularly by adding intelligent capabilities such as advanced analytics or machine learning. There's no sense or value in automating a flawed process.

TAKE OWNERSHIP OF THE BOT

RPA works best in predictable processes that are based on rules. Bots can struggle to deal with variations or anomalies – particularly when working with spreadsheet-powered processes, which can be fraught with errors. Paradoxically, humans are far better at intuitively spotting issues or errors within a repeatable process. Bots can be trained – particularly when combined with artificial intelligence capabilities – but will still require human oversight and ownership.

Deployment of attended RPA is very fast. **It has no impact on existing information systems** and requires no modifications to applications.



PREPARE FOR THE FUTURE

Like any IT project, it's vital to document and catalog each bot's functionality and how its code works. Business process innovation is constantly accelerating, and it is likely that the bot may be enhanced with machine learning or AI capabilities in the future.

ADDRESS THE HUMAN CONCERNS

It's commonly assumed that people are afraid of technologies like artificial intelligence, machine learning, and robotic process automation. However, research now suggests that most workers don't fear automation, but welcome it. Many see it as technology they can work with and are keen to understand how it can help them do their jobs better. The key is to protect people, not jobs. If automation changes an individual's role, this can be a force for positive change in the organization if it improves the employee's experience, well-being, and satisfaction.

HAVE A PLAN

RPA and conversational AI bots are here to stay, so you need a plan. Whether you are planning to implement across the organization or start with small pilots, it is essential to have a strategic plan. For larger enterprises, it may make sense to create an RPA center of excellence to act as a repository of policies and strategies for RPA deployment. An RPA center can help catalog bot capabilities and dependencies and reskill the workforce.

LEARN MORE

Combining automation and artificial intelligence can deliver a step change in productivity and efficiency. This intelligent robotic process automation offers great potential to improve your customer experience and help your employees be more productive with higher-value tasks.

To find out how SAP® Intelligent Robotic Process Automation services can help, please consult the following:

Visit the website
Read the solution brief
Watch a demo
Get started

www.sap.com/contactsap

THE BEST RUN SAP®