Everest Group®

Defining Attended Robotic Process Automation (RPA)

What to Look for in an Enterprise-grade Solution

NICE®

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Introduction

Robotic Process Automation (RPA) is a key enabler of enterprise automation. With COVID-19 posing an existential threat to businesses, automation emerged as a vital lever to ensure business resilience and agility. While reducing cost and driving operational efficiency have been key drivers of adoption of RPA, there has been a distinct shift in enterprise priorities in the last 12-18 months. Today, given the precipitating talent shortage across industries, organizations are increasingly focusing on improving employee experience / engagement as they start to realize the connected benefits associated with doing so.

As organizations look to drive enterprise-wide adoption of automation technologies to improve value realization, demand for attended RPA is rising. Attended RPA enables enterprises to democratize the use of automation by providing employees with their own personal digital assistants or robots on-demand to automate mundane repetitive tasks, which helps to increase employee productivity and improve experience by enabling them to focus on more value-adding work. While unattended and attended RPA work in concert for several use cases, these modes of RPA encapsulate different automation elements for different purposes. Hence, the technological capabilities required in an attended RPA solution are different from those in unattended RPA.

As enterprises seek to drive greater value from attended RPA, they face with multiple questions ranging from the scalability and security of the attended RPA solutions to ease of use for business users. Although understanding of attended RPA is increasing on the supply side, with technology providers adding new features to their solutions, there are varying perspectives on what an enterprise-grade solution should include. To understand the most important product capabilities for enterprises in an attended RPA solution and what other provider capabilities matter the most to them, Everest Group surveyed enterprise executives and RPA practitioners across organizational sizes and industries.

This report combines the findings from the survey and select in-depth interviews, as well as Everest Group's ongoing research and IP on RPA, to provide insights around the following:

- Introduction to attended RPA and key adoption drivers
- Key characteristics of an enterprise-grade attended RPA solution – understanding enterprise preferences and the relative importance of various product capabilities
- Other provider capabilities, beyond the technological dimensions, that contribute to making an attended RPA solution enterprise-fit
- Key barriers to adopting/scaling attended RPA
- Best practices and key success factors to drive enterprise-wide adoption of attended RPA

The research explores the attended RPA journey from an enterprise practitioners' perspective and identifies capabilities that matter most to enterprises. It also looks at how mature enterprises have deployed attended RPA at scale to provide insights into the product capabilities for which enterprises have a greater preference.

Research methodology

All of the enterprises included in this research have annual revenues of than US$1 billion and have been on their automation journeys for at least a year. All of the executives whom we interviewed lead some aspect of their enterprises' automation ecosystems; their titles include head of the automation Center of Excellence (CoE), head of digital transformation, head of GBS automation, director IT – intelligent automation, lead solution architect – RPA, and head of contact center.

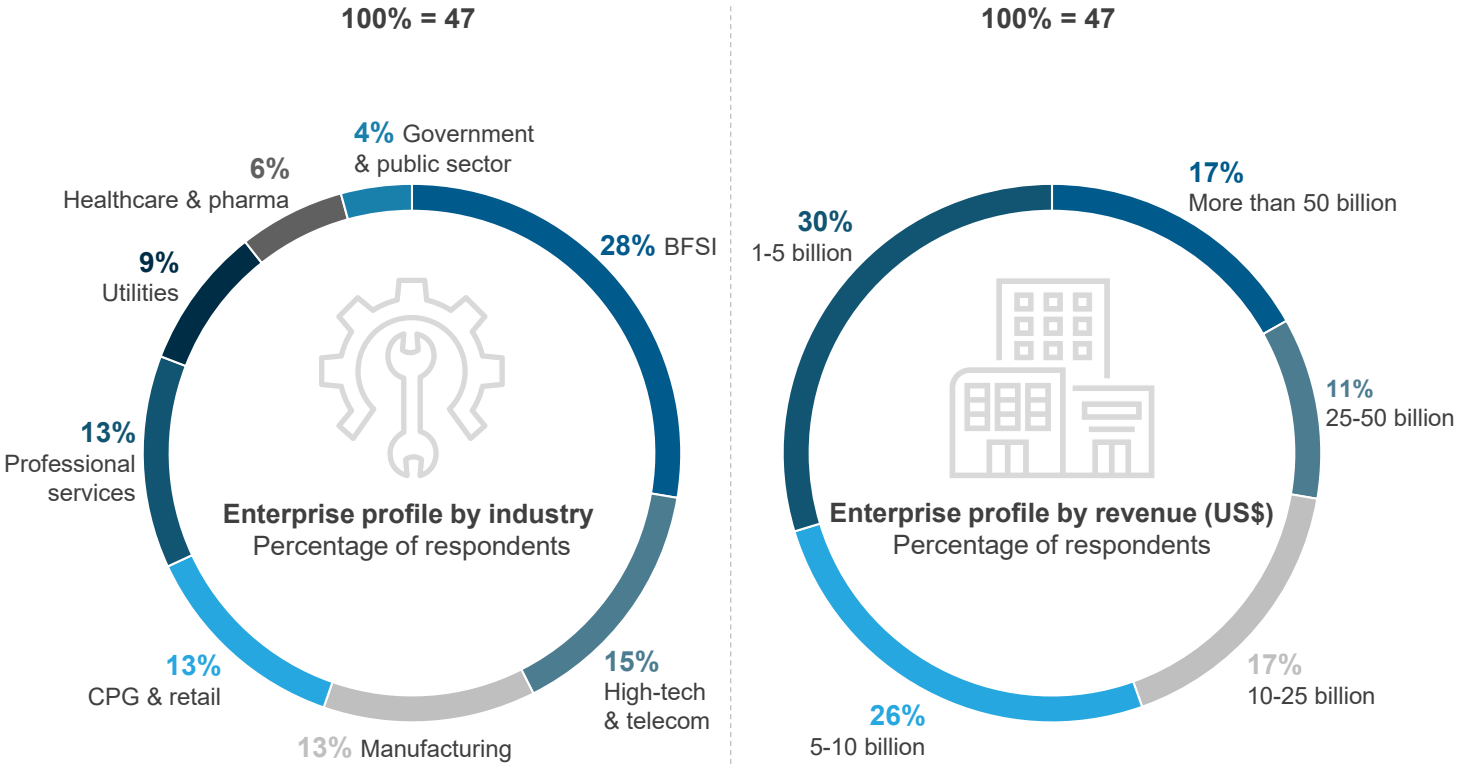
Of the 47 enterprise participants, we identified the 14 enterprises as mature adopters based on the overall duration of, and total investment in, their automation programs, stage of attended RPA adoption (scaling-up or steady-state), and the number of attended RPA licenses (more than 200). Additionally, we gathered input from five enterprises that have adopted unattended RPA but not attended RPA, to understand the barriers/challenges inhibiting attended RPA adoption.

Exhibit 1 shows the distribution of the 47 participating enterprises across industries and based on total organization revenue. It is important to note that the respondents' collective profile does not represent the global landscape of attended RPA buyers but is only evident of the sample considered for this study.

EXHIBIT 1

Distribution of profiles of respondents by industry and revenue

Source: Everest Group (2021)



Introduction to attended RPA and key drivers of adoption

The types of RPA solutions

RPA refers to a software program designed to mimic human actions to automate repetitive business tasks. There are different categories of RPA solutions and – based on the specific needs and use cases – enterprises can select the solution best suited to serve their purposes.

Unattended RPA

Unattended RPA refers to robots that do not require specific triggers or user interaction to initiate execution and can be deployed on virtual machines on-premises or in the cloud. In unattended RPA, the robots are deployed on a centralized server from which they can be controlled and monitored through a central control room/orchestrator. These automations are typically scheduled/queued to run periodically. As RPA technology continues to evolve with a host of advanced capabilities to help enterprises scale adoption, several new product capabilities are being added to the unattended RPA solutions, including features such as dynamic load balancing, auto-scalability, multi-tenancy, and support for a SaaS delivery model. To automate more complex, judgment-intensive processes, integrating RPA with AI technologies continues to garner attention from both supply and demand side.

Desktop automation

Desktop automation is a class of solutions that focuses on improving individual worker productivity by automating simple rules-based tasks. It is deployed on a worker's physical desktop and is triggered on-demand by user actions / desktop events. These tools are used primarily used to aide employees by automating simple tasks at the individual worker level; they cannot be used to automate complex end-to-end back-end processes and have limitations in terms of security, flexibility, governance, and scalability.

Attended RPA

Attended RPA is one step up from desktop automation; it transforms the way enterprises execute employee-level automation. Like desktop automation, attended RPA robots operate as a personal digital assistants to each employee, providing them with near real-time guidance and contextual assistance as and when required to execute a business process. It offers employees the ability to run automation workflows on virtual machines as well as on their desktops. Attended RPA also comes with advanced governance mechanisms to centrally monitor and control robots. Enterprises use attended RPA as a key enabler of seamless, time-critical human-robot collaboration and see features such as background automation as defining aspects of attended RPA.

Advanced guidance features such as a unified desktop screen for automation, contextual triggering of robots, and the ability to create a custom User Interface (UI) for agent guidance, enables RPA robots to assist and work seamlessly with human agents. Attended RPA offloads manual and repetitive tasks such as gathering information from multiple disparate applications from an agent so that employees can focus on higher value work.

Attended RPA has found applications across various areas such as on-the-job training through real-time process guidance, offloading manual and repetitive tasks from customer service agents so that they can focus on offering superior customer experience, and reducing the time to implement changes in processes or policies by modifying attended robots to follow the new process.

Adoption drivers and benefits of adopting attended RPA at scale

Enterprises can achieve a variety of benefits by scaling up their attended RPA initiatives:

- Strategic impact – increased customer satisfaction and superior employee experience
- Cost impact – financial savings, number of hours automated, and FTE capacity created
- Operational impact – employee productivity, operational efficiency and quality, reduction in turnaround time, and governance/compliance

Exhibit 2 lists the top reasons enterprise participants adopted attended RPA. Key adoption drivers revolve around improving employee productivity, generating cost savings, and increasing operational efficiency. As attended robots offload manual and repetitive tasks from the employees, and interface with them via interactive and intuitive screens, employees become more efficient, resulting in significant cost impact.

While employee productivity is also a key driver for mature adopters, strategic benefits such as improving customer experience/satisfaction and improving employee engagement/experience take precedence over cost savings. Agent guidance features such as unified screen and next-best-action recommendations assist employees in completing processes effectively, while minimizing errors, ensuring faster turnaround time, and indicating the right products/services to offer to the customer, thereby enhancing both employee and customer experience/satisfaction.

EXHIBIT 2

Key drivers for attended RPA adoption

Source: Everest Group (2021)

★ Top driver for mature adopters

Key Drivers	Level of importance (average rating)
★ Employee productivity	5.32
Cost savings	5.13
Operational efficiency	5.09
★ Employee experience and guidance	5.00
★ Customer experience/satisfaction	4.89
Process governance and compliance	4.70

Key characteristics of an enterprise-grade attended RPA solution – what matters?

Key technological dimensions of attended RPA

We grouped the key features of an enterprise attended RPA solution into five dimensions and asked enterprise adopters to rate each on its level of importance:

- Ease of automation development
- Ease of deployment and scalability
- Agent assistance/guidance features
- Data security and governance
- Integration with complementary capabilities

It is not surprising that data security and governance is the most important dimension for enterprises. The significant difference between its average rating and other dimensions' unequivocally demonstrates enterprise emphasis on this topic. The next most important are ease of deployment and scalability and ease of automation development.

However, for mature adopters, agent assistance/guidance surpassed ease of automation development and ranked among the top three most important dimensions along with data security and governance and ease of deployment and scalability. Because mature adopters have spent more time on their automation journeys, they have already invested in developing or gaining access to relevant talent for robot development; as a result, ease of automation development is a given. More sophisticated agent assistance and guidance features are of more importance to them as these product capabilities can contribute to improving employee experience and productivity, a key driver of attended RPA adoption. Exhibit 3 provides details of how participating enterprises, including mature adopters, rated these dimensions. In the next section, we explore each of these dimensions in detail.

EXHIBIT 3

Key technological dimensions of an enterprise-grade attended RPA solution

Source: Everest Group (2021)

★ Top dimension for mature adopters **% of respondents who have indicated:** High (5-7) Medium (3-4) Low (1-2)

Key technological dimensions	Average rating	Respondents		
★ Data security and governance	5.69	82%	17%	1%
★ Ease of deployment and scalability	5.26	74%	23%	3%
Ease of automation development	5.20	71%	24%	4%
★ Agent assistance / guidance features	5.11	69%	28%	3%
Integration with complementary capabilities	5.08	68%	29%	3%

Most important product functionalities across technological dimensions

Data security and governance

RPA robots are often used to move sensitive data across systems while executing a process. This data can range from customers' confidential Personal Identifiable Information (PII) to system credentials, and any kind of data breach can have major repercussions for enterprises. Therefore, robust security and governance is of paramount importance to enterprise customers when they look for an enterprise-grade attended RPA solution. Furthermore, as attended RPA is more often adopted at the individual user level, where each employee is equipped with a digital assistant to automate repetitive tasks, security features such as audit trails and compliance with security standards are even more crucial as they are used to identify operational errors and subvert fraudulent activities.

Exhibit 4 shows the relative importance of product capabilities in the data security and governance dimension.

EXHIBIT 4

Data security & governance

Source: Everest Group (2021)

★ Top dimension for mature adopters **% of respondents who have indicated:** High (5-7) Medium (3-4) Low (1-2)

Product capabilities / functionalities	Average rating	Respondents		
★ Robust logging of robot activity / audit trails for accountability	6.02	83%	17%	0%
★ Adherence to IT policy and security standards such as ISO	5.85	83%	15%	2%
★ Session and error logs for debugging and problem resolution	5.79	81%	19%	0%
Support for single sign-on	5.62	85%	15%	0%
Out-of-the-box integration with the Active Directory	5.51	77%	23%	0%

We explain the top three features in this dimension below.

- **Robust logging of robot activity / audit trails for accountability:** it is imperative to have robust log files to ensure that actions performed by robots can be properly monitored. Reviewing logs / audit trails can help identify abnormal spikes in activity, access of specific systems, and use of privileged accounts/credentials. Log collection, storage, and analysis play a key role in ensuring a company's digital security
- **Adherence to IT policy and security standards:** compliance with the organization's internal security standards and IT policies is a high priority for enterprises as well as authorities in a regulated sector. Any RPA platform that holds qualified security certifications such as ISO and Veracode and is

compliant with regional regulations such as GDPR and FIPS, is likely to align well with the enterprise's IT policies to provide a secure environment and take less time to implement and deploy. Enterprises might also have to pay heavy fines for non-compliance with the provisions, significantly increasing overhead costs

- **Session and error logs for debugging and problem resolution:** session-level logs are crucial in helping system administrators, support teams, and developers to formulate and enact swift solutions to any errors that might go undetected in the design and testing stages. Comprehensive robot session and error logs along with a near real-time debugging capabilities during the design stage allow developers to quickly identify and resolve issues within a workflow

Our survey found that the top-rated features for mature enterprises are match those above; these security and governance features are critical for all enterprises irrespective of their maturity.

Ease of deployment and scalability

This dimension encompasses some of the most important product capabilities to move from desktop automation to enterprise-grade attended RPA at scale. The dimension involves robot management features that are considered less important when deploying attended robots on individual desktops for personal productivity, but that become critically important as organizations implement attended RPA at scale with centrally managed automations.

The top-rated features in this dimension are:

- **Ability to execute automation in the background / minimized screens without interrupting the user:** a key aspect of running attended automations on user workstations is that it should not interrupt the user working on the same machine. Typically, when employees are working on their desktops, many applications are minimized. The attended robots must be able to connect into minimized applications while running. The ability to support the Picture-In-Picture (PIP) mode allows users to run attended automations in parallel with the other processes conducted. Attended automation running in the PIP mode runs in an isolated Windows session, allowing the user to use the machine while the process is running. This enables automation in the background while the employee may be working on something else on the desktop
- **Availability of a server component to centrally manage attended robots across multiple desktops:** a centralized server is essential to manage attended automations deployed across several employee workstations. The central control room: offers the ability to monitor the functioning of the attended robots; allows organizations to better manage version control and upgrades to deployed automations; enables secure caching/copying of operational information for robot recovery or exception handling; offers the ability to store logs; and, enables role-based access control. A central server that can manage, monitor, and undertake version upgrades for attended robots is a must-have for enterprises to adopt attended RPA at scale. A centralized application server also enables reusability of robotic workflows and is critical for complex use cases that require attended and unattended robots to interact
- **Ability to execute multiple concurrent/parallel automations / guidance flows on the same machine:** the ability to run concurrent robot executions within the same environment is critical to optimizing the use of attended robots. Several business processes often require the human agent to perform multiple tasks at the same time, many of which can be completed by using attended robots, such as gathering customer information from various applications, updating data in the underlying systems, and sending a confirmation email to the customer. Enabling users to run parallel attended

automations in the background, executed through different event-based triggers, reduces turnaround time, thereby significantly improving customer as well as employee experience

Mature adopters also rank the functionalities we have discussed above as top product capabilities. Mature enterprises, many of which have deployed unattended robots and are looking to automate relatively complex use cases, have ranked the ability of an attended robot to exchange information with other attended/unattended robots in near real-time highly as well.

Exhibit 5 indicates the relative importance of the product capabilities in this dimension.

EXHIBIT 5

Ease of deployment and scalability

Source: Everest Group (2021)

★ Top dimension for mature adopters **% of respondents who have indicated:** High (5-7) Medium (3-4) Low (1-2)

Product capabilities / functionalities	Average rating	Respondents		
★ Ability to execute automation in the background / minimized screens without interrupting the user	5.74	81%	17%	2%
★ Availability of a server component to centrally manage attended robots across multiple desktops	5.49	79%	19%	2%
★ Ability to execute multiple concurrent / parallel automations / guidance flows on the same machine	5.49	79%	19%	2%
Ability to create/define event-based triggers based on desktop events, user actions, etc.	5.34	77%	21%	2%
Features to reduce robot footprint and optimize CPU and memory consumption	5.34	77%	23%	0%
★ Ability of an attended robot to exchange info with other attended / unattended robots in near real time	5.17	68%	32%	0%
Ability to exchange information between the human agent and the attended robot in near real time	5.02	66%	26%	9%
Ability to trigger/control attended robots through natural language voice / chat commands	4.83	66%	23%	11%

Ease of automation development

Ease of automation development is a core dimension, especially for enterprises in the early adoption stages. It encompasses how easy it is to learn the software and develop automations and incorporates flexibility and ease of robot design and development, reusability, and interoperability. With increasing enterprise focus on democratizing RPA across the organization and enabling citizen developers with limited technical knowledge to create automations on their own, demand for no-code development with drag-and-drop features is rising. It also places more emphasis on access to training materials and documentation that are easy to grasp and follow for business users to start developing automations without significant IT involvement and support. Exhibit 6 shows respondents' relative ranking of the automation development features.

EXHIBIT 6

Ease of automation development

Source: Everest Group (2021)

★ Top dimension for mature adopters **% of respondents who have indicated:** High (5-7) Medium (3-4) Low (1-2)

Product capabilities / functionalities	Average rating	Respondents		
★ Ability to develop attended and unattended automations in a single platform	5.53	74%	23%	2%
Availability of pre-built connectors/integrations with leading enterprise applications	5.51	79%	19%	2%
Extensive libraries of pre-built reusable automation assets	5.45	81%	19%	0%
★ Features for collaboration when developing automations	5.36	74%	26%	0%
★ Ability to connect to the correct instance when more than one instance of the application is open	5.34	74%	21%	4%
No-/low-code automation development features such as drag-and-drop	5.23	70%	26%	4%
Version control and management	5.11	68%	30%	2%
Built-in macro-recorder to create automation workflows	4.91	64%	30%	6%
Automated workflow generation using desktop process mining capability	4.83	62%	30%	9%
AI-/ML-based built-in guidance feature to aid developers in creating automation workflows	4.74	64%	21%	15%

We describe the top three ease of automation development features below.

- **Ability to develop attended and unattended automations in a single platform:** having the ability to develop attended and unattended RPA robots in the same platform has various advantages. It is easier to train developers on a single platform than multiple platforms. While some transactional tasks can be fully executed by deploying only unattended or attended robots, most processes require a combination of both. In scenarios where attended and unattended robots must interact with each other, more seamless integration is possible when they have been developed on the same platform. While some enterprises prefer integrating best-of-breed solutions, using the same provider for attended and unattended RPA speeds onboarding, implementation, and deployment
- **Availability of pre-built connectors/integrations with leading enterprise applications:** an attended RPA robot is frequently required to interact with various enterprise applications such as SAP, Oracle, and Microsoft applications while automating different tasks. Pre-built connectors/integrations provide a faster, easier, and more robust way to create automations that involve RPA robots to interact with such applications
- **Extensive libraries of pre-built reusable automation assets:** automations that are commonly used across different processes need not be created every single time. Access to, or the ability to create, a library of such reusable automation workflows, methods, and/or components can significantly reduce the time and effort required to build new workflows and ensure that the quality of these automations adhere to expected standards

Interestingly, a larger percentage of respondents rated the availability of pre-built connectors and reusable automation assets highly (5-7), emphasizing the importance and enterprise awareness of these capabilities. While some basic automation development features are more crucial for enterprises starting their adoption journeys, mature enterprises value more advanced features for developing complex automation workflows. In addition to the ability to develop attended and unattended automations, features to enable collaboration when developing automations and the ability to connect to the correct instance when more than one instance of the application is open, are the top features for mature adopters.

Agent assistance and guidance features

Respondents to our survey indicated that agent assistance and guidance is one of the key dimensions that differentiates attended RPA from unattended RPA, as these features relate to the core adoption objectives related to improving employee and customer experience. Features such as customizable UIs, unified screen, and contextual triggering of RPA robots enable human agents to seek assistance from an attended robot in near real time, helping them to reduce turnaround time and focus on higher-order work. It is interesting to note that mature adopters ranked this dimension among the top three, while all participating enterprises ranked it lower. Mature adopters, which have more sophisticated robot development capabilities, place more value on advanced features that can further increase employee productivity over other dimensions such as ease of robot deployment.

Based on the enterprises' responses, the top three agent assistance and guidance features include:

- **Unified screen for desktop automation:** a unified screen enables users to leverage attended robots to fetch information from multiple applications into a single easy-to-read screen for the agent, reducing the manual effort needed to access applications and speeding resolution. RPA platforms that offer this capability empower users with a designer to create/edit these dynamic forms/screens. In some cases, these forms can also trigger next best action based on the gathered information

- **Ability to create a customizable interactive UI:** custom and interactive UIs streamline robot-agent communication. Users can leverage callouts and on-screen wizards with interactive elements such as buttons, text fields, drop-downs, help bubbles, and tooltips to create highly intuitive UIs with built-in features for step-by-step process guidance, alerts, etc. These UIs can also be created to ask a question requiring a user response, prompting the user to click buttons, complete fields, and upload files, for the attended robot to advance to the next step ,which reduces the time needed for employee training, increases adoption, and improves agent productivity
- **Contextual triggering of robots for agent assistance:** to enable seamless agent-robot interactions, attended robots can be triggered automatically by analyzing customer-agent voice or chat interactions in near real time using Natural Language Processing (NLP) capabilities or integration with chatbots. Agents can also trigger attended robots using voice commands or chat in natural language. These capabilities can integrate with the unified screen for better coordination

Our survey shows that mature enterprises rate the same three features as most important within the agent assistance and guidance dimension, followed by relatively more advanced features such as AI-based next-best-action action recommendation. Exhibit 7 shows the relative importance of solution characteristics constituting the agent assistance and guidance dimension.

EXHIBIT 7

Agent assistance and guidance features

Source: Everest Group (2021)

★ Top dimension for mature adopters **% of respondents who have indicated:** High (5-7) Medium (3-4) Low (1-2)

Product capabilities / functionalities	Average rating	Respondents		
★ Unified screen for desktop automation to capture relevant data and present it in a customizable screen	5.36	81%	17%	2%
★ Ability to create customizable UI such for interactive use cases including on-screen process guidance	5.13	66%	32%	2%
★ Contextual triggering of robots for agent assistance by analyzing customer-agent interactions or screen events	5.13	64%	36%	0%
Built-in AI-based next-best-action action recommendation for assisting agents	5.00	64%	32%	4%
Automatic generation of after-call summary and transcript in contact center scenario	4.96	70%	21%	9%

Integration with complementary capabilities

While RPA is extremely useful for automating repetitive tasks, as organizations move along the automation adoption curve, they increasingly need to automate end-to-end processes to drive superior outcomes. To achieve this goal, it is imperative to look at the entire automation lifecycle from discovering automation opportunities and optimizing processes prior to automation to automating judgment-intensive processes and managing a hybrid workforce through comprehensive orchestration capabilities. This requires RPA to integrate and interoperate with other complementary technologies such as process mining, process orchestration, conversational AI, and Intelligent Document processing (IDP). Integrations with these other automation technologies augments attended RPA and significantly enhances the overall value of the deployed automations.

Based on the enterprises' responses, the top three features in this dimension are:

- **Integration with a process orchestrator:** process orchestration software helps business users to manage end-to-end business processes by offering the ability to orchestrate the flow of work across human workers, digital workers (such as RPA, IDP, and conversational AI), and enterprise applications in long-running workflows. Integration of RPA with a process orchestrator / BPM solution helps in automating long complex processes that involve human steps, unattended robots, and attended robots. It expands the scope from task-level automation to process-level automation, thus increasing the overall value. For attended RPA use cases, this integration is crucial as it allows the creation of control points for agents to step into the automation loop wherever needed. It also enables users to trigger multiple attended robots in parallel to execute different parts of a complex process
- **Integration with conversational AI / chatbot:** integration with chatbots can help enterprises automate conversational workflows with bi-directional communication between chatbots and RPA robots. Customer requests that come through self-service channels that involve a conversational AI interface can be executed using an attended robot; for example, the attended robot can be triggered to update a customer address in the database and send a confirmation email to the customer. In cases in which a chatbot receives a complicated customer query that the RPA robots cannot take action on, the attended robot can be triggered to route the query to an employee. Integration with conversational AI can also be used to create a natural language interface through which agents can trigger attended RPA bots using chat/voice commands
- **Integration with Intelligent Document Processing (IDP):** IDP software solutions blend the power of AI technologies to process unstructured and semi-structured documents and extract relevant data that can then be leveraged in a structured format. There are several use cases of attended RPA that involve the robots to handle documents uploaded in image (JPG and PNG) and PDF formats, such as extracting a customer's address from a KYC document to update in the database, invoice processing, and claims processing. Integration with IDP can expand the scope of attended robots to automate document-intensive tasks without human intervention

While mature adopters rank integrations with process orchestrator/BPM and conversational AI solutions, embedded capability, or integration with Business Intelligence (BI) and advanced analytics platforms are the top-rated capabilities under this dimension for that group. As mature enterprises scale up their attended RPA initiatives, the ability to monitor and analyze automations' performance is critical for continued value realization. Integration with a BI tool helps them collect the necessary data and create customized reports to analyze automation performance, enabling them to improve operational decision-making.

Exhibit 8 shows the relative importance of solution characteristics constituting the integration with complementary capabilities dimension.

EXHIBIT 8

Integration with complementary capabilities

Source: Everest Group (2021)

★ Top dimension for mature adopters **% of respondents who have indicated:** High (5-7) Medium (3-4) Low (1-2)

Product capabilities / functionalities	Average rating	Respondents		
★ Integration with process orchestrator to handle processes with human, robot, and systems steps	5.47	77%	23%	0%
★ Integration with conversational AI / chatbot to process customer requests in near real time	5.28	71%	23%	6%
Integration with Intelligent Document Processing (IDP) to process semi-/un-structured data	5.23	72%	23%	5%
★ Embedded capability or integration with Business Intelligence (BI) and advanced analytics platform	5.11	70%	30%	0%
Integration with desktop process mining / task mining to identify/prioritize high-potential automation opportunities	4.91	64%	36%	0%
Integration with process mining tools to gather data for reporting and analytics	4.66	64%	32%	4%

Other provider capabilities that matter to enterprises

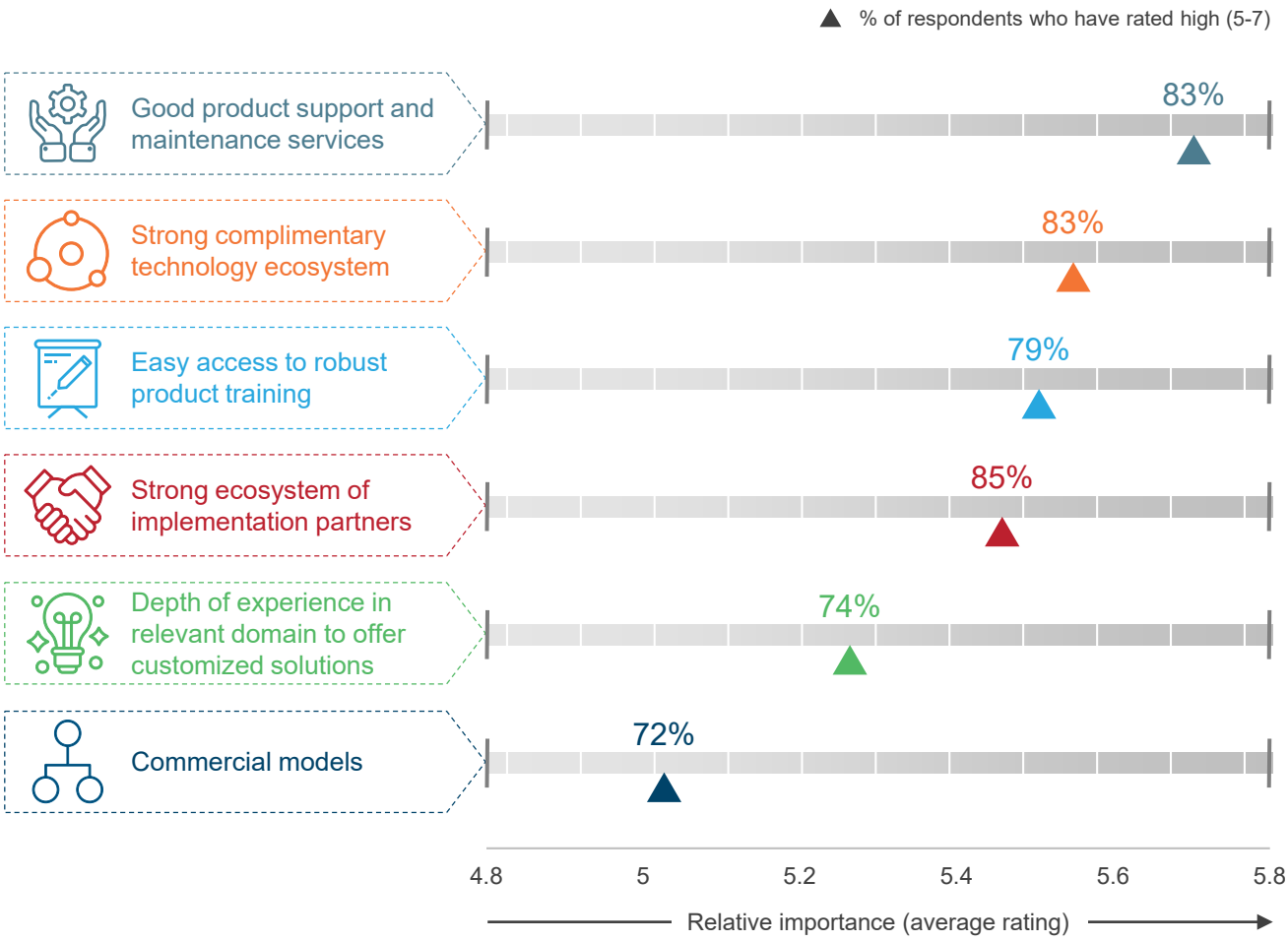
There is more to enterprise attended RPA than just technology; there are a variety of other provider capabilities on top of product functionality that are critical to making a solution enterprise-grade. Any technology that is not well supported does not have a place in the enterprise.

We asked study participants to rate some of the key provider capabilities, beyond the core product offering, on their level of importance to them; Exhibit 9 shows these ratings.

EXHIBIT 9

Other provider capabilities that matter to enterprises

Source: Everest Group (2021)



The other provider capabilities that matter to enterprises (in decreasing order of importance) are:

- **Good product support and maintenance services:** On-time product support and maintenance services are crucial for a successful attended RPA adoption. Features such as an embedded help tools, regular software maintenance support, migration toolkits, and an online user community and support forum provide enterprises with the means to successfully maximize the value out of their attended RPA investments
- **Strong complimentary technology ecosystem:** given that enterprises today are focused adopting different automation technologies in a more holistic manner to extract more value from their deployed RPA solutions, a strong ecosystem of complementary technologies is increasingly important
- **Easy access to robust product training:** support for on-site and online training in different regional languages either by the provider or via training partners, free training modules, and role-based courses help in wider adoption of attended RPA across the organization
- **Strong ecosystem of implementation partners:** a good ecosystem of implementation partners increases enterprises' preferences for an RPA solution as it helps them get consultants or bring in skills when needed

- **Domain expertise to offer customized solutions:** respondents indicated that, while the depth of experience in the relevant domain may not be a top criterion, it often is a key differentiating factor between providers
- **Commercial models:** while commercial models are low on enterprises' priority lists as a make-or-break criterion, pricing constructs that require low upfront investments and provide more flexibility to scale up or down are often preferred

Key barriers to adopting/scaling attended RPA

To realize superior value from their investments in attended RPA, it is important for organizations to understand the key challenges they may face in adopting and scaling attended RPA. Exhibit 10 ranks the top challenges enterprises in implementing attended RPA. We also surveyed enterprises that have adopted unattended RPA but not attended RPA; Exhibit 10 notes the top three challenges these enterprises faced as they attempted to expand the scope of their programs from unattended to attended RPA.

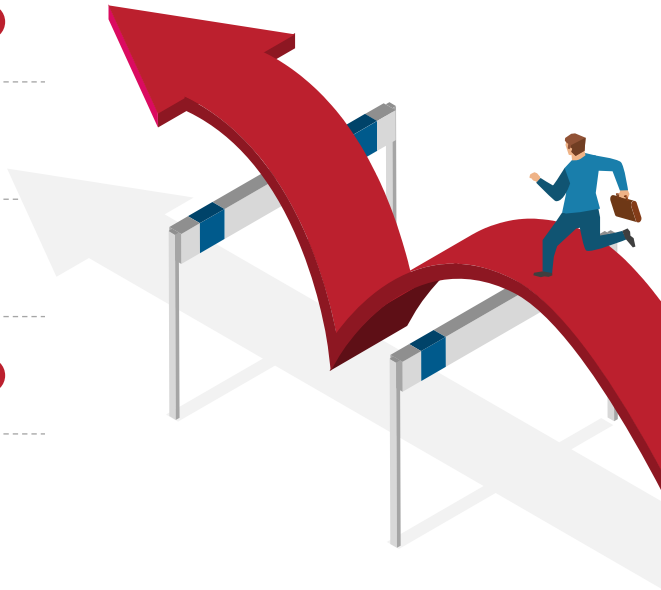
EXHIBIT 10

Challenges to adopting/scaling attended RPA

Source: Everest Group (2021)

● Top challenge for non-adopters

Challenges faced by enterprises in adopting/scaling attended RPA	% of enterprises indicating as key barrier
Constituting and implementing a CoE / operating model	68% ●
Training/accessing resources to develop and use attended automation	64%
Lack of awareness about potential value of attended RPA	61% ●
Implementing the right change strategy and approach	61%
Creating a robust automation strategy and roadmap	55%
Removing roadblocks from compliance and security functions	50% ●
Maintaining a healthy pipeline of opportunities	47%



Digging deeper into the top three challenges:

- **Constituting and implementing a CoE / operating model:** a CoE provides a foundational structure and governance framework for successful automation execution, ensures strategic alignment among all the stakeholders involved, and equips the enterprise with a forum to share resources and discuss challenges and best practices. However, constituting and implementing a CoE can be challenging as it requires dedicated funding and support, cross-functional members from different parts of the organization such as IT and business, and the right operating model (centralized vs. decentralized vs. hybrid), for a successful implementation
- **Training/accessing resources to develop and use attended automation:** an organization can realize the potential of attended RPA only when it acquires or develops relevant talent. To enable existing employees to become citizen developers, they need to be incentivized through the right rewards and recognition and provided the necessary training to acquire those skills. Difficulty in acquiring and retaining automation-skilled talent and high training costs to develop in-house skills further limit talent accessibility and poses a significant threat to project success
- **Lack of awareness about potential value of attended RPA:** when compared to unattended RPA, there is a significant lack of awareness among C-suite executives as well as employees around the strategic and operational benefits attended RPA offers. The CoE must work along with the attended RPA provider to educate the right stakeholders and evangelize attended RPA across the organization by demonstrating early wins through carefully chosen Proof-of-Concept (PoC) / pilot projects

While constituting a CoE and lack of awareness about potential value from attended RPA are common challenges for both adopters and non-adopters of attended RPA, non-adopters have also highlighted that removing roadblocks from compliance and security functions is a significant barrier. While this is a concern for unattended RPA adoption as well, its severity is higher for attended RPA especially in the case where the robot licenses are distributed among employees and not centrally monitored (versus unattended RPA, which is usually driven with a top-down approach and where the robots are centrally managed and controlled with significant involvement of enterprise IT). Hence, it becomes critical to choose a provider that offers advanced capabilities which allow distributed attended RPA licenses to be monitored centrally.

Removing roadblocks from compliance and security functions emerging as a major barrier also links to the preference that we observed earlier that data security & governance are very important features of enterprise attended RPA. Attended RPA robots access enterprise systems and the underlying data using human agent credentials and require organizations to have robust access control mechanisms in place to avoid unauthorized access and accountability issues. Obtaining buy-in from compliance and IT security functions is critical to allow attended RPA robots to access sensitive data such as Personal Identifiable Information (PII) to execute enterprise-wide automation projects.

Best practices for successful adoption

Mature enterprises shared a variety of best practices they used to overcome these challenges:

Secure executive sponsorship and empower the CoE

Mature adopters commonly recommend formulating and empowering the CoE early in the automation journey as a vital success factor. Securing executive sponsorship can help fund the CoE as it creates the foundational structure and governance framework for a successful automation program.

Appoint champions to drive awareness

Identifying program torch bearers from among employees can aid in spreading awareness about attended RPA technology and its benefits, addressing concerns, and disseminating success stories. They can help other employees overcome resistance in adopting the solution and help project managers deliver outcomes in collaboration with other team members. The champions can also facilitate change management by helping enterprises position attended RPA as a means to reduce repetitive and manual work and as an opportunity for employees to focus higher value work.

Drive citizen developer-focused training programs

Mature enterprises suggest using several strategies to secure the right talent for automation initiatives, including implementing dedicated internal training programs, leveraging third-party service providers to help in-house attended RPA development skills, and offering continuous learning and upskilling. Some enterprises also develop a range of educational assets such as demo presentations, videos, and help guides to better enable citizen developers to create automations on their own.

Enable a crowd-sourcing approach for use case identification

Mature enterprises endorse adopting a bottom-up or crowd-sourcing approach to use case identification, which has the added benefit of having more ideas bubble up from process owners themselves. To drive citizen-led discovery, many mature enterprises have set up dedicated portals where business users can submit automation ideas that the CoE prioritizes for large-scale adoption based on factors such as the scope of the automation, productivity gains, reduction in process time, process criticality, and potential cost savings / ROI.

Partner with enterprise IT early on

Ensuring that enterprise IT is on board from the start is crucial to program success, as it helps in understanding the current application landscape and infrastructure requirements for relevant technology implementations, as well as in addressing data security and privacy considerations (such as access to system data and enterprise applications).

Conclusion

The need for digital transformation has grown significantly following the pandemic, and automation has emerged as a key enabler in this regard. While generating cost savings and driving operational efficiencies have traditionally been the major drivers for RPA adoption, enterprises are increasingly focusing on improving employee experience and customer satisfaction as the key objectives of RPA adoption.

Consequently, the demand is rising for attended RPA, a platform that empowers employees with their own personal digital assistants, enabling them to automate mundane repetitive tasks and allowing them to focus on more value-adding work. However, to achieve meaningful impact, it is vital to select the right enterprise-grade attended RPA solution.

Our research explores the key product capabilities that make a solution enterprise-grade and reveals that enterprises are looking for a secure and robust attended RPA platform that is easy to deploy and scale and offers a user-friendly robot development environment. Enterprises that want to significantly scale up their attended automation deployments also need advanced agent assistance and guidance features to better augment their employees and unlock more value from these investments. In addition to core solution features, other provider capabilities such as product maintenance and support, ease of access to product training, an ecosystem of complementary technologies and implementation partners, and relevant domain expertise are key enterprise considerations.

To ensure superior outcomes from attended RPA adoption, it is imperative to select a solution with enterprise-grade capabilities, evaluate other provider capabilities that are crucial for successful implementation, be cognizant of the challenges that might hinder organization-wide adoption, and learn from the best practices of mature adopters to address these challenges and achieve success.

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This study was funded, in part, by NICE

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