The New Frontier Of Automation: Enterprise RPA

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Executive Summary

Robotic process automation (RPA) is the next step in the evolution of business processes since it significantly reduces the need for employees to perform routine, rule-based, high-volume activities, enabling them to instead focus on more strategic tasks that help the business.

In August 2017, UiPath commissioned Forrester Consulting to evaluate the state of RPA. Forrester conducted an online survey with 105 operations decision makers in the US, UK, Japan, Germany, and France to explore this topic.

Forrester's in-depth survey yielded several important recommendations:

KEY FINDINGS

› **Include CX and revenue in your hunt for operational efficiency.**
Typical RPA use cases focus on reducing costs by integrating legacy applications. However, RPA can also generate new revenue and improve the customer experience (CX). Changes to CX can be more dramatic: RPA was found to reduce the average hold time that annoys customers.

› **Review managed services and emerging RPA-as-a-service (RPAaaS) options.** On-premises integration, virtual desktop infrastructure (VDI) integrations, and desktop client interface issues have led to an on-premises RPA market. But we expect an RPA managed services market to develop in the next two years. Solution partners, which many clients use to jump-start RPA deployments, have specialized skills that will be difficult for many to replicate.

› **Build an assessment model to guide the RPA process selection.**
RPA may plug gaps in legacy systems but can delay much-needed system modernization. Some processes will benefit more from new digital approaches, not from RPA robots doing the same process with less labor.

› **Start centrally but plan to federate responsibility to the business.**
Formalize the operating model early in the RPA journey. It's acceptable to tune operations in a small centralized team, but plan to distribute the functions outlined to individual business units. This will drive a quicker set of results and avoid a host of potential RPA issues.

› **Build the operating model around automation — not a specific RPA tool.** Forrester has identified 13 artificial intelligence (AI) technology building blocks that can add intelligence to the digital workforce of the future.

› **Keep change management initiatives front and center.** Despite their stated desires, internal users and immediate managers fear change and are worried about robotic solutions replacing them: 67% of automation technologists cite the fear of job loss as creating the most severe negative attitudes.[1] Allocate resources to ensure that change becomes the norm, not a feared outcome.

Nine out of 10 firms report that working with digital workers will be an extremely positive or moderately positive experience.

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Enterprises With Stalled Digital Transformation Efforts Look To Emerging Digital Workforce As A Savior

Digital transformation is changing how enterprises conduct business, requiring an increasingly broad range of technologies. Even though 90% of survey respondents cite digital transformation as a top priority, only 19% show progress within that journey. As a result, enterprises are ripe for technologies that can show immediate progress. In other words, those that have not adopted digital processes will face significant competitive disadvantages compared to those that leverage existing and new, more powerful emerging technologies to lower costs, increase speed of processes, and achieve superior insights into the mountains of data they collect to make better and more accurate decisions.

Enterprises that embrace and are on the verge of acquiring newer technologies will manage endless, dull workplace routines. Robotic process automation is one of the key technologies enterprises are seeking, as the business processes that RPA automates are typically rule-based and highly repetitive. It's no surprise then that survey respondents plan to leverage RPA-enabled digital workers to engage with both their customers and more so their employees to improve customer experiences, operational excellence, and front-end/sales enablement execution (see Figure 1):

› **Automation will make current roles more effective and efficient.** Digital workers are expected to help improve back-end operations by enabling customer service teams to be more efficient (58%) and effective (50%). How? By leveraging RPA, workers can instead focus on more strategic tasks while RPA handles the repetitive tasks faster, accurately, and more cost-effectively than traditional workers. In fact, RPA is also poised to make workers more productive (51%) by enabling them to focus on higher-order strategies like focusing on more strategic work (48%).

› **RPA is expected to make business processes much more efficient.** Due to the business processes it automates (highly repetitive and rule-based tasks), RPA enables firms to create digital workforces that execute repeatable process steps faster, more accurately, and cost-effectively than traditional human workers. It's no surprise then that 58% of survey respondents plan to improve business process efficiency from the use of RPA-enabled digital workers.

› **RPA will help create a deeper customer profile.** RPA today is simple (few static rules, less than a few hundred clicks, and only a few apps accessed), yet over the next two years robots will essentially be powered by AI, which means they will be able to conduct intelligent searches. In fact, 46% of respondents said RPA robots will be able to diversify their information gained to create a much more cohesive 360-degree view of the customer.

What is RPA?

RPA is powered by artificial intelligence and machine learning capabilities to handle a high volume of repeatable tasks.
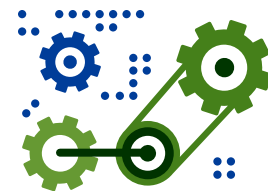
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Figure 1

"What do you plan to gain from leveraging RPA-enabled digital workers to engage with employees?"
(Showing top 10 only)

■ Improve customer experiences   ■ Improve operational excellence   ■ Improve front-end/sales enablement

Make customer service teams more efficient	**58%**
Improve business process efficiency	**58%**
Use digital workers to offload routine existing contact center agents tasks	**55%**
Improve overall workforce productivity	**51%**
Make customer service teams more effective	**50%**
Allow customer service teams to focus on value-generating tasks as RPA automates workflows	**48%**
Change the role of customer service staff to focus on more strategic work	**48%**
Use RPA chatbots to gather diverse information from legacy systems to create an efficient 360-view of the customer	**46%**
Improve the ability to retain customers	**46%**
Replace legacy "knowledge management" systems used by employees with chatbots enabled with smart search	**45%**

Seventy-three percent of firms said digital workers are "Very valuable" or "Valuable" in supporting internal employees.

DIGITAL WORKERS DIRECTED AT LIFTING EMPLOYEE PERFORMANCE IS TODAY'S OPPORTUNITY

Competitors that digitize their ecosystems, as well as emerging entrants that are much more agile and tech-savvy than traditional firms, have put an ever-mounting pressure on firms to reduce costs. Typically, RPA will have repeatable and predictable interactions within IT applications rather than requiring an entire process redesign. RPA can mimic the way people interact with applications and make decisions based on simple rule sets.

Combining the traditional worker with digital workers or "robots" drastically reduces errors (62%) as the entire end-to-end process can be enhanced by robots with more selective and critical human intervention (see Figure 2). Additionally, many organizations require routine processes to be performed manually that lack the scale or value to warrant automation via IT transformation. RPA, on the other hand, takes over these routine tasks while the traditional worker focuses on more value-added strategic work (61%).

Once a process has been defined as a series of rules or instructions a digital worker can execute, the tasks it performs can be monitored and recorded at every step. In other words, traditional workers determine what needs improving and how — resulting in better decision making by the organization (55%).

Digitally Advanced Enterprises Will Target AI-Powered Robots To Meet Customer Requirements

Forrester's research suggests that in 2018, RPA-based digital workers (i.e. robots) will replace or augment 311,000 office and administrative positions and 260,000 sales and related positions. As a result, the RPA software market will remain heated and exceed $1 billion by the end of 2018.[2] The survey correlates with those findings: 49% of firms stated that they plan to implement digital workers within the next 12 months or more, while 45% said they have already implemented digital workers within the past 12 months or more (see Figure 3).

It's important to understand where enterprises expect their investments to go. Fifty-two percent of survey respondents said they expect that chatbots directed at customers will improve self-service. Asking customers questions or answering their queries is one manner of use, but 48% expect that chatbots directed at employees will better help them service customers. Here's why (see Figure 4):
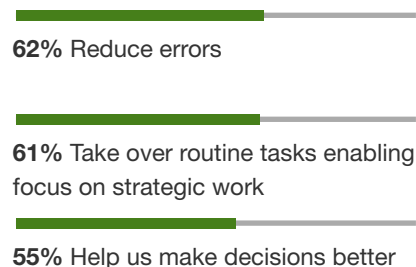
› **It makes employees "smarter."** Robots powered by RPA tools will boost an employee's ability to get answers faster, according to 64% of survey respondents. How? A digital workforce can work 24 hours a day, seven days a week. To put it simply, digital workers can answer queries any time during the day. In doing so, they can provide solutions for employees who would normally spend many hours trying to find the best answer. These chatbots can also improve adherence to compliance (both internal and external) requirements (34%).

Figure 2

"What are the affects to you and your job performance from having increased collaboration with the digital worker?"
(Select all that apply; showing top three only)

"Digital workers . . ."

62% Reduce errors

61% Take over routine tasks enabling focus on strategic work

55% Help us make decisions better

Base: 105 manager-level or above respondents from operations groups, shared services, finance/accounting, and other lines of business
Source: A commissioned study conducted by Forrester Consulting on behalf of UiPath, December 2017

Figure 3

"What are your organization's plans when it comes to digital workers?"

- ■ Plan to implement
- ■ Implemented

6% Interested but no plans to implement

19% Planning to implement in the next one to three years

30% Planning to implement within the next 12 months

29% Implemented within the past 12 months

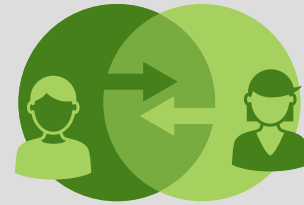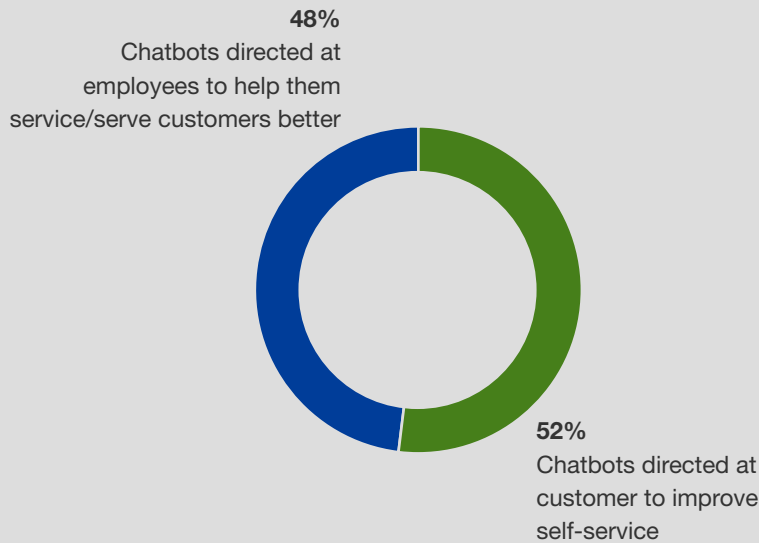**16%** Implemented within the past one to three years

Base: 105 manager-level or above respondents from operations groups, shared services, finance/accounting, and other lines of business
Source: A commissioned study conducted by Forrester Consulting on behalf of UiPath, December 2017

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› **There is growth potential to better answer complex questions.** AI, the theory and capabilities that strive to mimic human intelligence through experience and learning, is becoming more prevalent in our daily lives. Combined with RPA, this technology is still developing (52%), and the growth potential is huge as enterprises continue to steadily improve their automation algorithms and continue to see new applications for RPA to create better automation use cases.

› **There is too high of a training burden that stems from tangled legacy systems.** Wrestling with cumbersome systems consumes too much human talent. For example, training time to learn back-end systems, aging knowledge management databases, and tribal lore is extensive. To relieve this pressure, service tasks related to claims, payments, and profile updates can be supported by RPA. Difficult questions, such as when a customer moves to a new state, which may trigger new rules and regulations, can also be handled by RPA.

› **There are too many diverse exceptions that grow in complexity.** Today, humans bring detailed domain expertise to resolve customer issues. But this has become more challenging. Compliance, security, and personal privacy concerns have introduced complex procedures. RPA helps retrieve and provide guidance.

› **It enables smarter decision making.** Every step in the process, every activity performed, and all sources of data have a digital audit trail — meaning better decision making (42%).

Figure 4

"Where do you see the most 'newer' term investment?"

48%
Chatbots directed at
employees to help them
service/serve customers better

52%
Chatbots directed at
customer to improve
self-service

Fifty-nine percent said RPA will help employees meet their customer needs in advance due to the amount of data being collected.

"You said 'newer' term investment of chatbots is directed at employees to better service/serve customers. Why is this?"
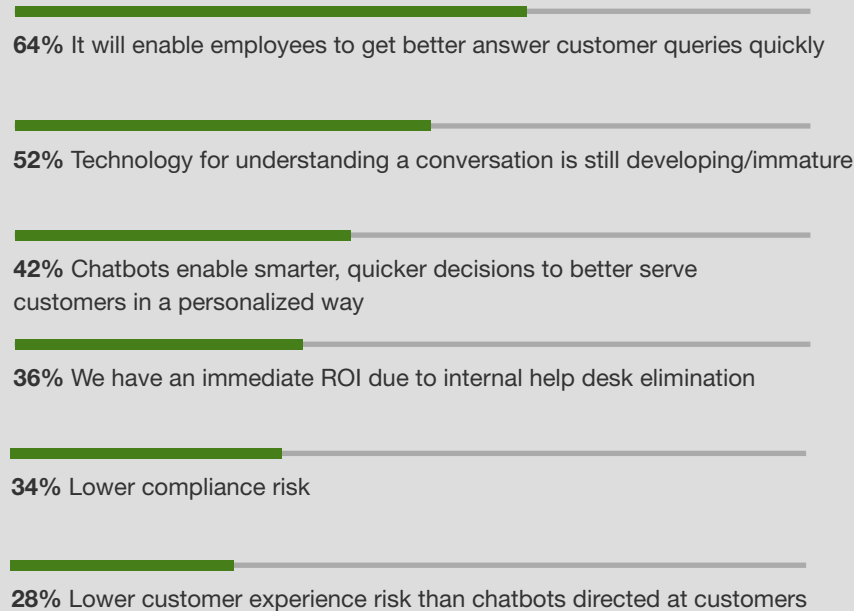
64% It will enable employees to get better answer customer queries quickly

52% Technology for understanding a conversation is still developing/immature

42% Chatbots enable smarter, quicker decisions to better serve customers in a personalized way

36% We have an immediate ROI due to internal help desk elimination

34% Lower compliance risk

28% Lower customer experience risk than chatbots directed at customers

Base: 105 manager-level or above respondents from operations groups, shared services, finance/accounting, and other lines of business
Source: A commissioned study conducted by Forrester Consulting on behalf of UiPath, December 2017

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Firms Struggle To Understand How To Fully Implement RPA Technologies

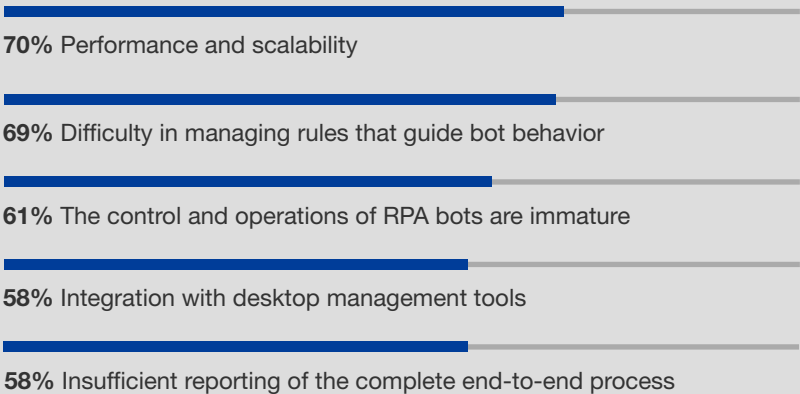The state of RPA is very much like other relatively new technologies; all companies jump to implement the technology before having a handle on the key issues associated with successful delivery. In essence, early adoption means that firms will run into barriers that prevent them from leveraging RPA's full capabilities (see Figure 5):

› **The performance and scalability are eccentric.** Don't expect RPA technologies to simply work like a magic wand and fix all the issues with legacy systems. Some processes would benefit more from new digital approaches, not from a patchwork of RPA robots doing the same old process with slightly less labor. If firms can improve things themselves first, they should do so.

› **There's a shortage of skills and expertise.** When technology teams leverage technologies that are either completely new to them or with which they don't have extensive expertise, gaps in delivery will naturally occur. It's no surprise then that 69% of firms said they find it difficult to manage the rules that guide the robot's behavior.

› **Controlling and operating RPA robots is difficult.** Control processes, such as the split between the overall business and the technology organization (and exactly what needs to be managed), are not clear for many (61%). Plus, the difficulty in designing robots using the provided design tools — when there is a lack of expertise to build a comprehensive robot — makes it more difficult for the robot to fulfil its goals (58%).

Figure 5

"With which technical and deployment issues is your organization struggling with when it comes to RPA technology?"

(Rank your top five; top five results shown)

70% Performance and scalability

69% Difficulty in managing rules that guide bot behavior

61% The control and operations of RPA bots are immature

58% Integration with desktop management tools

58% Insufficient reporting of the complete end-to-end process

Base: 105 manager-level or above respondents from operations groups, shared services, finance/accounting, and other lines of business
Source: A commissioned study conducted by Forrester Consulting on behalf of UiPath, December 2017
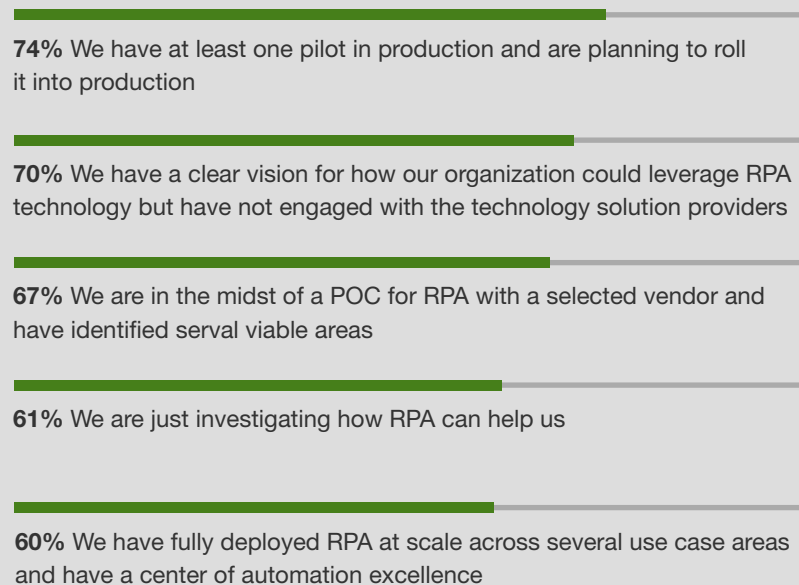
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Digital Workforce Requires Operational And Platform Maturity

Mature operating models for RPA blend tasks across business units and the technology organization. It's no surprise then that organizations are already implementing RPA. In fact, three out of four firms (74%) said they're at least piloting digital workers and/or planning to roll them into production (see Figure 6). Organizations that can trial this technology with a view of how it will extend into their wider operations will be able to demonstrate the potential for RPA to deliver the most value across various lines of business.

In other words, RPA needs to be owned and managed in order to make full use of its capabilities, which requires a long-term strategic view. Seventy percent of firms said they have a clear vision of how their organization can leverage RPA technology, but haven't yet engaged with an RPA vendor. Other firms are still investigating how RPA can help them (61%).

Figure 6

"Assessing your organization's maturity for RPA and the digital workforce, to what extent do you agree or disagree with the following statements?"

74% We have at least one pilot in production and are planning to roll it into production

70% We have a clear vision for how our organization could leverage RPA technology but have not engaged with the technology solution providers

67% We are in the midst of a POC for RPA with a selected vendor and have identified serval viable areas

61% We are just investigating how RPA can help us

60% We have fully deployed RPA at scale across several use case areas and have a center of automation excellence

Base: 105 manager-level or above respondents from operations groups, shared services, finance/accounting, and other lines of business
Source: A commissioned study conducted by Forrester Consulting on behalf of UiPath, December 2017
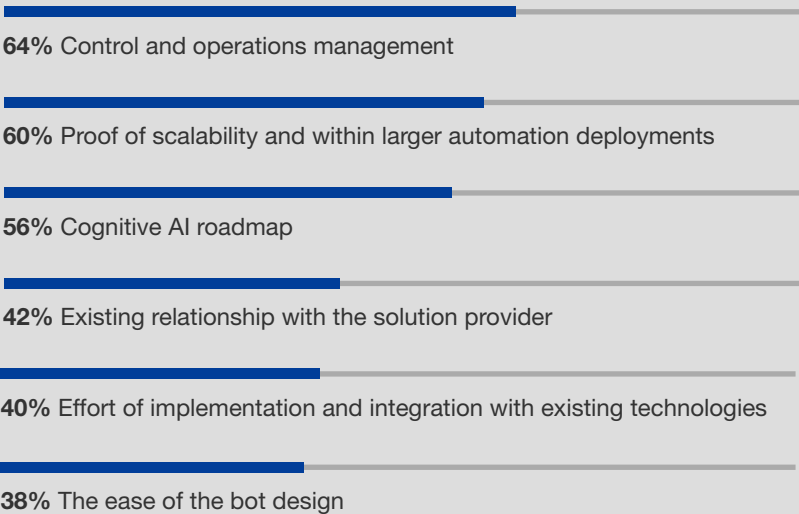
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PARTNER WITH TECHNOLOGY VENDORS TO HELP GET AHEAD OF THE GAME

Enterprises that plan to roll out RPA on their own face various roadblocks. Most enterprises are planning to work with RPA solutions providers to avoid launching poorly designed RPA-powered digital workers that often leave consumers and employees feeling frustrated. A technology vendor that specializes in RPA solutions must be sought in the same way as any technology or sourcing procurement strategy. Our survey revealed enterprises are seeking technology vendors that (see Figure 7):

› **Provide control and operations management.** Sixty-four percent said they seek RPA solution providers that offer control and operations management.

› **Scalability and extensibility are also key criteria.** A track record showcasing the scalability and extensibility of the tool remains a top priority for organizations that seek RPA solutions providers (60%). A track record conveys that it can be done.

› **Cognitive AI roadmap.** RPA solution providers that offer references for smart implementations can boost the confidence of customer organizations (56%). Firms that provide efficient and rapid robot design are also favored (38%).

Figure 7

"When selecting an RPA solutions provider, what are the primary criteria your organization looks for?"

64% Control and operations management

60% Proof of scalability and within larger automation deployments

56% Cognitive AI roadmap

42% Existing relationship with the solution provider

40% Effort of implementation and integration with existing technologies

38% The ease of the bot design

Base: 105 manager-level or above respondents from operations groups, shared services, finance/accounting, and other lines of business
Source: A commissioned study conducted by Forrester Consulting on behalf of UiPath, December 2017

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Key Recommendations

RPA is another step in the evolution of business processes. It is the next logical step to significantly reduce the requirement for employees to perform ruled-based, high-volume activities. Instead, RPA enables employees to focus on more strategic tasks that help the business — and the beauty of it all is that many organizations are just beginning to explore the use of RPA in different scenarios and situations.

Forrester's in-depth survey yielded several important recommendations:

Include CX and revenue in your hunt for operational efficiency. Typical RPA use cases focus on reducing costs by integrating legacy applications. This is fine, but RPA can also generate new revenue and improve the customer experience. Debt collection and reduced cycle times for an order-to-cash process are fertile areas for revenue generation. Changes to CX can be more dramatic: In one case, robots gathered information for an agent after it received an account number and handled the security questions, reducing the average 12-second hold time that annoys customers.

Review managed services and emerging RPAaaS options. On-premises integration, VDI integrations, and desktop client interface issues have led to an on-premises RPA market. But we expect an RPA managed services market to develop in the next two years. Solution partners, which many clients use to jump-start RPA deployments, have specialized skills that will be difficult for many to replicate.[3]

Build an assessment model to guide the RPA process selection. Our inquiries show that clients often select their target use cases poorly and fail to consider the broader picture. For example, RPA may plug gaps in legacy systems but can delay much-needed system modernization.[4] Some processes will benefit more from new digital approaches, not from RPA robots doing the same process with less labor. Applications with a less-than-stable history are not good candidates for RPA, nor are many cloud apps, which can confuse robots with their frequent updates.

Start centrally but plan to federate responsibility to the business. Formalize the operating model early in the RPA journey. It's acceptable to tune operations in a small centralized team, but plan to distribute the functions outlined to individual business units. Develop a joint understanding between business and technology teams as automation projects start. This will drive a quicker set of results and avoid a host of potential RPA issues.

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Build the operating model around automation — not a specific RPA tool. Forrester has identified 13 AI technology building blocks that can add intelligence to the digital workforce of the future. In addition, you may end up with a couple of RPA tools that specialize in process domains, such as finance, the contact center, or IT service management. Our clients reveal that building operating models tightly around a single RPA vendor is a poor long-term play. Instead, follow a broader strategy that focuses on automation that goes beyond — but includes — RPA.
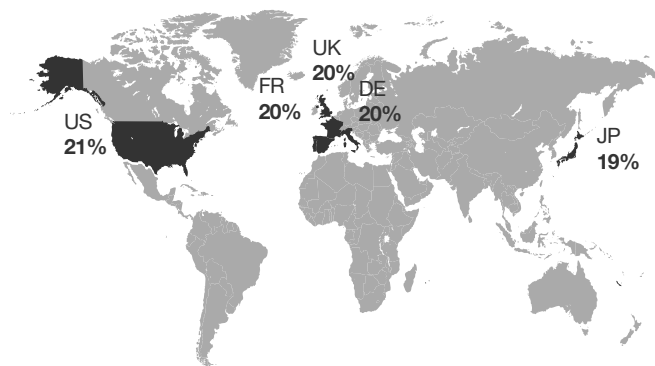
Keep change management initiatives front and center. Despite their stated desires, internal users and immediate managers fear change and are worried about robotic solutions replacing them: 67% of automation technologists cite the fear of job loss as creating the most severe negative attitudes.[5] Allocate resources to ensure that change becomes the norm, not a feared outcome.

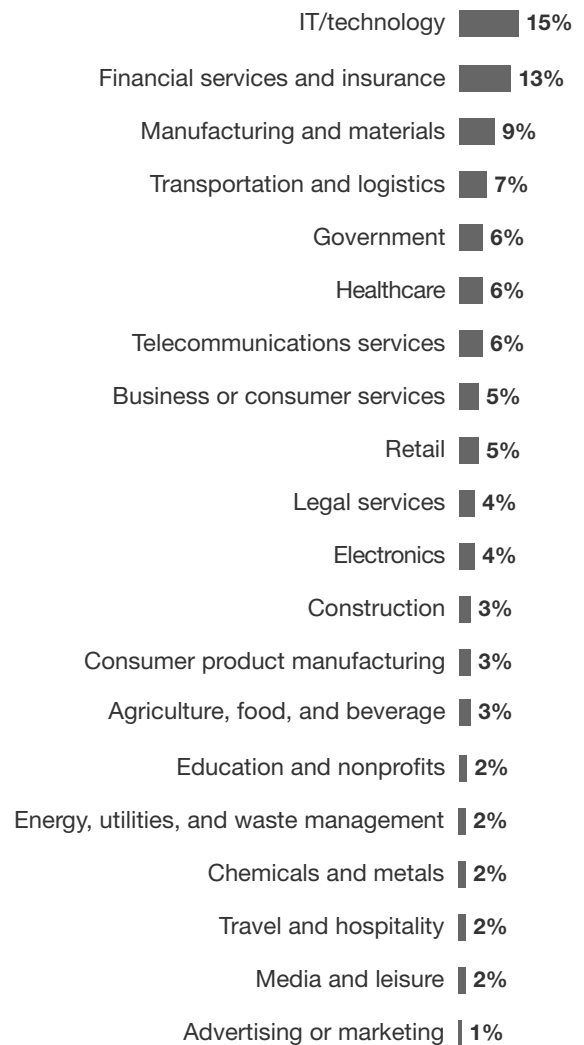FORRESTER®

Appendix A: Methodology

In this study, Forrester conducted an online survey of 105 managers in France, Germany, Japan, the UK, and the US to evaluate the state of RPA. Survey participants included decision makers in financial services, retail, manufacturing, oil and gas, and insurance. Questions provided to the participants asked how digital workers support internal employees in improving automation efforts, the effects on job performance from having increased collaboration with a digital worker, and what firms plan to gain from leveraging RPA-enabled digital workers to engage with employees. The study began in August 2017 and was completed in December 2017.
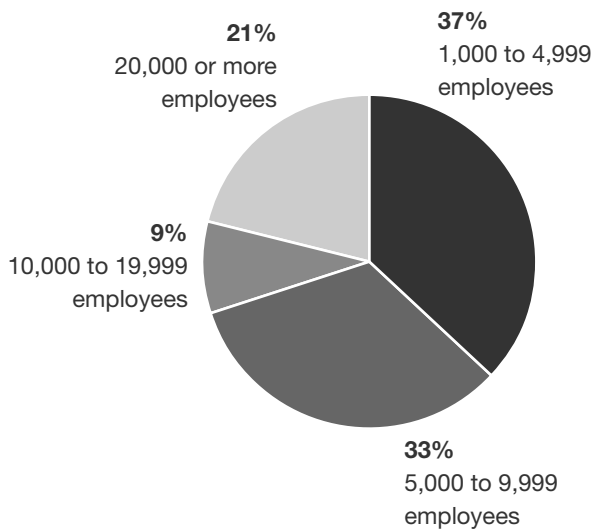
Appendix B: Demographics/Data

"In which country are you located?"

UK
20%

FR
20%

DE
20%

JP
19%

US
21%

"Using your best estimate, how many employees work for your firm/organization worldwide?"

21%
20,000 or more employees

37%
1,000 to 4,999 employees

9%
10,000 to 19,999 employees

33%
5,000 to 9,999 employees

"Which of the following best describes the industry to which your company belongs?"

Industry	%
IT/technology	**15%**
Financial services and insurance	**13%**
Manufacturing and materials	**9%**
Transportation and logistics	**7%**
Government	**6%**
Healthcare	**6%**
Telecommunications services	**6%**
Business or consumer services	**5%**
Retail	**5%**
Legal services	**4%**
Electronics	**4%**
Construction	**3%**
Consumer product manufacturing	**3%**
Agriculture, food, and beverage	**3%**
Education and nonprofits	**2%**
Energy, utilities, and waste management	**2%**
Chemicals and metals	**2%**
Travel and hospitality	**2%**
Media and leisure	**2%**
Advertising or marketing	**1%**

Base: 105 manager-level or above from operations groups, shared services, finance/accounting, and other lines of business
Source: A commissioned study conducted by Forrester Consulting on behalf of UiPath, December 2017

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Appendix C: Endnotes

[1] Source: Forrester's Q2 2016 Global Automation Technology Online Survey.

[2] Source: "The RPA Market Will Reach $2.9 Billion By 2021," Forrester Research, Inc., February 13, 2017.

[3] Source: Forrester analyst inquiries and briefings.

[4] For a market forecast for RPA that describes issues with the nonstrategic aspects of RPA, see the Forrester report "The RPA Market Will Reach $2.9 Billion By 2021 [137229]."

[5] Source: Forrester's Q2 2016 Global Automation Technology Online Survey.

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