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Thought Leadership Paper
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The Future Of Work Is Still Being Written

But Who Is Holding The Pen?

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Executive Summary



The impact of automation and intelligent technologies on the future of work is global. Organizations have been undergoing digital transformation for several years, but one technology has truly lived up to the transformative capability: automation. It is transforming businesses and directly impacting bottom lines as a result of improved productivity. While automation is proving to be an invaluable asset, it also raises employees' concerns about their job security.

Organizations that are planning to implement, investing in, or currently using robotic process automation (RPA), a key component in the landscape of automation and artificial intelligence (AI) technology bolsters human-agent productivity. It's the tip of the spear that is driving automation in the enterprise as it increases process automation and helps operations deliver differentiated experiences and uncover new revenue streams by eroding repetitive work, boosting the need for super agents, and upskilling the workforce. It demonstrates an organization's commitment to employees by helping them continuously learn and acquire knowledge around RPA, creating a more loyal and appreciative workforce.

In July 2019, UiPath commissioned Forrester Consulting to evaluate the impact of automation and how firms are enabling better planning and preparedness for the future while considering employee experience (EX). To better understand the future of employees and RPA technology, Forrester conducted an online survey with 270 decision makers from operations groups, shared services, finance, and other lines of business from France, Germany, the UK, and the US. Forrester also supplemented the online survey with 10 in-depth qualitative interviews with the same criteria.

KEY FINDINGS

- › **Automation is advancing faster than the enterprise knowledge required to support it.** With emerging AI-based technology, organizations must adapt their change management approaches to consider culture, skills, and organizational structures to best realize their full potential.
- › **Automation offers incredible value to businesses.** Automation isn't futuristic — it's here right now, and it offers tangible business benefits. Automating repetitive, rule-based tasks enables employees to focus on higher-value activities that require advanced skills, improves employee engagement, and translates to happier customers. Forrester's research shows that more engaged employees means higher growth: A 5% improvement in employee engagement leads to a 3% increase in revenue.¹
- › **Automation will affect different roles in the future.** Some jobs will be cannibalized, some will be created, and others will be transformed, but only a few will remain untouched.
- › **Address skills gaps to maximize the value of automation.** Investing in employees is the smart thing to do. By training employees, providing them vocational courses, or encouraging them to pursue digital qualifications, it allows them to overcome fears around automation and embrace it as a productivity-boosting asset.

The World Of Work Is Changing, And That's A Good Thing

Advancing automation will usher in a flux of trends and disruptors, and it will alter the way organizations operate. On one hand, continuous progress promises higher productivity, economic growth, and greater efficiency. On the other hand, automation raises concerns and questions about the broader impact it could have on jobs, skills, wages, and even the nature of work itself.²

Too many headlines paint a doom and gloom story about the impact that automation AI will have on the workforce. Many envision a future in which robots and digital agents displace human workers. Others believe humans will just find other things to do —and be happier for it. Forrester's 2020 predictions on automation take a balanced view. Millions of jobs will inevitably be replaced, but the technology will create many new jobs. The biggest effect will be a structural change to the job market.³

INVESTMENT IN AUTOMATION WILL RISE

Automation, which encompasses AI, is now the driver of most organizations' digital transformation strategies. But the impact on the workplace is not well-understood, and it can't be ignored. The dynamics of the labor market, technical feasibility, and acceptance of the more advanced AI building blocks (like deep learning and conversational intelligence) are just some of the factors that will determine the pace of workforce automation. Yet, our survey is clear on the near-term acceptance of RPA technology and its role in firms' automation roadmaps. For 66% of companies in this study, RPA software spend is going to increase by at least 5% over the next 12 months (see Figure 1). Forrester predicts that the RPA services market will reach \$7.7 billion, and eventually balloon to \$12 billion by 2023.⁴

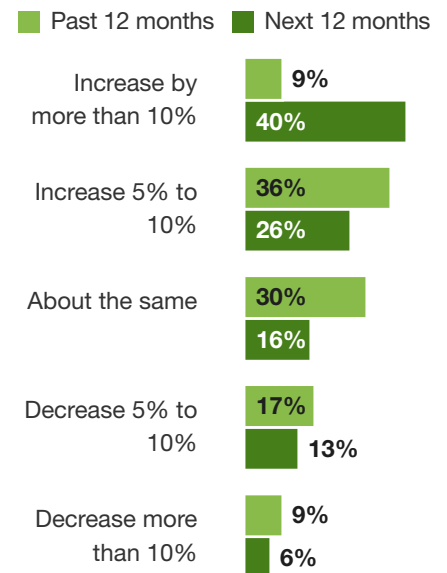
Here's why: Decision makers believe RPA will lead to more productive and more efficient working environments by removing repetitive work and boosting the need for super agents. The noninvasive character of RPA is perhaps its biggest strength. A director of IT operations described the benefits like this: "One of the biggest advantages of using a virtual workforce or an RPA robot is that it does not require you to replace your existing systems. Instead, RPA can leverage your existing systems the same way a human employee can." Looking at organizations' business priorities for the coming 12 months, their focus will be on improving customer experience (CX), change management processes, and employee experience (see Figure 2). These are areas where RPA can help organizations maximize their efforts.

But the increasing investment in RPA requires improved change management processes. To transition employees to new levels of work underpinned by automated processes, it involves cultural change and the need to monitor behaviors. So it's no surprise that 81% of respondents said they need to improve their change management processes.



Figure 1

“How has your group/department spending on technology Robotic Process Automation (RPA) changed over the past 12 months? How do you expect it to change over the next 12 months?”



Base: 270 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, November 2019

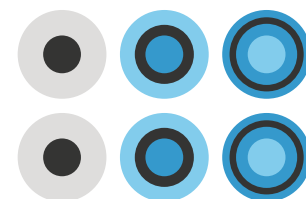
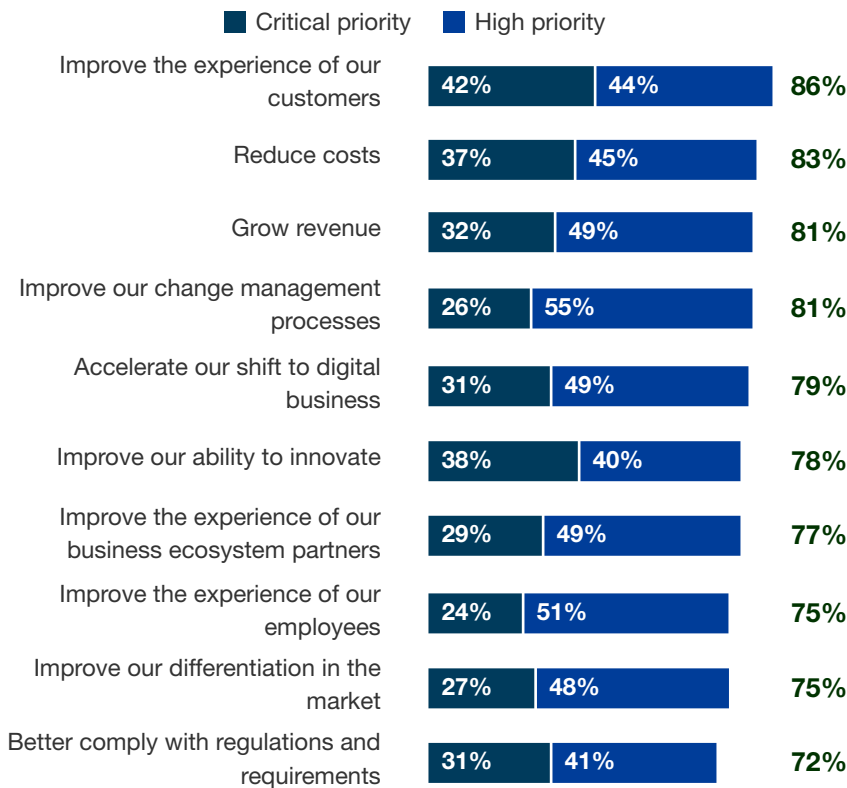


Figure 2

“Which of the following initiatives are likely to be your organization’s top business priorities over the next 12 months?”



Base: 270 manager level or above from operations groups, shared services, finance/accounting and other lines of business
 Note: Percentages may not total 100 because of rounding.
 Source: A commissioned study conducted by Forrester Consulting on behalf of UiPath, November 2019

RPA DRIVES BUSINESS OUTCOMES

Our survey of 270 decision makers who are responsible for operations at their firms and different lines of business leaders highlighted that organizations are planning to use RPA to meet key business priorities (see Figure 3). They plan to do this by:

- › **Lightening the IT load and improving business results.** RPA is just as applicable to IT as it is to business. IT no longer sees RPA as just another solution to ingrate. Enabling employees to perform repetitive and administrative tasks quickly reinforces IT’s key role in enabling workforce productivity. With RPA, rule-based, repetitive tasks that are prone to errors (such as password reset or help desk issues) can be completed faster and more accurately. Employees can then turn to higher-value activities that improve business metrics. The interviewed VP of HR from one firm said the implementation of RPA has been very successful. “The upside has been immense. We’re going to continually invest and increase the usage of this technology over the next three to five years.”

“Customers judge us on our ability to help them. If we’re unable to provide them the information they need quickly or it’s just wrong, CX scores plummet. RPA helps us to increase levels of customer satisfaction.”

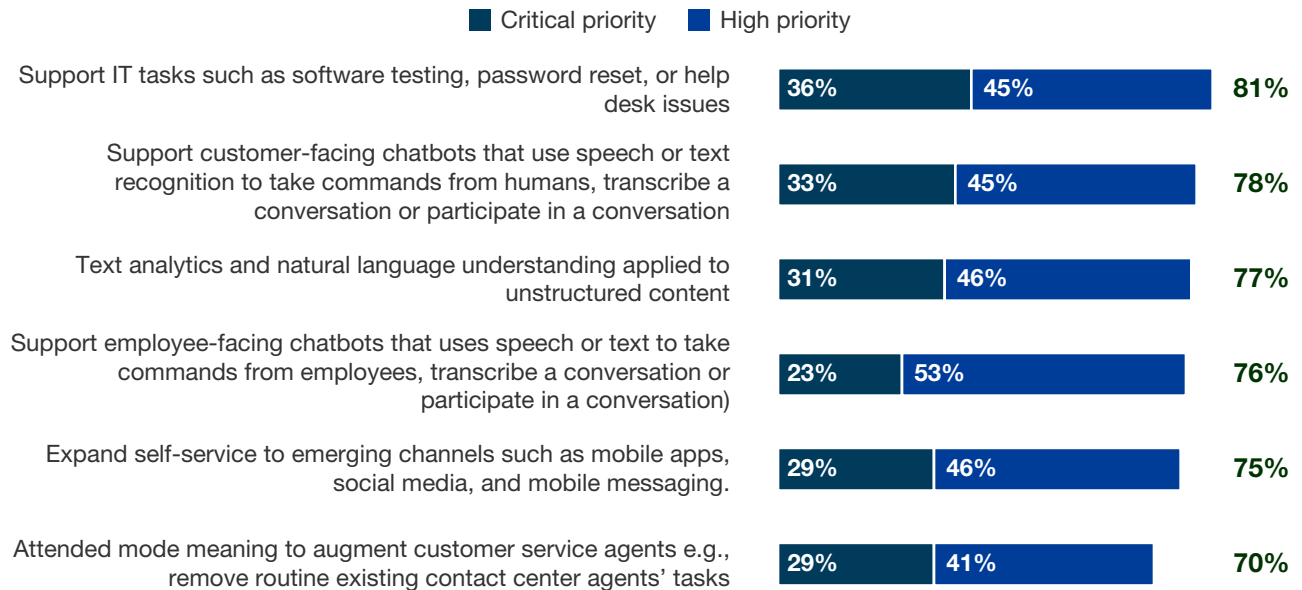
Head of recruiting operations, international financial brokerage organization



Figure 3

“Which of the following initiatives are likely to be your organization’s top business priorities over the next 12 months?”

“My organization uses RPA to . . .”



Base: 270 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, November 2019

- › **Equipping employees with the right knowledge.** Customer service representatives need access to account details. Often, they must access multiple systems to get what they need. A director of compensation and benefits within the HR function said, “We have built an automation platform internally to essentially automate a lot of data ingestion and cleaning.” This allows customer service robots to access and pool information. Seventy-six percent of respondents said automation is being used to support employee-facing chatbots that help employees transcribe conversations.
- › **Increasing the quality of customer experience.** Customer service leaders recognize the importance of delivering excellent CX to keep customer satisfaction high and churn rates low. Over the next 12 months, organizations are looking to prioritize the experience of their customers and, by leveraging RPA, firms are better able to serve their customers. Equipping employees with the right knowledge and data to answer requests can drive conversion and revenue. Beyond that, automation tools can also create personalized interactions, improve operational efficiency, and increase customer engagement by supporting customer-facing chatbots (78%) and emerging channels such as mobile apps or social media (75%).

“If we can automate tasks, employees spend a lot of their time on customers and adding strategic value . . . we’ll make them more productive. That’s the goal.”

Head of operations, retail firm



› **Increasing employee productivity.** Employees want to both feel and actually be productive. Carrying out menial and repetitive tasks can negatively affect employee happiness and output, affecting an organization’s capacity for growth. More meaningful work for employees subsequently elevates engagement, productivity, and performance levels, and it even increases job satisfaction (up to 75% of decision makers agree). To successfully navigate the era of AI, automation, and robotics, it requires a deeper understanding of employee experience. But despite what most managers believe, employees aren’t most motivated by recognition or performance-based pay. Instead, psychological research shows that being able to make daily progress toward important work is what best builds engagement.⁵

“EX is important, but only after establishing the best use case. Once RPA setup is complete, manual errors are eliminated. Employees obviously benefit from this. Employees manually entering data into forms or systems hold back service speed. Robots work at lightning speed without a break.”

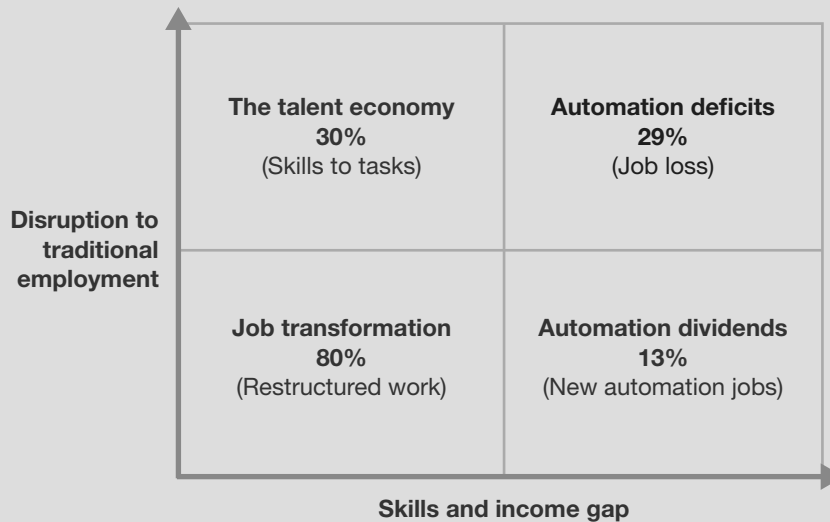
General manager, fintech



Automation Impacts Employees Differently

By 2030, workers will end up in one of four categories (see Figure 4).⁶ Some jobs will be cannibalized (automation deficits), new ones will be created (automation dividends), and others will be transformed. Millions will move to the talent economy and take on tasks from marketplaces. A vice president of HR for a consulting firm reinforced this idea: “Deficits in jobs will occur naturally, but we’re also seeing new roles created on the back of this. All in all, though, we’re looking at a substantial reduction in the traditional workforce — not the specialist, but the generalist workforce — by full implementation of the automation process.”

Figure 4
Four Options Emerge For The Future Of Work



Source: Forrester forecasts

To help leaders and workers plan for this progression, Forrester grouped more than 800 occupations tracked by the National Bureau Of Labor Statistics into 12 automation personas (see Figure 5).⁷ An enterprise will have a mix of personas. For example, there may be physical workers who install equipment, location-based workers who work from retail outlets, and cubicle workers who support back-office functions. To win in the future of work, firms need to plan for changes at the persona level. Why? Because automation will affect each persona differently. It could show through:



- › Skill gaps.
- › Job security or anxiety.
- › Employee attitude toward change.

Figure 5
12 Personas To Plan For The Future

| Traditional economy workers | | Profile/definition | Examples |
|-----------------------------|-------------------------------------|--|--------------------------|
| Knowledge work | Cross-domain knowledge workers | Workers determine tasks, ideas, priorities, artistic contributions, and goals, with insights and decisions they draw from a number of knowledge domains. | Emergency room physician |
| | Single-domain knowledge workers | Workers determine some tasks, priorities, and goals and draw from a single knowledge domain for insights and decisions. | Actuarial |
| | Function-specific knowledge workers | Structured and semistructured tasks, e.g., compiling, categorizing, calculating, auditing, or verifying information, are organized around a discrete function. | Insurance underwriter |
| Frontline work | Physical workers | Workers perform physical activities that require arms, legs, and moving the body, such as climbing; lifting; walking; stooping; and scaling ladders, scaffolds, or poles. | Factory worker |
| | Human-touch workers | Tasks include personal assistance; medical attention; and emotional support to coworkers, customers, or patients. Physical contact often combines with oral communication. | Massage therapist |
| | Location-based workers | Workers depend on a unique physical environment, e.g., a retail store or a secured office building. Physical environments define their jobs. | Retail store clerk |

Source: Forrester Research, Inc.

Figure 5 (Cont.)

12 Personas To Plan For The Future

| Traditional economy workers | | Profile/definition | Examples |
|-----------------------------|-----------------------|--|--------------------------------|
| Administrative work | Coordinators | Tasks include administrative, staffing, monitoring, or controlling activities, e.g., for fleets or money spending, and providing information to supervisors, coworkers, or subordinates. | Fleet manager |
| | Cubicle workers | Workers perform repetitive and structured tasks in back-office and front-office positions, including workers in low-cost economies who generally perform contact center (phone) or BPO (data entry) functions. | Accounts payable administrator |
| Emerging models of work | Mission-based workers | Workers believe that job satisfaction, work-life harmony, and alignment to their values and needs are important work considerations. | Yoga instructor |
| | Teachers/explainers | These workers know methods for curriculum design, teaching, and instruction for individuals/groups or can present machine logic and decisions. | Knowledge-based curator |
| | Digital elites | Enterprise architects, software development pros, and ML algorithm specialists use computers and data modeling to process information. | Data scientist |
| | Digital outcasts | These workers are unable to work effectively with machines or transition due to skills, attitudes, and ambitions. | Finance and accounting clerk |

Source: Forrester Research, Inc.

THE DIGITAL SKILLS GAP IS A CONCERN FOR ALL WORKERS

With automation advancing, concern about existing digital skills is increasing (see Figure 6). Some employees will be motivated and passionate. They'll advocate for change, and happily develop themselves professionally into better automation-related jobs. Those opposed to changes will take a wait and see approach and be reluctant to learn new skills.

Our survey found that 41% of respondents believe their employees are concerned that their existing digital skills may not match what their job will require in the future, and more than half (53%) said employees are concerned or feel threatened by the growing complexity of tasks they face and will face in the future. An HR vice president told us, "We'll reduce the size of our overall HR function by 15%. But that's only achievable if we have a fully implemented system and process, which would have its own timeline."

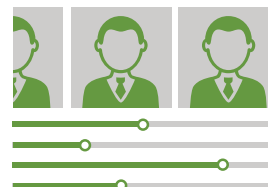
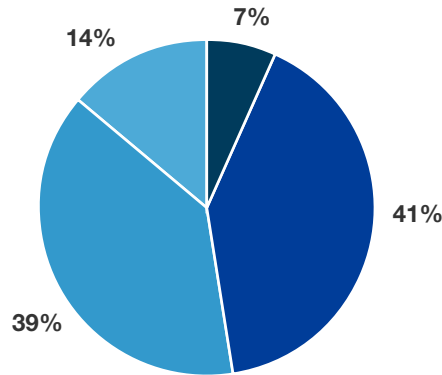


Figure 6

“Please select the statement that best characterizes the attitude of your employees related to digital skills required?”

- They do not have any ambition to enhance their digital skills.
- They are slightly concerned that their existing digital skills may not match what their job will require in the future.
- They are concerned in their ability to succeed at their existing job, but are not interested in advancing their digital skills.
- They feel threatened with the growing complexity of the tasks they face now and will in the future.



Base: 270 manager level or above from operations groups, shared services, finance/accounting and other lines of business

Note: Percentages do not total 100 because of rounding.

Source: A commissioned study conducted by Forrester Consulting on behalf of UiPath, November 2019

TRACK EMPLOYEE ANXIETY TO HELP MANAGE CHANGE

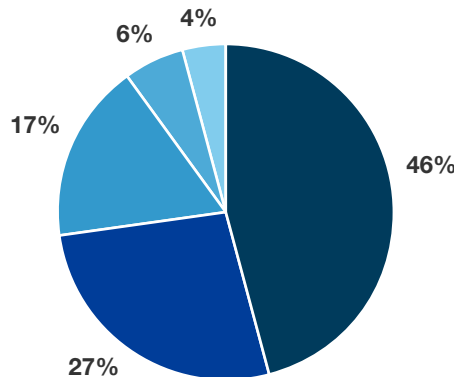
Tracking anxiety that stems from new technology is a powerful step in understanding the future of work, and it'll help organizations boost their employee experience. Sixty-three percent of the interviewees in our study said measuring and monitoring employee anxiety will enable their firms to approach employees differently (see Figure 7). For example, a general manager of a fintech firm told us: “Not everybody will join the digital journey. But we want to be aware of our employees’ sentiments, what they want, what can we do to support them, and so on. Hence, it’s critical to measure employee anxiety, happiness, and satisfaction across various metrics. Technology helps your company compete in the market, but employees are the face of it all.” A director of IT operations echoed this sentiment by saying, “We need to absolutely make sure we’re measuring employee anxiety. Otherwise, they’ll leave and go to a more employee-centric organization.”



Figure 7

“What is your company’s approach to measuring/monitoring employee anxiety?”

- It is important and will become more so. Monitoring will enable us to approach employees differently.
- We have no formal way to measure it and no programs or ideas on how to deal with it. But we think it may be important in the future.
- It’s critical to ensure we use the data to refine our change management processes.
- It’s not required or on our radar at this point. We just don’t see it as a problem.
- It won’t make any difference. Employees will still feel anxiety/fear of job security.



Base: 270 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, November 2019

Education In The Workplace Will Boost Career Prospects

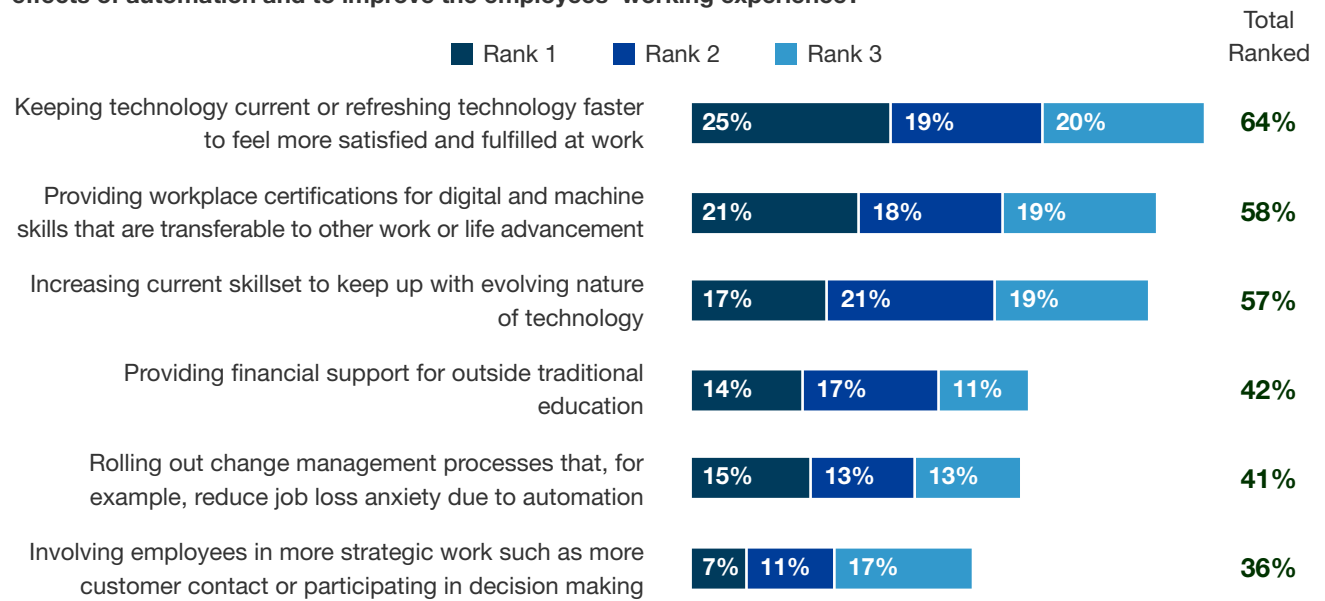
We asked organizations how they will cope with the potential adverse effect that automation could have on employee experience. One vice president of HR said: “If you look at what the key skills are that will drive automation and robotics going forward — analytical skills, communication skills, and problem-solving skills — this is an area that automation cannot solve and absolutely requires human intervention. Machines and humans will have to work together.” Decision makers will need to bridge the gap between robots and humans (see Figure 8). Interviewees said they will:



- › **Frequently refresh technology to improve employee satisfaction.** Sixty-four percent of decision makers said they will upgrade technology faster to help employees feel more satisfied and fulfilled at work. It’s a key workforce experience factor tied to psychological safety.
- › **Develop innovative programs for education at work.** To help employees deal with the inevitable skills gap, organizations see workplace certifications as a way to improve digital knowledge and reskill employees. Fifty-eight percent of respondents said they will provide workplace certifications that are transferable. It’s a way to keep up with automation to stay relevant, skilled, and digitally aware. A director of IT operations said, “We don’t want to just hire staff for their qualifications, but for their attitude and aptitude, their ability to critically think, and a knack for quickly grasping concepts.”

Figure 8

“Please indicate what would be the most successful activities within your organization to cope with the potential effects of automation and to improve the employees’ working experience?”



Base: 270 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, November 2019

› **Invest in skills.** In order to keep pace with the world of work, employees want to feel supported and acknowledged for their skills. If employees want to pursue additional certifications related to their line of work, organizations should provide financial support. Forty-two percent of respondents said that is how they will improve the employee experience. In fact, one vice president of HR said, “Supporting employees to gain technical knowledge is important because that’s what we will look for when hiring for more complex technical roles.” A general manager of a fintech firm also said: “It’s critical for organizations to provide employees the ability to transition to new roles. Not every employee will want to transition to the new role because they don’t want to or can’t or don’t care. But from an organizational perspective, it’s an important strategy worth exploring.”

LOOK AT EXTERNAL EXPERTS TO TO EXTEND AUTOMATION TRAINING

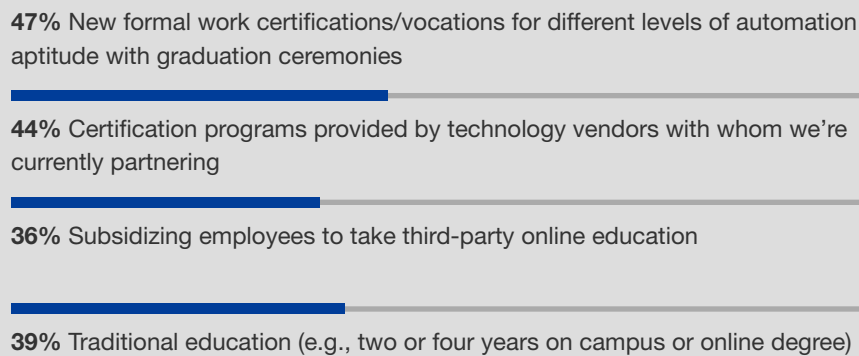
Enterprises must bring their employees along on the automation journey and provide them with the technical training and education that allows them to partner in a firm’s success. Most firms agree that new formal work certifications/vocations and certifications provided by third-party vendors will have major beneficial effects on the skills issues that automation initiatives cause (see Figure 9.) A general manager of a fintech firm said, “I think I would just look for people who are more process- and data-driven because those skill sets will be important in this space.” A logistics director for a global supermarket chain said, “Any sort of business degree helps, but those who pursue RPA-specific courses or modules will become more sought after.”



Organizations can influence universities and colleges to pursue the automation skills agenda. Traditional education is beginning to keep pace as businesses work with leading institutions, universities, and colleges to craft an RPA knowledge ecosystem. Enterprises need immediate and impactful ways to prepare their workforces. As a result, they are turning to outside service providers or software vendors to train existing or new employees for automation-based roles (see Figure 10). Working with vendors to restructure the workforce enables organizations to march ahead and capture the benefits of automation.

Figure 9

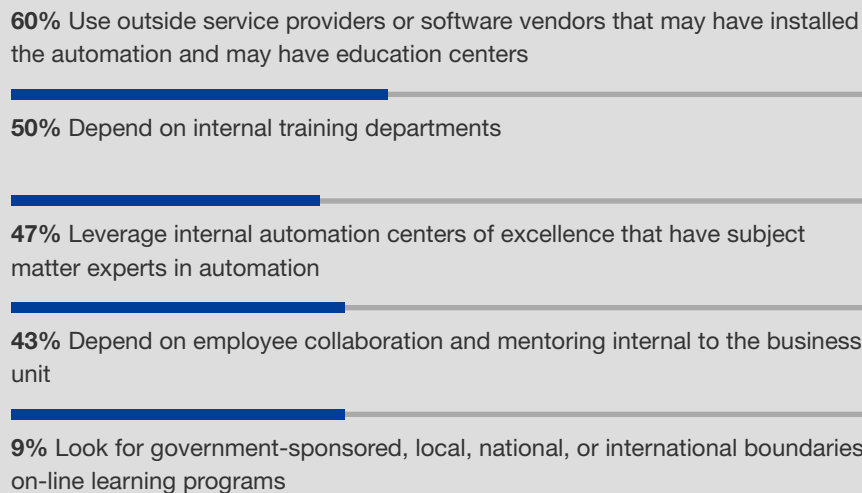
“Please rank the education approaches below in terms of how effective they are at dealing with previous workplace automation issues?” (Showing major benefits only)



Base: 270 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, November 2019

Figure 10

“How does your organization plan to train existing employees or new employees for the new automation-focused roles?”



Base: 270 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, November 2019

Key Recommendations

Emerging technologies such as RPA, virtual agents or robots, and machine learning have propelled automation to a top spot among enterprise initiatives. Yet firms are dragging the required skills, experience and impact on jobs as an afterthought. To address gaps, organizations should:



Proactively address the 12 work personas. Organize, survey, and personalize programs within these generic categories. Include digital elites, mission-based workers, digital outcasts, and the different forms of knowledge workers, cubicle employees, location-based workers, and physical workers. These profiles and needs will diverge materially as automation advances.



Plan a structural change in how you recruit, retain, and manage workers. The workforce will be a mix of full-time employees and talent with no formal ties to a company. Workers will move from role to role and across organizational boundaries more freely than ever. Enterprise cultures and systems today are locked into an “owned talent” mentality and aren’t prepared for this shift. Mission-based workers, digital elites, and outcasts need to be part of a new conversation.



Look to build new digital certification programs from within but use partners to do so. The evidence is here: Enterprises anticipate a growing skills gap, and there are few answers today. Gaps will lead to dead-end careers, which lead employees with bad attitudes. These, in turn, degrade the customer experience and hurt business. Look to automation service and platform vendors to augment your internal programs.

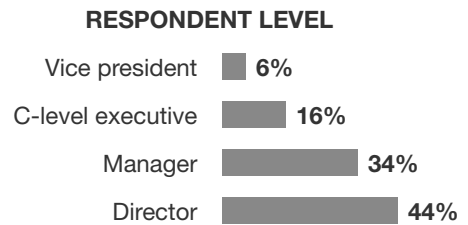
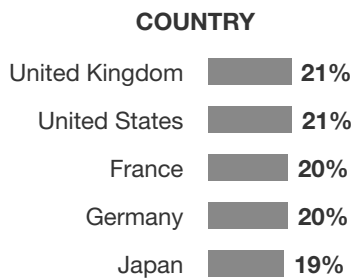
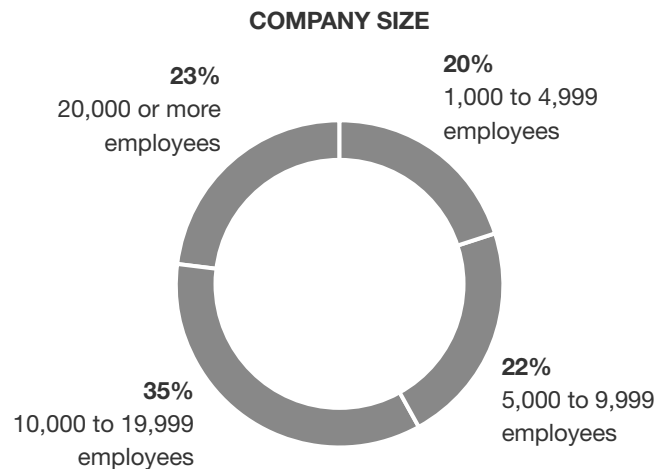
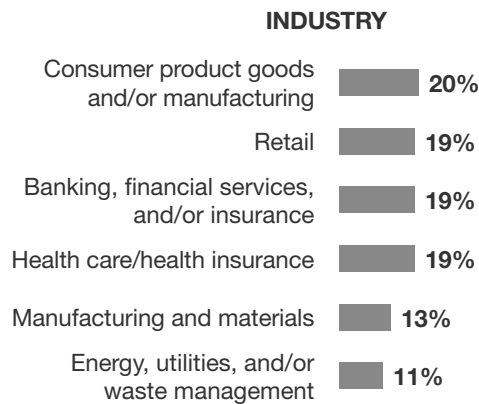


Recognize that constructive ambitions will reduce deficits. Devise a formal process to identify employees with constructive ambitions. Higher wages and more job security will fuel ambitions for these workers and they’ll learn new skills. They’ll feel a slow burn that pushes them outside their comfort zones. Give these workers an opportunity to adapt to new automation.

Appendix A: Methodology

In this study, Forrester conducted an online survey of 270 manager level or above from operations groups, shared services, finance, and other lines of business. Forrester also supplemented the online survey with 10 in-depth qualitative interviews across France, Germany, the UK, and the US. The study sought to evaluate what organizations are doing to embrace automation, train employees, and recruit talent. Survey participants included decision makers for automation strategy and its initiatives. Questions provided to the participants asked what the automation priorities are, challenges and benefits of the technology. Additionally, organizations were asked how they plan to manage the change management process and what steps they are taking to hire for automaton-based roles. The study began in October 2019 and was completed in December 2019.

Appendix B: Demographics



Base: 270 manager level or above from operations groups, shared services, finance/accounting and other lines of business
 Note: Percentages may not total 100 because of rounding.
 Source: A commissioned study conducted by Forrester Consulting on behalf of UiPath, November 2019

Appendix C: Endnotes

¹ Source: “Stop Trying To Replace Your Agents With Chatbots,” Forrester Research, Inc., April 17, 2019.

² Source: “Use RPA To Deliver Better Customer Service Experiences,” Forrester Research, Inc., November 6, 2019.

³ Source: “Predictions 2020: Automation,” Forrester Research, Inc., October 30, 2019.

⁴ Source: “Predictions 2020: Automation,” Forrester Research, Inc., October 30, 2019.

⁵ Source: “Employee Experience Is Crucial To Success In The Era Of AI, Automation, And Robotics,” Forrester Research, Inc., September 16, 2019

⁶ Source: “Future Jobs: Plan Your Workforce For Automation Dividends And Deficits,” Forrester Research, Inc., April 30, 2019

⁷ Source: “Future Jobs: Plan Your Workforce For Automation Dividends And Deficits,” Forrester Research, Inc., April 30, 2019