

Point of View

Unleash the Virtual Workforce

Using Process Automation to meet
emerging digital expectations

Executive Summary

Companies worldwide are turning to process automation not just for greater efficiency, but to help power their digital transformations—to innovate better, boost customer service and satisfaction, empower employees, and increase revenues and profits. Robotic process automation has been the first wave, and now the tide is turning to include intelligent and cognitive automations. These technologies can be used separately or together to handle basic, rules-based processes up through highly complex processes—and even to anticipate and prepare for sales spikes, field equipment failures, and more.

This POV examines business leader attitudes toward process automation, how such automation may change the workplace, and how a company can leverage that automation to gain the benefits of digital transformation.

The 92% solution

Businesses are considering every possible tool in the technology kit to cope with increasingly challenging environments both inside and outside of their enterprises. They're tasked on two fronts: make IT predictable – optimize core IT systems better than ever before to ensure scalability, reduce risk and cut costs.

At the same time, they are expected to take an exploratory approach to IT – innovate the business by experimenting with new technology to identify new opportunities by failing fast. In response, they're turning to cloud-first, mobile-first strategies, to modern software engineering approaches, and other pillars of digital transformation.

And that includes process automation. Avanade defines the three types of Process Automation covered in this PoV in figure 1 below. But it should be noted that this is a rapidly evolving space and as we will discuss, increasingly it is a mash-up of process automation technologies firms are using, including artificial intelligence.

Robotic Process Automation (RPA) uses software to mimic the actions a person would take at a PC, at scale, to automate business processes that are highly repetitive, rules based and use template-based data. With RPA, businesses can create virtual workforces that execute repetitive steps in a process faster, more accurately, and more cost-effectively than traditional workers. Because these virtual workers interact with systems the same way traditional workers do, there's no complex system integration required. And a simple, intuitive user interface is all it takes for the business-side of the company to configure processes for automation.

This isn't news to IT executives. More than nine out of ten (92%) global IT decision makers surveyed by Avanade¹ in 2017 said that process automation is a key technology to address the emerging needs of the digital business.

Process Automation




Robotic Process Automation 	Intelligent Automation 	Cognitive Automation 
Custom built or commercial software used to automate repetitive tasks and eliminate manual effort e.g. Service Desk, Business Process automation and Optical Character Recognition	Intelligent tools use data/patterns in the organization from the past to make recommendations actions or offer predictions to provide the best future benefit. This is typically done through an underlying Analytics capability.	Cognitive computing involves self-learning systems that use data mining, pattern recognition and natural language processing to mimic the way a human brain functions. The goal is to create automated IT systems that are capable of solving problems without human assistance.

Figure 1: Different types of Process Automation © Avanade 2017

¹ Source: "IT Modernization: Critical to digital transformation", Research conducted by Vanson Bourne on behalf of Avanade, March 2017

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As shown in figure 2 below the major drivers IT executives consider for process automation are to meet business objectives such as increasing productivity (73%) and reducing costs (65%).

Of course they do, because they see other companies achieving these business goals with process automation technologies like RPA, such as the insurance services provider that reduced the cost of claims processing by 30%... the UK mobile provider with 650% ROI... and the “Big 6” energy supplier with 200% ROI in 12 months.²

Not only does RPA deliver these returns: they’re increasingly difficult to get any other way. It’s simply impossible, for example, to squeeze much more out of people using traditional optimization approaches.

Businesses are also adopting process automation in response to the cultural changes wrought by the millennial workforce; millennials want to use the cool technologies on the job that they already use as consumers. This has implications for recruiting and retention. To compete for the best and brightest minds, businesses need to leverage technology that makes work more exciting and more focused on meaningful, higher-order tasks—things that are more human, less robotic by nature. In doing so, they can create an innovation culture that benefits both the business and its employees.

Most important, by vastly increasing the productivity, scalability, and profitability of an organization, and by freeing workers from mundane tasks so they can focus on delivering innovation and competitive advantage, process automation is an essential driver on the road to the digital business.

Utilities firm sees the light

One of the world’s largest electric utilities asked Avanade to automate 80 processes that complete 110,000 tasks monthly. More than 100 minibots handle manual work.

Results:

2,000 personnel hours saved monthly

300% increase in revenues with only 19% increase in FTEs

5X industry average productivity as measured by FTE/Consumer ratio

Major drivers for process automation

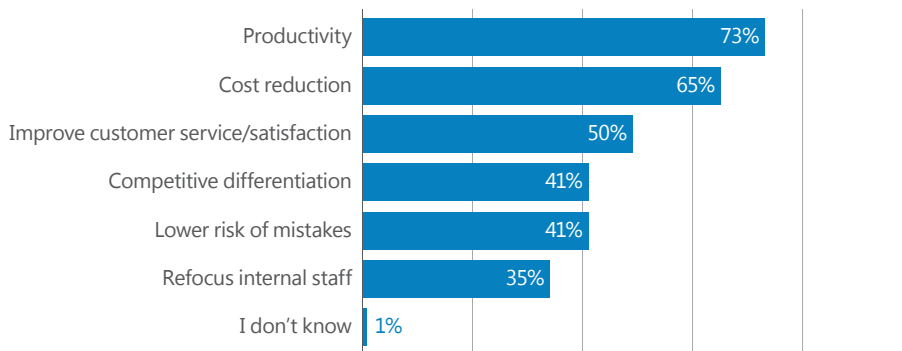


Figure 2: Source: “IT Modernization: Critical to digital transformation”, Research conducted by Vanson Bourne on behalf of Avanade, March 2017

² “The IT Function and Robotic Process Automation,” Research Report, London School of Economics. Authors: Leslie Willcocks, Mary Lacity, Andrew Craig. October 2015.

A peek at the future

Process automation’s potential to handle increasingly complex tasks will have far-reaching consequences across an ever-widening range of industries. Andrew McAfee, on the book he co-authored with Erik Brynjolfsson called [The Second Machine Age](#) shows that technology does a better job than doctors at reading MRI scans or diagnosing cancer, for example.

Will process automation replace traditional, human workers? Forrester predicts that by 2019, 25% of all job tasks will be offloaded to software robots, physical robots or customer self-service automation³. The tedious tasks of collecting information, for example, may well be outsourced to computer code. But many of the people in those jobs will likely see their work transformed or new jobs become available. The same Forrester study suggests that 13.6 million jobs will be created using these tools over the next decade⁴.

Chatbots and AI-driven personal assistants likely will be widespread and infinitely more capable. Salespeople won’t waste time scheduling meetings; project managers won’t spend hours creating work-back schedules; and, best of all, meetings may be more focused and productive, thanks to note-taking and follow-up handled by an AI assistant.

More than just RPA

Not surprisingly, then, most businesses plan to deploy process automation within the next three years—including robotic process automation (56%), intelligent automation (61%) and cognitive automation (59%). See figure 3 below: These types of automation aren’t mutually exclusive. Complex business processes may use any combination of software robotics, intelligent automation and cognitive automation.

By itself, robotic process automation (RPA) reduces the need for human involvement in rule-based, repetitive tasks such as processing an insurance premium. Where the traditional handling of this task might be completely manual, an RPA version might engage a human worker only for the initial step of standardizing unstructured data to a structured format. Software bots might then validate the data, access the account database, create a transaction document, and upload it to a repository.

When the business adds intelligent automation and cognitive automation to its kit, it can use these technologies together with RPA for more sophisticated automations.

For example, figure 4 shows a service desk might create an intelligent email advisor bot to parse email requests, identify the best matches with available staff, assign and create the ticket, and route it for processing. This automation might include natural language processing, machine learning, and predictive analytics to conduct the cognitive assessment of the incoming email request.

As a final step, a cognitive resolution component might resolve the ticket and respond to the person who requested the service. The experienced helpdesk analysts would be freed from having to handle routine tasks and could focus on adding greater value to the business by handling requests too sophisticated for automation.

Process automation deployment is growing

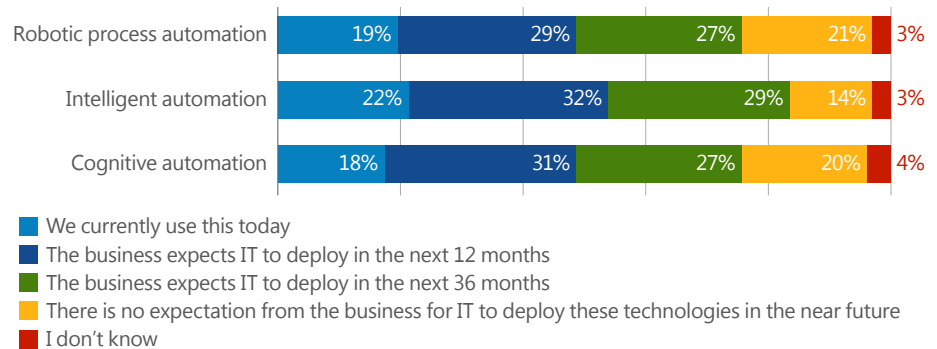


Figure 3: Source: “IT Modernization: Critical to digital transformation”, Research conducted by Vanson Bourne on behalf of Avanade, March 2017

3 http://blogs.forrester.com/jp_gownder/15-08-24-robots_wont_steal_all_the_jobs_but_theyll_transform_the_way_we_work

4 <https://gigaom.com/2016/10/05/artificial-intelligence-its-not-man-vs-machine-its-man-and-machine/>

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Similarly, an intelligent assistant bot could be assigned to receive and process incoming requests from a business' web portal as well as from email, and then either resolve the ticket if the bot is able, or assign the ticket to a human agent. The human support agent would now be required to handle only escalated tickets.

Businesses are also adopting process automation in response to the cultural changes wrought by the millennial workforce; millennials want to use the cool technologies on the job that they already use as consumers. This has implications for recruiting and retention. To compete for the best and brightest minds, businesses need to leverage technology that makes work more exciting and more focused on meaningful, higher-order tasks—things that are more human, less robotic by nature. In doing so, they can create an innovation culture that benefits both the business and its employees.

Most important, by vastly increasing the productivity, scalability, and profitability of an organization, and by freeing workers from mundane tasks so they can focus on delivering innovation and competitive advantage, process automation is an essential driver on the road to the digital business.

Invoices no problem for Global Oil & Gas Firm

To fix a time-consuming and error-prone invoice payment process, Avanade created automated agents for exception handling.

Results:

\$43 Million increase in on-time payments

61% reduction in average handling time

95% of exceptions handled automatically

75% increase in productivity

Previous Manual Process

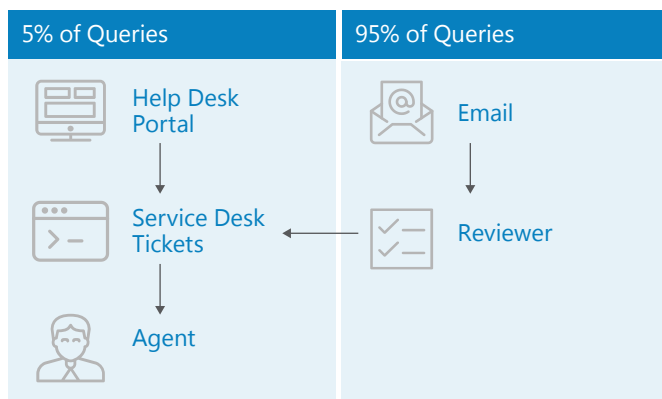
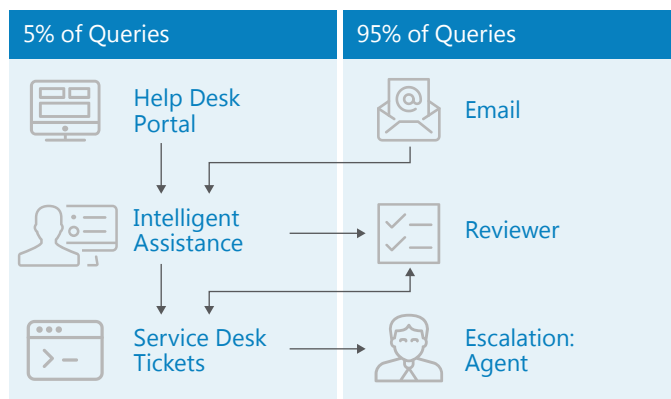


Figure 4: Service Desk Automation © Avanade 2017

Intelligent Automation Assistance



A peek at the future

How RPA, intelligent automation and cognitive automation are architected to work together can be hugely important to the success of process automation. A process based on RPA, which calls intelligent and cognitive automation when needed, will not be very flexible. When the business process changes or produces new answers or responses to incoming requests, the underlying logic of the RPA process map has to be manually changed too, which can be time consuming and expensive.

In contrast, a process based on intelligent automation, that uses RPA as one potential tool for implementation, is inherently more flexible and future-proof. That's because the process trains on a large body of data and learns the best responses, rather than blindly following a process map. The more complex the process is, the more valuable this approach is, too.

Moreover, because of the inherent adaptability of intelligent automation, it continues to learn and grow as the business process changes.

Intelligent automation is itself evolving. No longer based just on traditional analytics, intelligent automation now also includes predictive analytics. Such forward-thinking automations not only respond optimally to incoming requests, but also anticipate those requests and prepare for them.

That has very practical business applications. Just ask the manufacturer whose process automation system now can anticipate when customer orders will spike and can scale up bots automatically to handle the extra orders before they come in. Or, ask the oil and gas company whose automated bots analyze field service records, anticipate equipment failures and schedule service visits to address the potential failures before they become actual ones.

For the majority, it takes a service provider

Although most global IT decision makers surveyed by Avanade said they plan to adopt process automation, the vast majority (94%) admit to concerns about the technology. Security (62%) is their top concern, followed by change management. Others are held back by a lack of resources (44%) and skills (37%).

But they have a plan. To address these concerns, as figure 6 shows, most plan to turn to service providers to assist with implementation. Just more than half (51%) will seek vendor support for RPA, and just over six in ten will do so for intelligent (63%) and cognitive (64%) automation techniques.

Even businesses that manage their own needs in an area such as security can benefit from a service provider knowledgeable in applying security principles and technologies to process automation. What security permissions, for example, should be granted to bot workers?

Concerns about process automation

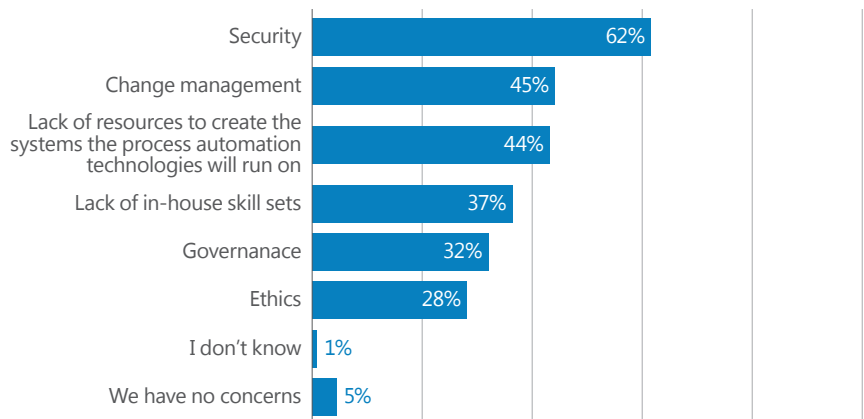


Figure 5: Source: "IT Modernization: Critical to digital transformation", Research conducted by Vanson Bourne on behalf of Avanade, March 2017

The ethics of automation

How does the change management function understand how to analyze the jobs affected by RPA, including how to account for both formal and informal job functions? What governance policies should be implemented? What disaster recovery and business continuity plans? And who will own all these new responsibilities?

Those are a lot of questions. One place to begin providing answers is with the creation of a formal Digital Ethics Framework. Most companies already have policies to deal with sensitive information, but the Digital Ethics Framework should go beyond that to also include guidelines on how bots obtain and use information. The threat isn't that your bots are waiting to harm your business—but, rather, that they can be reprogrammed by bad actors inside or outside of your business to do so. Even without nefarious intent, bots that handle sensitive information represent potential sources of failure in privacy and data protection.

So, think about mechanisms to ensure that APIs and systems are designed with privacy and ethics in mind and with a minimal data approach. As bots become more sophisticated, they'll take on a broader range of context-based functions and potential responses. Data that's appropriate for them to handle in one scenario may be inappropriate in another.

So, consider employing multiple, context-specific identities that give bots access only to the appropriate data in each situation they encounter.

Be sure to brainstorm, with as many stakeholders as possible, what could go wrong, and take those possibilities seriously. You can't foresee every eventuality, of course, but you can adopt frameworks that give you structured approaches for dealing with crises when they do occur.

More broadly, it's important to have a roadmap in place to help guide high-level conversations, as well as discussions across the entire workforce about what automation actually means to your workers. Many fear it will make their roles obsolete. Push forward with a culture that continually underscores the real goal in mind: augmentation that helps drive business outcomes. The human touch will be an asset, not a liability, in the process-automation world.

Service provider implementation support

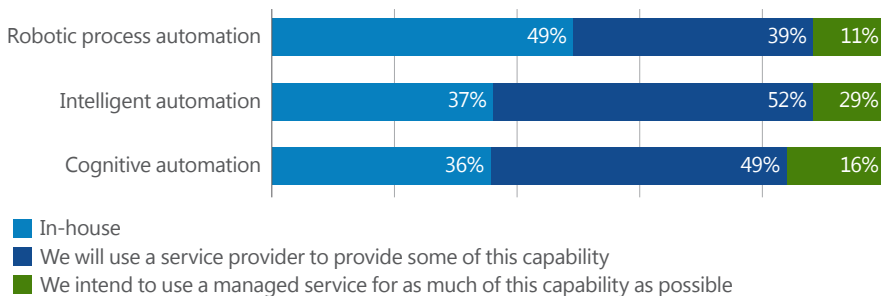


Figure 6: Source: "IT Modernization: Critical to digital transformation", Research conducted by Vanson Bourne on behalf of Avanade, March 2017

Global telecom now glad to take your order

When each sales agent struggled to manually index more than 150 orders per day with up to 10 line items per order across several apps, Avanade created an RPA solution using SharePoint, SAP and Excel.

Results:

75% reduction in manual labor

100% process accuracy

95% of orders handled automatically

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Where to begin

If you aren't thinking about process automation, you're already behind. If you're starting out on your process-automation journey, consider automating simple, straight-forward processes, especially if they can be done using any number of AI-related technologies. One business Avanafe worked with used text recognition to scan thousands of PDF application forms, exponentially speeding up the task for reviewers.

Like most businesses that use process automation as a tool for their digital transformations, you may wish to partner with a technology provider with expertise in the field. Avanafe focuses on

automation that delivers the most benefits with the lowest cost and least disruption—and we've delivered more than 6,000 successful automations to more than 350 process automation clients worldwide.

Avanafe can deliver successful process automation to you, too. We have more than 1,000 subject matter experts, 3,500 business excellence and automation experts, a highly scalable automation factory, and more than 70 developers certified in process-automation tools. And we partner with process-automation leaders including Blue Prism and Automation Anywhere to deliver even more value.

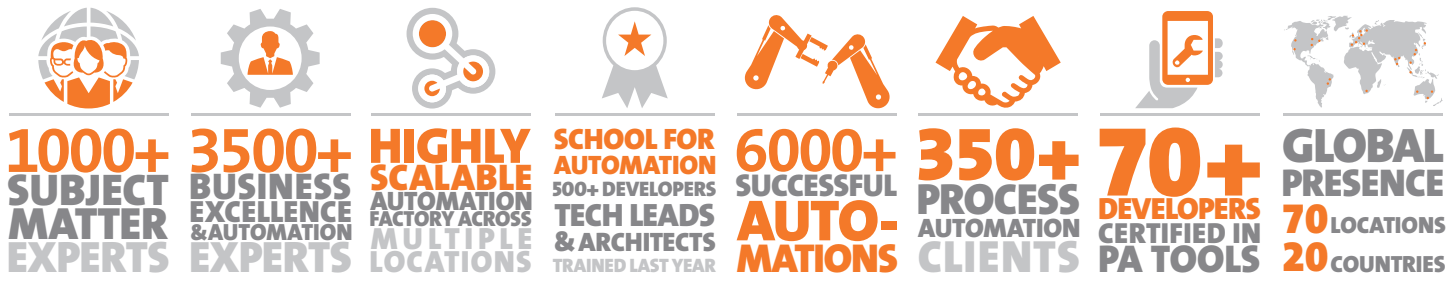
Next Steps

Our aim is to help businesses get the most from their Process Automation projects, bringing them the best of Avanafe to deliver an end-to-end solution that supports tangible business outcomes.

For more information:

Email: RPA@Avanafe.com

Visit: <https://www.avanafe.com/en/solutions/technology-services/process-automation>



About Avanafe

Avanafe is the leading provider of innovative digital and cloud-enabling services, business solutions and design-led experiences, delivered through the power of people and the Microsoft ecosystem.

Majority owned by Accenture, Avanafe was founded in 2000 by Accenture LLP and Microsoft Corporation and has 30,000 professionals in 24 countries.

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