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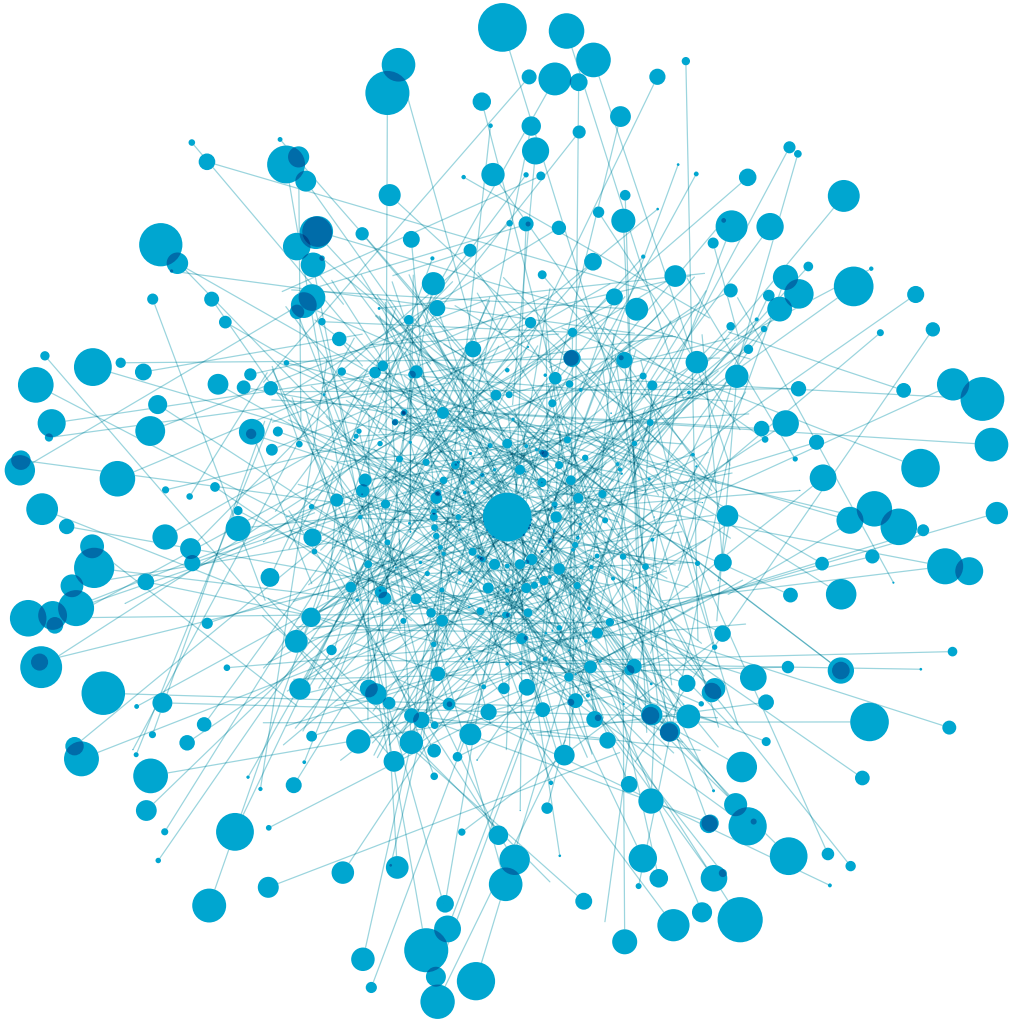
The robots are ready. Are you?
Untapped advantage in your
digital workforce

#worktodo

Consulting
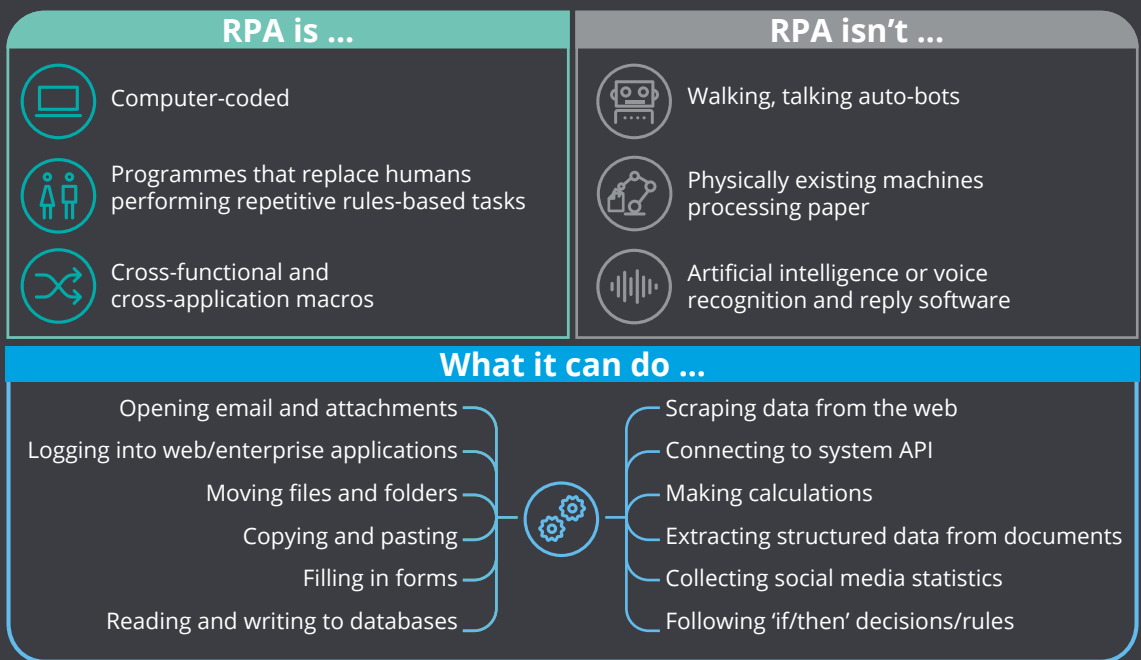
Definitions and methodology

Definitions

Cognitive automation is the use of cognitive or artificial intelligence technologies such as natural-language processing and machine learning to enable more complex automation, typically based on the laws of probabilities.

Digital workforce is used to describe the automated solutions that are delivering processes within an organisation – 'robots', chatbots, algorithms and artificial intelligence. In most cases, the digital workforce will be either working in the background on virtual machines or accessed by consumers and co-workers through a command-based interface. Today, robots dominate most digital workforces and therefore Robotic Process Automation is the main focus of this report.

Robotic Process Automation (RPA), often referred to as 'robotics' or 'robots', is defined as the automation of rules-based processes with software that utilises the user interface and which can run on any software, including web-based applications, ERP systems and mainframe systems.

RPA is ...

- Computer-coded
- Programmes that replace humans performing repetitive rules-based tasks
- Cross-functional and cross-application macros

RPA isn't ...

- Walking, talking auto-bots
- Physically existing machines processing paper
- Artificial intelligence or voice recognition and reply software

What it can do ...

- Opening email and attachments
- Logging into web/enterprise applications
- Moving files and folders
- Copying and pasting
- Filling in forms
- Reading and writing to databases
- Scraping data from the web
- Connecting to system API
- Making calculations
- Extracting structured data from documents
- Collecting social media statistics
- Following 'if/then' decisions/rules

Methodology

In September 2017, Deloitte invited organisations globally to take part in an online survey on their use of RPA. We received responses from over 400 individuals across many industries with combined value of £1,500 billion. This information has been analysed in aggregate and forms the basis of this publication.
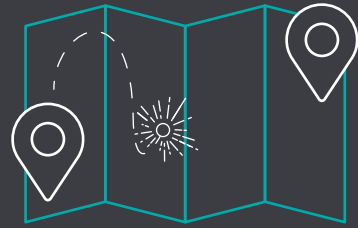
Contents

Most organisations have embarked upon their RPA journey

53%

of respondents have already started their RPA journey

2020

This is expected to increase to

72%

in the next two years

If this continues at its current level, RPA will have achieved **near-universal adoption within the next five years**

RPA delivers value for business leaders ...

The benefits of RPA adoption are significant

2

Payback was reported at less than 12 months, with an average **20% of full-time equivalent (FTE) capacity provided by robots**

RPA continues to meet and exceed expectations across multiple dimensions including:

Improved compliance	**92%**
Improved quality/accuracy	**90%**
Improved productivity	**86%**
Cost reduction	**59%**

78%

of those who have already implemented RPA expect to **significantly increase investment in RPA over the next three years**

... yet scaling RPA is clearly proving more difficult than anticipated

only

3%

of organisations have scaled their digital workforce

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Foreword

Welcome to the 2017 Deloitte report examining Robotics and Cognitive Automation with a particular focus on Robotic Process Automation (RPA) and its role in shared services, global business services (GBS) and other administrative organisations. This is our third such report, following 2015's *"The robots are coming"* and 2016's *"The robots are here"*.

Over the past year, there has been intensifying interest in robotics and automation, both in the media and on the conference circuit. The potential for these technologies to reduce costs and jobs in particular has been highlighted. In our UK report *"From brawn to brains"*, we showed that 35% of UK jobs are at risk of automation in the next 10-20 years. Our research demonstrated that, while technology contributed to the loss of 800,000 jobs between 2001 and 2015, in the same period it helped create 3.5m new jobs which, on average, were higher skilled and higher paid. It is clear that the job landscape in the future will be dramatically different. In parallel with moving to greater use of robotics and automation, businesses need to reimagine the shape and role of their human workforce.

This year's Deloitte RPA survey, which attracted well over 400 responses from around the world, shows that awareness of robotics remains high. Continuous improvement and automation are top of the strategic agenda for many companies. Even more organisations have investigated the RPA opportunity and/or built a proof of concept. They are convinced robotics will deliver a significant productivity increase and that it is applicable for a sizeable portion of their activities.

They are also convinced that robotics can deliver other benefits, such as improved compliance, faster turnaround times and higher quality. They also report that payback periods are attractive – averaging around a year. Yet levels of implementation remain similar to those reported last year, and only 3% of organisations have managed to scale RPA to a level of 50 or more robots.

So, if a majority of surveyed organisations have started on their RPA journey and almost a quarter more plan to do so in the next two years, why has adoption of RPA at scale not progressed faster?

Our experience of working with many organisations on robotic and digital transformations has given us insight on the many challenges of achieving automation at scale. This report will look at how organisations have addressed these challenges and ask how the remarkable potential of a large-scale digital workforce can be released, to drive competitive advantage. Robotic and cognitive automation is clearly one significant disrupter in the future world of work that needs to be understood, and responded to, as part of a much wider transition to new ways of working.

We would like to thank all the executives who participated in the survey and interviews. We hope you find our insights thought provoking and useful, and we would welcome the opportunity for further discussion with you on this topic.

Justin Watson
Robotics and Cognitive Automation Lead
UK Consulting

David Wright
Robotic Process Automation Lead
Global Business Services, UK Consulting

Executive summary

This report builds on our previous research on robotics. The 2017 global robotics survey attracted over 400 responses and its findings demonstrate clearly that robots are here and they are here to stay.

Continuous improvement and automation remain top of the strategic agenda: 53% of the respondents have already embarked on the RPA journey and a further 19% of respondents plan to adopt RPA in the next two years. If adoption continues at its current level, RPA will have achieved near-universal adoption within the next five years.

RPA is increasingly becoming an enterprise-level opportunity: for 64% of respondents on the RPA journey, it is a strategic or enterprise-wide initiative. This figure has grown significantly. Just 12 months ago, only 15% of respondents reported RPA being a part of a wider corporate initiative. Many organisations that started with function-specific RPA initiatives have grown or consolidated these to take advantage of the broader opportunity across the business.

There is an expectation that robots could deliver a significant portion of current transactional activities. On average, the expectation is that 20% of FTE capacity could be provided by robots. This expectation matches the reality for those that have already implemented RPA. In fact, those that have scaled RPA appear to have had such a positive experience that their expectations are even more ambitious: they believe that 52% of FTE capacity could be provided by robots. This can enable the human workforce to be redeployed to more value adding activities.

RPA implementation has an attractive payback period – just under 12 months. Organisations that have piloted RPA expect, on average, a 9.3-month payback period while, in reality, the payback achieved by those that have implemented and scaled RPA has been 11.5 months. The difference is, perhaps, due to an underestimation of time and cost to deliver RPA by some organisations, since 63% said their expectations of time to implement were not met and 37% said their expectations of cost to implement were not met.

However, organisations are continuing to invest in RPA. Among those that have already implemented RPA, 78% expect to significantly increase investment in RPA over the next three years, with those that are piloting RPA planning to spend an average of $1.5m on RPA. Organisations that have implemented or scaled across the enterprise have already invested an average of $3.5m in robotics.

RPA continues to outperform expectations on non-financial benefits such as accuracy, timelines, flexibility and improved compliance, with at least 85% of respondents reporting that RPA met or exceeded their expectations in these areas. In addition, a total of 61% reported their expectations of cost reduction being met or exceeded. Some highlighted the fact that this enabled them to move people from performing transactional tasks to higher-value activities that also led to greater job satisfaction.

In terms of stakeholder support, the C-suite and functional leadership are the most supportive stakeholder groups for companies that have implemented RPA: 72% reported a C-suite that is supportive of RPA. The IT organisation, on the other hand, remains the least supportive stakeholder when it comes to RPA. Overall, it would appear that resistance to the implementation of robotics has fallen since last year among all other stakeholders. Critically, only 17% of respondents faced some employee resistance when it comes to piloting RPA. This dropped to only 3% with respondents who were implementing or scaling RPA. Our respondents suggest that engaging employees in the design and implementation of the RPA solution can be very effective in reducing resistance and can lead to further positive impact including higher job satisfaction.

Process standardisation and change management are reported as the main challenges in the proof of concept and pilot stages of the RPA journey. As organisations move to pilot, implementation and scaling, integration with other IT systems and flexibility of the RPA solution are often quoted as challenges.

On the strategic agenda, the importance of developing analytics capabilities has risen dramatically since last year to become the third most important strategic priority. This is a notable change that highlights the value of converting data to insight.

The cognitive agenda is increasingly anticipated. Those organisations that have implemented or scaled RPA are already looking at cognitive automation: 44% of them have identified suitable solutions and a further 28% are already implementing cognitive automation.

The prize for organisations that get RPA right is significant. Yet, to achieve it they need first to establish the right ambition, foundations and agility. When exploring RPA our recommendation is to consider these elements carefully from the outset and establish an ambition and a model that will enable you to deliver at scale and manage your digital workforce in a fast, fluid and flexible manner.

This in turn creates opportunities for the human workforce in the increasingly challenging market for talent. Instead of considering RPA as a pure cost reduction exercise, businesses should be looking for opportunities to invest saved time in more fulfilling jobs and more flexible work arrangements, enhancing their employee experience.

For a mid-table Fortune 1,000 organisation with around $20 billion revenue and 50,000 employees, automating 20% of estimated addressable activity through RPA could result in over $30m of bottom-line impact each year.

Introduction: Addressing strategic priorities

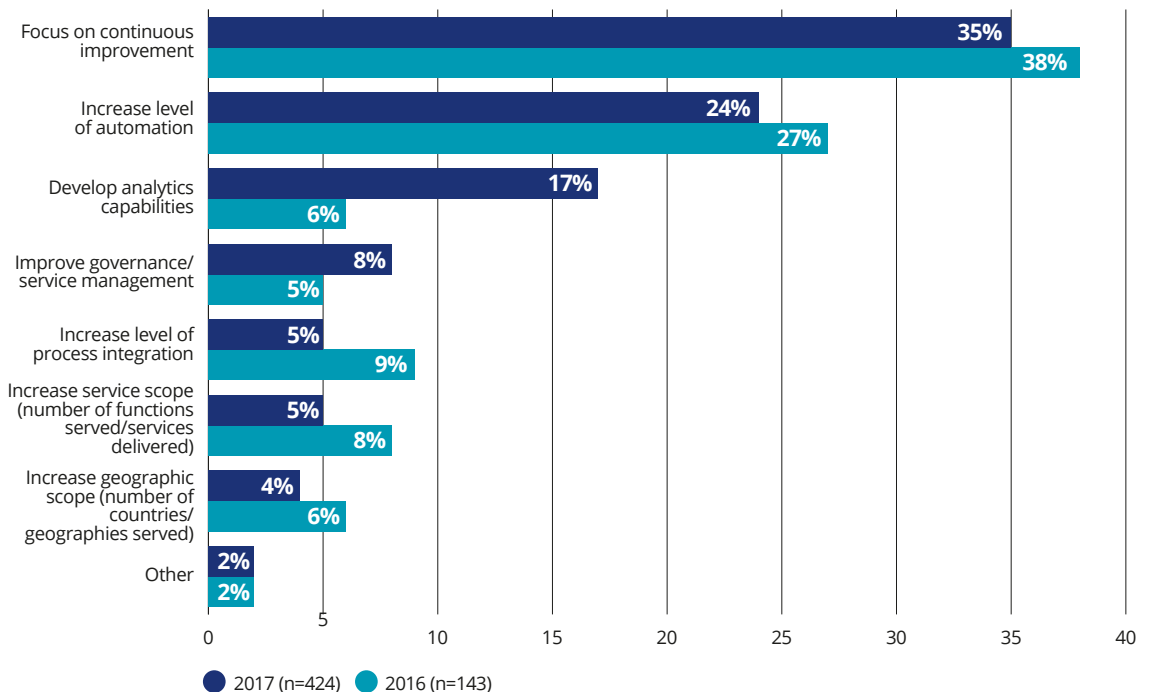**Continuous improvement and automation remain top priorities**

The answers to our question about strategic priorities show the same top two priorities as those in last year's survey *"The robots are here"* (see Figure 1). Continuous improvement and increasing the level of automation are still the main preoccupations for administrative functions and shared-service operations.

There is, however, a dramatic increase in the focus on analytics, with 17% of organisations identifying this as a top priority, compared with just 6% last year. Organisations are seeing more opportunity to derive value from data that already exists and new software, including RPA, is making even more data available to use. There are also improved tools and techniques to interpret this data, to help generate insight and support better decision making.

"By using RPA on top of the processes we can harvest much more information and data than through traditional methods. This opens up new opportunities like leveraging that information for cognitive and AI type of technologies. As we scale up and more data becomes available, this link will be stronger and stronger."

Karolina Mikolajow, Simplification Lead, UBS Investment Bank

Figure 1: What is the top strategic priority for your operation today?

Priority	2017 (n=424)	2016 (n=143)
Focus on continuous improvement	35%	38%
Increase level of automation	24%	27%
Develop analytics capabilities	17%	6%
Improve governance/service management	8%	5%
Increase level of process integration	5%	9%
Increase service scope (number of functions served/services delivered)	5%	8%
Increase geographic scope (number of countries/geographies served)	4%	6%
Other	2%	2%

Given the high impact of RPA on these top-three priorities, continued investment in its adoption is not surprising.
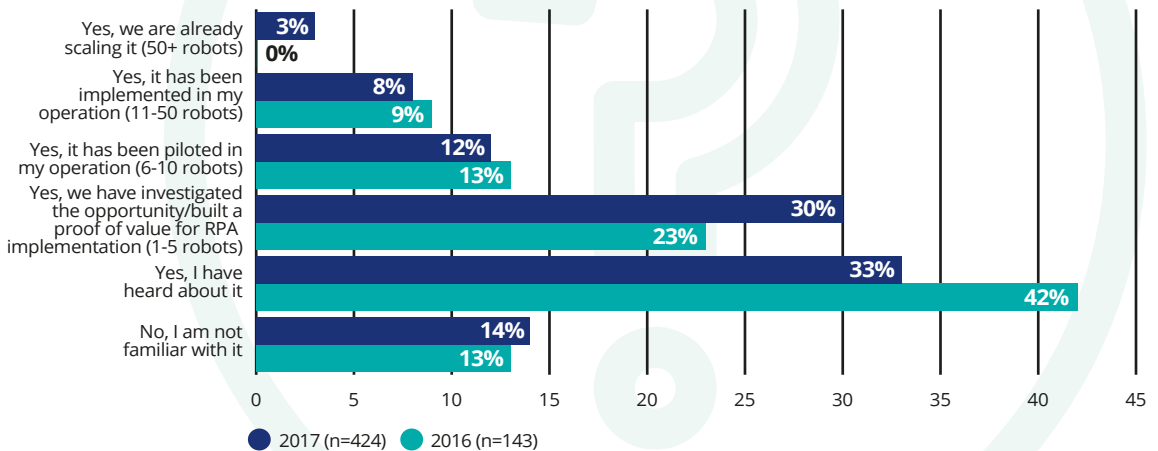
Yet there remains a large core of organisations that are, at best, slow to benefit from RPA (see Figure 2). Compared to last year, there has been a relatively small increase in the number of organisations investigating RPA or building a proof of concept, and only a tiny minority (3%) of progressive leaders have reached any form of scale with more than 50 robots in service.

We are surprised that so few have scaled, given the relatively low cost of implementation and the high benefit of automating carefully selected high-value activities.

While a few early adopters are already moving from experiment to scale, process automation using RPA is still in its infancy and many organisations have yet to fully realise its benefits.

Why have organisations not moved more quickly to implement and scale their digital workforce, when the benefits from RPA are high and the payback period is so attractive, at just under one year?

Figure 2: Are you familiar with RPA?

	2017 (n=424)	2016 (n=143)
Yes, we are already scaling it (50+ robots)	3%	0%
Yes, it has been implemented in my operation (11-50 robots)	8%	9%
Yes, it has been piloted in my operation (6-10 robots)	12%	13%
Yes, we have investigated the opportunity/built a proof of value for RPA implementation (1-5 robots)	30%	23%
Yes, I have heard about it	33%	42%
No, I am not familiar with it	14%	13%

A shift in mind-set is required

Many organisations, having started by treating RPA as an experiment, are now "stuck" and are suffering from IT issues, process complexity, unrealistic expectations and a "piloting" approach. Maximising the impact of RPA requires a committed shift in mind-set and approach from experimentation to transformation.

In making this change, organisations must make the right strategic choices – laying the right foundation to enable a 'premium' digital workforce to support their drive for competitive advantage. Given the relative immaturity of the automation market, it is taking time for large organisations in particular, to learn about and to adopt RPA at scale. We see three keys steps to achieving RPA adoption at scale:

Deloitte has been delivering finance-wide RPA programmes with a number of banking organisations. For instance, we have automated 50 accounting and reporting processes for one European bank, releasing 25% FTE capacity from relevant teams in year one, with a similar scale plan for year two. In parallel, the programme has set up a finance centre of excellence to run, maintain and change automations and has set up the infrastructure for up to 75 automated processes.
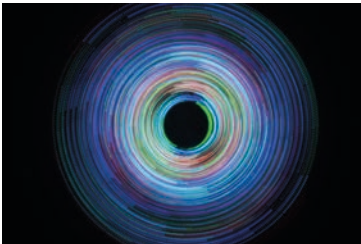
I. Start with a bold ambition:
Organisations that achieve scale in RPA set out a bold ambition for their digital workforce and make conscious choices to achieve it. In all cases, sponsorship has risen to the executive committee.

II. Build a strong foundation:
Higher-performing robots operate leaner, less error-prone and less customised processes. They are designed and operated by agile, effective teams. Strong foundations must be in place to achieve these outcomes, creating highly adaptable robots that work alongside an engaged human workforce.
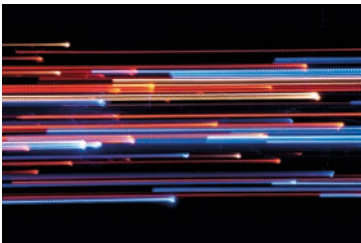
III. Achieve high-velocity change: Leaders in RPA operate with an agile approach – they make quick decisions and get on with it. Their fear of failure has reduced since they know that any problems will appear soon and can be addressed quickly, and they are willing to cut through organisational barriers. Their challenge now is to capitalise on the increased speed of doing business that their digital workforce has delivered.
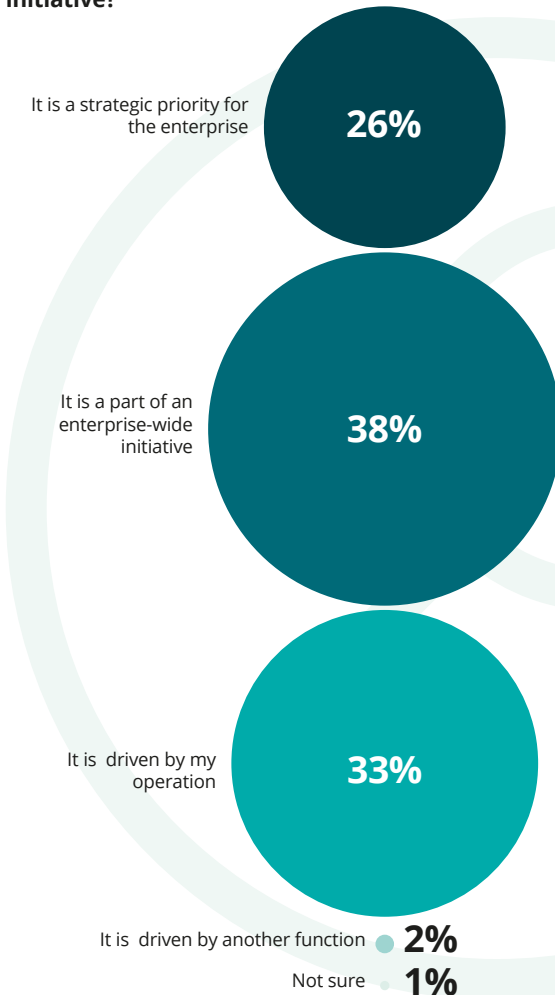
Start with a bold ambition

Think broad – across the whole enterprise

RPA solutions are enterprise platforms: they can, in theory, be applied to any automatable activity. The benefits of a digital workforce should be evaluated across the whole organisation, not just in functional silos, and support for adoption should be led from the top. Most companies now appear to recognise this.

In 2016, just 15% of respondents reported that their RPA programme was part of a wider corporate initiative. In 2017 the figure had risen to 64% – organisations that have embarked on the RPA journey have RPA as either enterprise-wide, or as a strategic initiative (see Figure 3). In addition, for organisations that are scaling this figure is 100%.

Figure 3: Is the RPA initiative driven by your own operation or is it part of an enterprise-wide initiative?

It is a strategic priority for the enterprise — **26%**

It is a part of an enterprise-wide initiative — **38%**

It is driven by my operation — **33%**

It is driven by another function — **2%**

Not sure — **1%**

n=181

"I believe there is more opportunity outside of the shared service centre… I look around our business and I see many more spreadsheets than should be present in our organisation."
Shared Services Director, Multinational building-materials company

Not all RPA journeys start off with an enterprise-wide scope and organisations should 'think big, start small'. Many of our clients have started small, in a specific functional area, where there is stakeholder support and clear opportunity, for example Finance or HR, or in a shared services or global business services organisation. Once proven, they can then showcase this to other parts of the organisation and help leaders 'think big' about the broader opportunity across the enterprise.

Think big – make your target significant

When it comes to scaling RPA, we were surprised by the ambition of the scope of potential automation reported by those scaling RPA.

On average, respondents who had implemented RPA estimated that 20% of capacity in their operation could be delivered by robots. This was in line with the expectations of organisations at proof of concept or pilot stages, which were targeting just under 20% of capacity in their operation.

However, among organisations that are already scaling robotics the average target was as high as 52% of capacity. Those implementing at scale believe their digital workforce will exceed their human workforce in terms of delivery capacity, for administrative and repetitive tasks.

Of course, companies do not expect to realise these targets immediately. One Deloitte client delivered an initial 8% of FTE capacity in the first wave of implementation which was realised through attrition and redeployment to higher value roles. But it recognised that as it built system-specific, re-usable components, the cost to implement would reduce and additional lower-volume processes would become more financially viable.

Think benefits – and think beyond cost reduction

There is temptation with RPA to focus solely on the benefits of reducing headcount in rules based processes. Cost reduction in the target processes is typically achieved through attrition, freezing recruitment and through moving people into higher value roles. This tends to be what drives business cases and helps organisations achieve an average reported payback period of just under 12 months.

However, the evidence yielded by this survey underlines and amplifies what we have learned through experience implementing RPA – that top line and productivity benefits can outstrip cost benefits: 86% of respondents indicate that their expectations of productivity improvement from RPA were met or exceeded, while the same is true of 61% in relation to expectations on cost reduction (see Figure 4).

"I am glad we considered compliance and internal controls when going through the RPA journey. A bot increases the quality of the process and allows for consistency and reliability."
Dr Tanja Küppers, VP, Global Head of Finance Transformation, DHL Supply Chain

Figure 4: Did the implementation meet your expectations in terms of:

Exceeded ● Met ● Did not meet
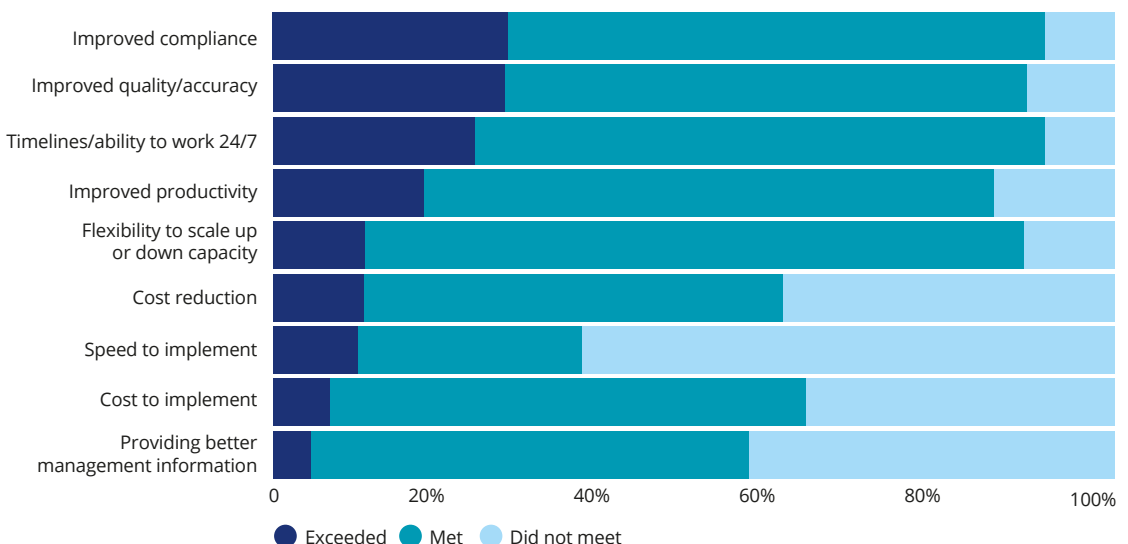
n=32

Confidence in RPA's capacity to deliver benefits such as improved compliance, quality and improved productivity remain high (in the 85% to 92% range). As organisations progress in their RPA journey, they increasingly value these upside benefits as they see how these positively impact their organisation.

However, for some organisations not all expectations are being met by RPA: 63% of respondents said that their expected speed to implement had not been achieved and 43% found that RPA had not delivered planned improvements in management information.
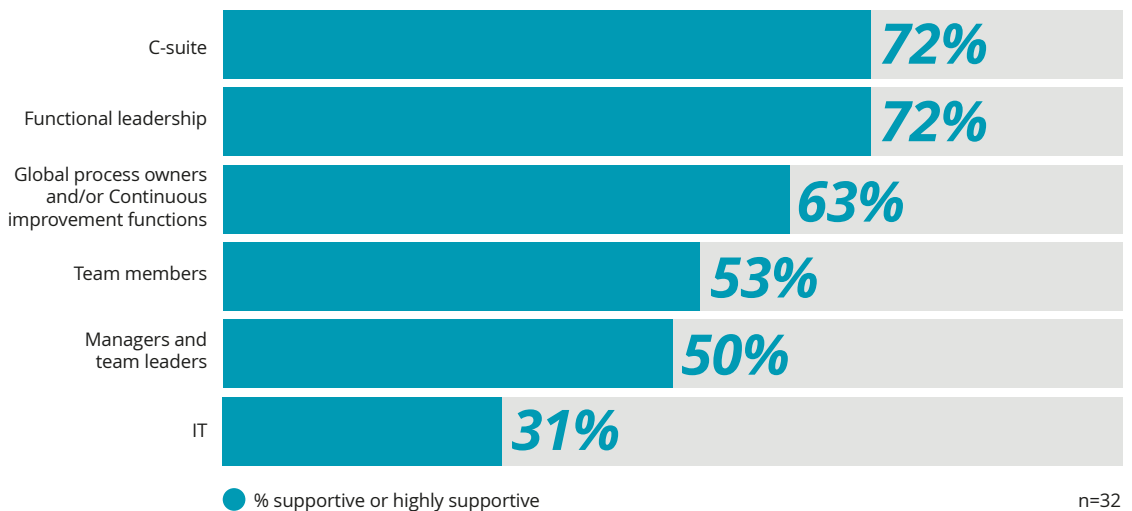
In our view, digital workforces require stringent planning, design and implementation. The rush to commoditise robot development has, in many cases, led to organisations failing to recognise that high-quality architecture, planning and building of a digital workforce can yield much-improved results.

Think high – get your C-suite on board

Implementing a premium, enterprise-wide digital workforce requires C-suite support and sponsorship. Our survey shows that C-suite and functional leadership are the most supportive stakeholder groups in companies that have implemented and scaled RPA (see Figure 5).

C-Suite awareness of, and support for, RPA in particular has increased since our last survey. Organisations can capitalise on this to cut through organisational barriers and to accelerate scaling, both of which are especially useful where there is resistance from other parts of the business.

Figure 5: How supportive of the RPA implementation were your stakeholder groups?

Stakeholder group	% supportive or highly supportive
C-suite	72%
Functional leadership	72%
Global process owners and/or Continuous improvement functions	63%
Team members	53%
Managers and team leaders	50%
IT	31%

● % supportive or highly supportive   n=32

Seeing is believing. An organisation was struggling to get its RPA business case approved and, if anything, the most conservative option was likely to be adopted. The CEO then visited another organisation and heard about what robotics was delivering there and suddenly the project had a powerful advocate on board. The project team's new challenge was to create a more ambitious implementation plan, as its leadership recognised the opportunity robotics presented and sought to capitalise on it.

Build a strong foundation

There must be a focus on process

This year, process standardisation is the top challenge faced by organisations across all stages of the RPA journey. Put simply, process complexity drives robot complexity: it increases the cost and difficulty to design and implement RPA, increases operating costs, and increases business disruption.

Robots require detailed process accuracy and need to be taught at the keystroke level. Yet, organisations are finding processes are not always well understood, even where robust process documentation exists. Operations that appear standard in the process documentation, often differ significantly in reality across countries and/or business units. Implementation teams need to work closely with the business to fully understand the detailed processes and proactively address any issues.

It is important to engage global process owners (GPOs) as stakeholders and, as Figure 5 shows, they are often highly supportive of RPA. One key strategic decision to make, ideally together with your GPOs, is whether you will automate the current processes with minor changes, or consider more wholesale process change as part of the automation. Typically, high-performing digital workforces operate re-engineered processes, achieving standardisation by automating the best process, or parts of process, and then, over time, migrating any variations to a new standard.

Top challenges for those who had implemented and scaled RPA

1. Process standardisation
2. IT buy-in and support
3. Integration and flexibility of solution
4. Stakeholder buy-in and expectations
5. Employee impact

"RPA operates at the absolute lowest level of process. It offers you a once in a lifetime opportunity to see the deepest levels of your processes, identify deviations from standard and address them."

Dr Tanja Küppers, VP, Global Head of Finance Transformation, DHL Supply Chain

It requires responsive and secure technology support

Buy-in from an effective IT organisation and successfully integrating the RPA solution are the next challenges in implementing RPA – a point that highlights the fundamental importance of including and integrating the IT organisation in the automation process.

The IT organisation is essential in setting up a scalable and secure bot infrastructure – to 'plumb' robots into your existing systems – and can hold the key to testing systems, approving user acceptance testing, signing off go-live and incident management on live systems.

"IT are absolutely critical to the successful deployment of RPA. This was a lesson we learned early on in our own RPA deployment in Deloitte. I have found there is a significant difference in both speed and cost to deliver between clients that have an engaged and supportive IT function and those where IT is less supportive."

David Wright, Director, Deloitte

The perception of most respondents (see Figure 5), is that the IT organisation can often be least supportive of RPA. This picture has not changed since last year, despite other stakeholder groups apparently warming to RPA. In our experience, it can be difficult to move RPA up the priority list of IT organisations when they are often focused on more immediately pressing and large-scale challenges of keeping the lights on, migrating estates to the cloud, and preparing for next generation ERP.

We recommend engaging the IT organisation from the outset, integrating it into your governance and sharing face time with executive sponsors. If IT teams are struggling, consider engaging CIO support to create a small handpicked team of agile, digital-minded technologists to support your RPA implementation and help you successfully navigate the wider IT organisation.

You need engaged people

Organisations that have succeeded in scaling RPA tend to have engaged people and have effectively built buy-in to the change process. In contrast with outsourcing, there seems to be little resistance across organisations to the introduction of RPA. Just 17% of organisations that are piloting RPA faced some or significant employee resistance, and among those that have progressed to implementation or scaling resistance was negligible (see Figure 6).

Some organisations had engaged their employees in the design and implementation of the robots and in how this alters the role and skills of the people who will be working alongside them. They reported that as a result, many employees had welcomed RPA, found their jobs were more satisfying after implementation and wanted to pioneer this new technology.

Figure 6: What impact has RPA had on your workforce?
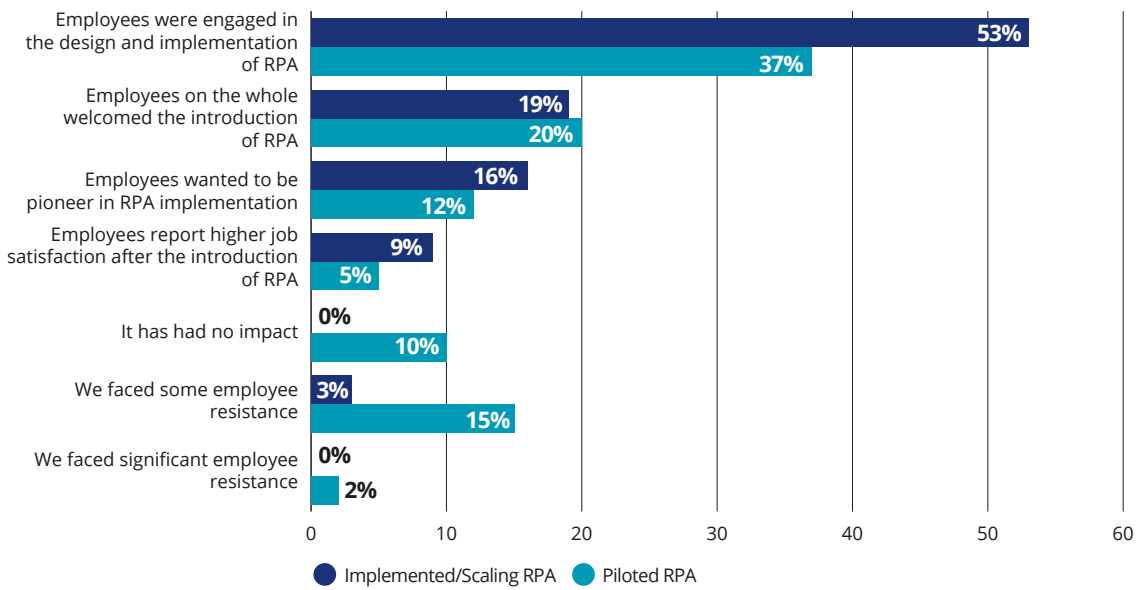
n=73

"RPA augments what our people do: it supplements their capability, it means that they can focus on things that are more value added, that are more interesting."

Shared Services Director, Multinational building-materials company

Robotics requires a transformation programme
Organisations achieving scale in RPA implementation have moved beyond the experimentation stage and into transformation. They recognise the potential and scale of impact and are adopting approaches and techniques associated with large-scale change programmes.
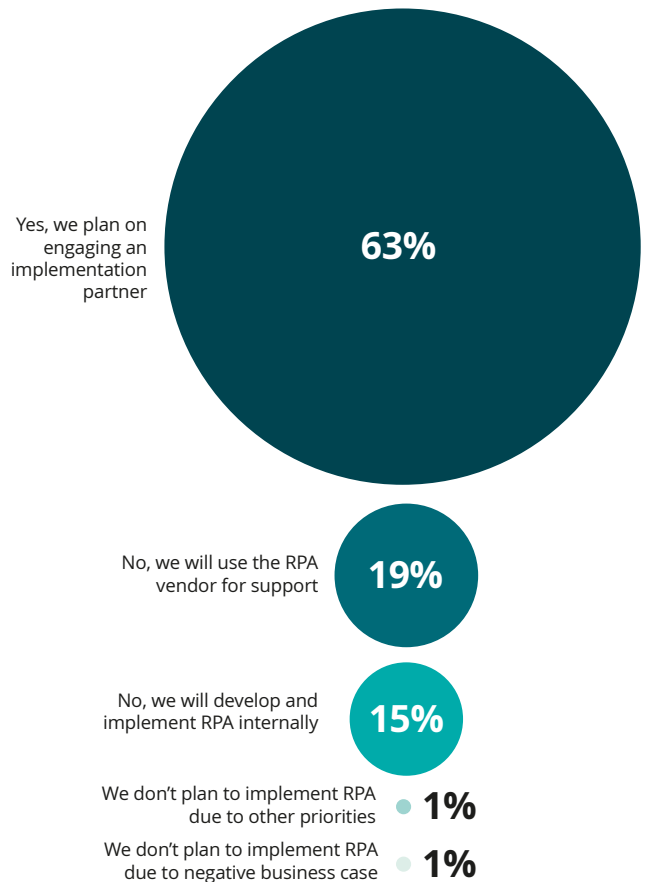
In these organisations, **investment is significant and rising**, typically in the $2m to $4m range for those with strategic or enterprise-wide initiatives. Of those that have already implemented RPA, 78% expect to increase or significantly increase investment in RPA over the next three years (see Figure 7).

Figure 7: How do you plan for your RPA investment to change in the next three years?

Increase significantly — **47%**

Increase — **31%**

Stay the same — **19%**

Decrease — **3%**
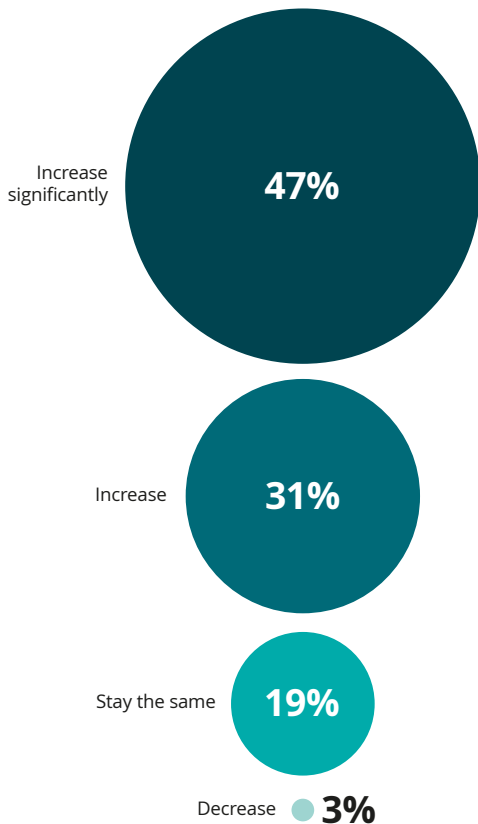
n=32

Figure 8: Do you plan to engage an implementation partner, in addition to the RPA vendor, to support your implementation?

Yes, we plan on engaging an implementation partner — **63%**

No, we will use the RPA vendor for support — **19%**

No, we will develop and implement RPA internally — **15%**

We don't plan to implement RPA due to other priorities — **1%**

We don't plan to implement RPA due to negative business case — **1%**

n=149

In many organisations, RPA adoption is also leading to **development or acquisition of new skills**: RPA architects, developers familiar with the RPA products, and robot operators are new roles where there are few subject matter experts. Respondents, particularly those at the early stage of their RPA journey, report a "Lack of RPA resources/skills/talent/expertise" as a key challenge. But it is not just RPA-specific specialist skills that are required: project management, process and change-management skills are essential.

In addition, to fully harness the potential of AI and robotics, businesses will need to upskill the people who will work alongside the robots, in the 'augmented' workforce, enabling them to deliver higher value activities.

New organisational and operating models are also needed and a key question is where to site RPA-implementation teams. While issues such as targets, method, vendor and quality assurance can be managed centrally for the whole enterprise, we believe that ownership of RPA implementation is best distributed at the business unit or function level. RPA expertise may be housed either centrally, in business unit or centres of excellence, preferably with the ability to move people between these centres depending on demand.

Specialist skills and capacity are required.
For the majority of organisations (63%), implementation will involve working alongside a dedicated third-party partner (see Figure 8), often to provide advice and skills that are scarce in their own organisation. This support ranges from turn-key solutions to collaborating to up-skill in-house teams and build internal RPA-delivery capability. Choices about third-party support are likely be driven by the nature of the digital workforce that an organisation is seeking to establish and by factors such as the complexity and number of roles required, the need for flexibility and the need for quality assurance. Just 15% of surveyed organisations plan to develop and implement RPA without any external support.

Achieve high-velocity change
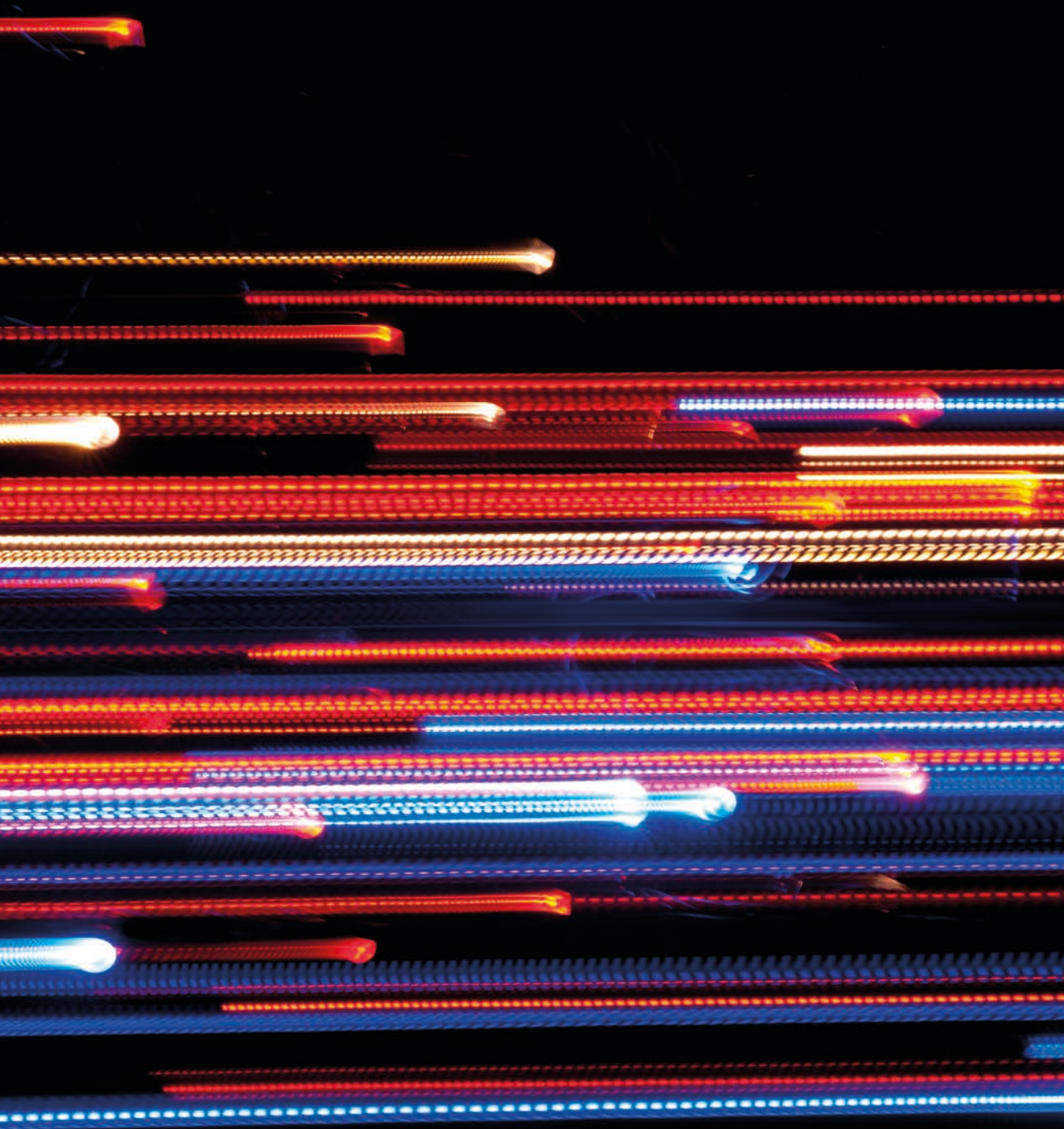
Delivery of a lean, digital workforce

The highest-performing digital workforce benefits from a well-planned 'robot architecture': the way it is designed, coded, deployed and integrated into your human workforce determines the future performance of a digital workforce. In our experience, a well-planned and designed digital workforce is around twice as productive as more organically developed robots.

The type of digital workforce will depend on your key choices, e.g.:

Extent of process re-engineering

Use of unattended vs. attended bots

Level of data captured for insight

Improvement to the process speed

A well-planned robot architecture at a global retail bank, using extensions to a leading off-the-shelf RPA solution, has allowed for the implementation of a substantial unattended bot farm, with operations monitored by a skeleton staff through a control-room extension. Around 150 bots now perform the work of at least 400 human equivalents. At a competitor, where the approach has been less well-planned, the same human work effort is performed by around 500 bots.

RPA fundamentally changes an organisation's operating model, providing a new team for administrative operations. This digital workforce layer has a much lower cost of delivery and higher reliability than offshore locations, but has a number of important limitations. These include the need for digital data, rules-based operations, a level of standardisation and sufficient transaction volume to justify developing the automation.

This operating model change is enabling a move up the value chain in many shared-service and administrative organisations. Some organisations are looking to move to 'lights-out' functions, where all the transactional and administrative activities are fully automated. The human workforce centres on higher-value and higher-paid skills, delivering tasks that demand human contact, judgement and creativity.
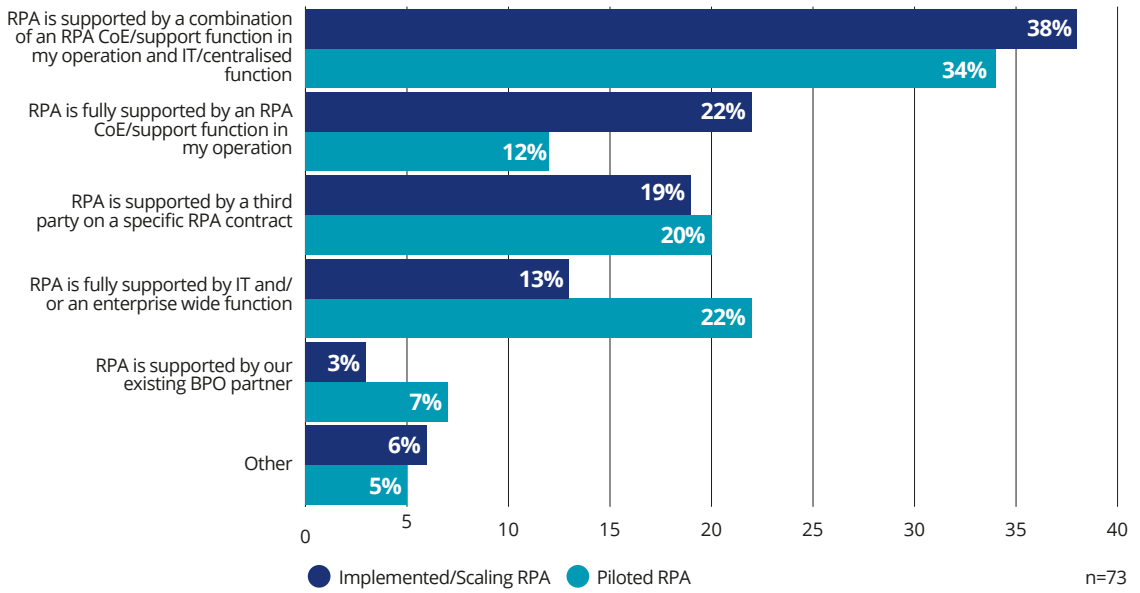
A responsive support organisation is required

RPA is also leading to the development of machine resources departments. Just as a human resources department seeks to get the best out of human employees, so a machine resources department, or RPA centre of excellence, should do the same for the organisation's robots.

Many support models are emerging for robotics, with the most common being a hybrid model combining an element of local operation-specific responsibilities and a centralised function that can provide wider co-ordination and more specialised activities. This retains local ownership and flexibility but allows economies of scale and enterprise-wide co-ordination in areas where this makes sense. In our experience, activities such as RPA-vendor-relationship management, disaster recovery and third-line support tend to be provided centrally.

Approximately 20-30% of organisations are supported by a third party, with the majority of these on an RPA-specific support contract. Figure 9 outlines how RPA is being supported for organisations in pilot stage and those implementing and scaling.

Figure 9: What is your RPA support model?

	Implemented/Scaling RPA	Piloted RPA
RPA is supported by a combination of an RPA CoE/support function in my operation and IT/centralised function	38%	34%
RPA is fully supported by an RPA CoE/support function in my operation	22%	12%
RPA is supported by a third party on a specific RPA contract	19%	20%
RPA is fully supported by IT and/or an enterprise wide function	13%	22%
RPA is supported by our existing BPO partner	3%	7%
Other	6%	5%

n=73

Right-sized governance – decisive yet flexible

An agile approach with the right leadership, talent and governance is key to driving high-velocity implementation.

It is important to take a value-chain view of the organisation and to consider how a digital workforce will enhance the end-to-end flow of value. In order to fully take advantage of a faster, more-accurate digital workforce, it may be necessary to make changes elsewhere in the value chain and the organisation's leadership needs to be open to this possibility.

Once robots are live, governance needs to be at an appropriate level to enable control but not to obstruct change and improvement. Robots are dynamic and should not be governed like an ERP or core system. Their governance requires a different mind-set – managing them as digital workers. While organisations need to be able to schedule and prioritise work on a real-time basis, they also need to be able to adjust what they do to meet changing business requirements and the evolution of the underlying systems.

Governance was mid-way on the table of challenges for organisations at the pilot stage of RPA. However, it was at the bottom of the list for the small number of organisations that had already implemented or scaled RPA, perhaps because in order to do so, they have already had to address the issue of developing and running effective governance that is tailored to RPA. We believe governance should be considered carefully and implemented correctly at the beginning of your RPA journey.

Agile ways of working are required

With RPA being the start of the next-generation-automation journey, agile should become the norm. This requires embedding different ways of working and cultivating a mind-set that enables your teams to succeed or fail quickly and, if they fail, to rapidly adapt their approach to learn from their experience. Utilising techniques like developing a "minimum viable product" allows you to operate at this speed by restricting the size of each automation. Regularly engaging stakeholders such as process specialists is also key – for example, running a "show and tell" at the end of each sprint where your team demonstrates the latest iteration of the automation can help you obtain regular feedback and course correct promptly.

Agile ways of working will not only benefit your digital workforce but will have a positive impact on your human workforce. Your people will become more responsive and used to working at pace, allowing them to function more effectively in an increasingly digital world.
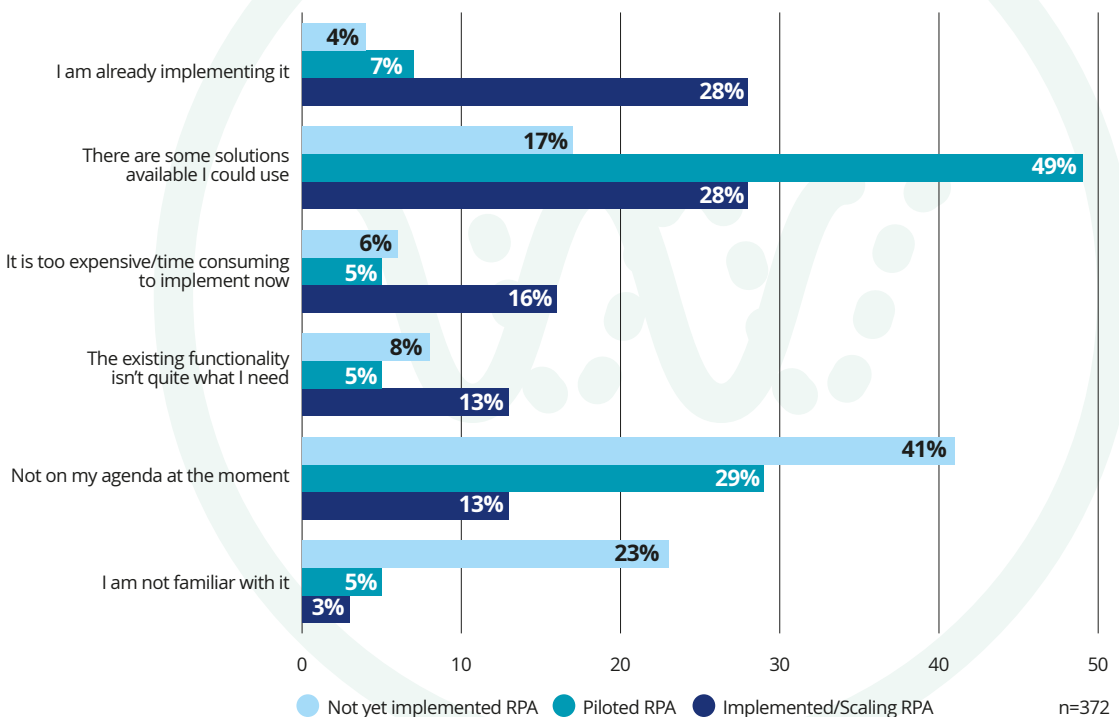
A step on the digital journey
RPA is a significant step on your organisation's digital journey, but it is only the start. As organisations progress in their adoption of RPA, they tend to become more ambitious with cognitive technologies. More than a quarter (28%) of those implementing and scaling RPA are also implementing cognitive automation, while only 6% of those that have not implemented RPA are progressing with cognitive automation (see Figure 10). RPA can fuel both the interest in and the agility required for other digital technologies, enabling organisations to move further on the digital automation journey.

"RPA has been really helpful to actually show the people on the ground that we can break barriers pretty quickly, which probably previously using other tools and traditional methods of development wouldn't be as agile and fast."
Karolina Mikolajow, Simplification Lead, UBS Investment Bank

Figure 10: What is your view on cognitive automation?

I am already implementing it: 4%, 7%, 28%
There are some solutions available I could use: 17%, 49%, 28%
It is too expensive/time consuming to implement now: 6%, 5%, 16%
The existing functionality isn't quite what I need: 8%, 5%, 13%
Not on my agenda at the moment: 41%, 29%, 13%
I am not familiar with it: 23%, 5%, 3%

Not yet implemented RPA ● Piloted RPA ● Implemented/Scaling RPA   n=372

Conclusion: gaining advantage through your digital workforce

While implementing robotics will take effort and investment, the prize can be very significant if you get your ambition, foundations and agility right. We recommend you consider these carefully from the outset and establish an ambition and a model that will enable you to deliver at scale and manage your digital workforce in a fast, fluid and agile way. The prize is not only a cheaper, faster and higher-quality workforce for those rules-based administrative tasks, but the opportunity to establish a mind-set and momentum that enables you to progress further and faster on your overall digital journey.

To-do list for scaling RPA

Start with a bold ambition

1. **Think broad** – Robotics should be adopted across the whole enterprise to maximise benefits

2. **Think big** – Make your target significant, leverage RPA fully, then incorporate cognitive automation

3. **Think benefits** – Look beyond headcount reduction and aim for the top line, and for quality and compliance through robotics

4. **Think high** – Get your C-suite on board. Speak to them as they are likely to be supportive of RPA adoption

Build a strong foundation

1. **Focus on process** – Invest in defining the process in detail and keep it simple as process complexity drives robot complexity

2. **Gain IT buy-in** – Secure IT support from the outset. IT are often less supportive to RPA and this can be a major obstacle to a successful implementation

3. **Engage your people** – Build automation with and for your people, so they understand it and feel the benefits. This will help keep resistance to RPA low

4. **Make it a transformation** – Scale RPA by treating it as a transformation not an experiment and recognise that you will need to invest and to partner
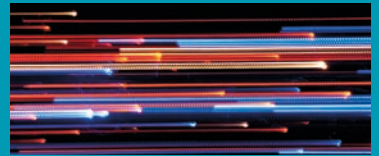
Deliver high-velocity change

1. **Get lean** – Plan your digital workforce to be fast, scalable and able to work 24x7. This workforce is a source of competitive advantage for those who get it right

2. **Build a responsive support organisation** – Establish the right kind of support for RPA with ownership from your operation and co-ordination across the enterprise

3. **Implement right-sized governance** – Make it decisive but flexible. An agile approach works best and effective governance is essential for scaling robotics

4. **Become agile** – Adopt agile ways of working and a digital mind-set to enable you to take full advantage of robotic and cognitive automation

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