
THE STATE OF ROBOTIC PROCESS AUTOMATION AND ARTIFICIAL INTELLIGENCE IN THE ENTERPRISE

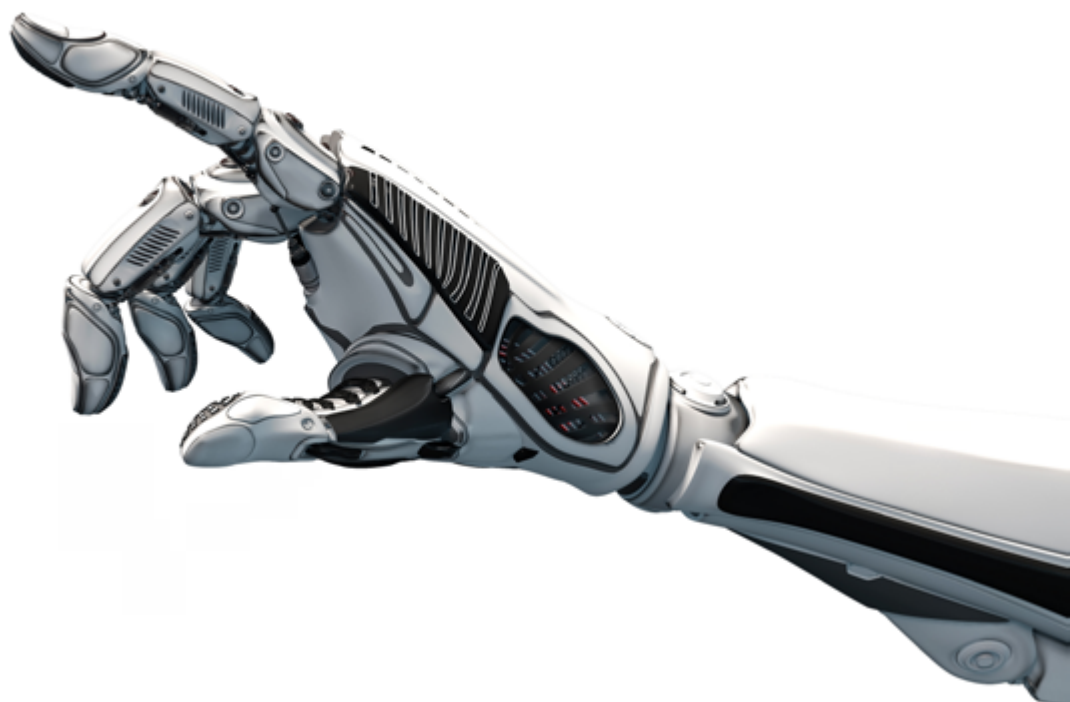


INTRODUCTION

In 2014, distinguished Oxford University philosopher, Nick Bostrom, released his book *Superintelligence: Paths, Dangers, Strategies*. It hypothesises the potential impact on society if “machine brains” were to surpass that of a human, with the premise being that our destiny would be dependant on machine intelligence, and therefore out of our own hands.

The book’s concerns have been echoed by Bill Gates, Elon Musk, and eminent physicist, Stephen Hawking. The latter said that while success in AI “would be the biggest event in human history,” it might be our last, “unless we learn how to avoid the risks.”

There is, however, a long way to go before we’re at the peril of walking, talking robots in the enterprise – even if Boston Dynamics’ humanoid robot, Atlas, was caught running freely into the woods. Currently, RPA is more commonly used in the enterprise, and in this report we will explore how both AI and RPA are affecting companies.



CONTENTS

04

The Audience

05

What are RPA and AI?

06

IT Industry

13

The Finance Industry

19

Other Industries

25

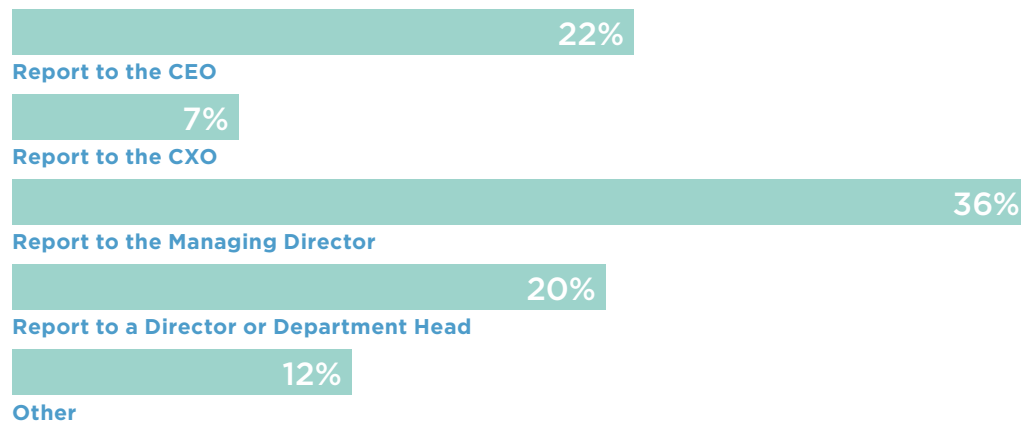
Key Takeaways

26

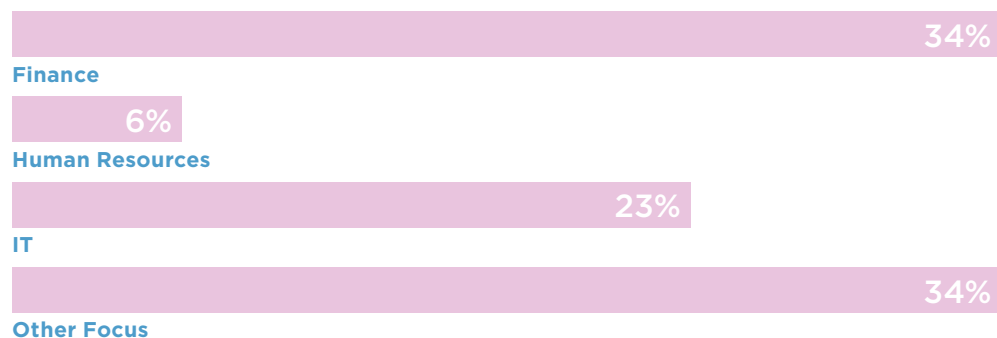
About the RPA and Artificial
Intelligence Summit 2016

THE AUDIENCE

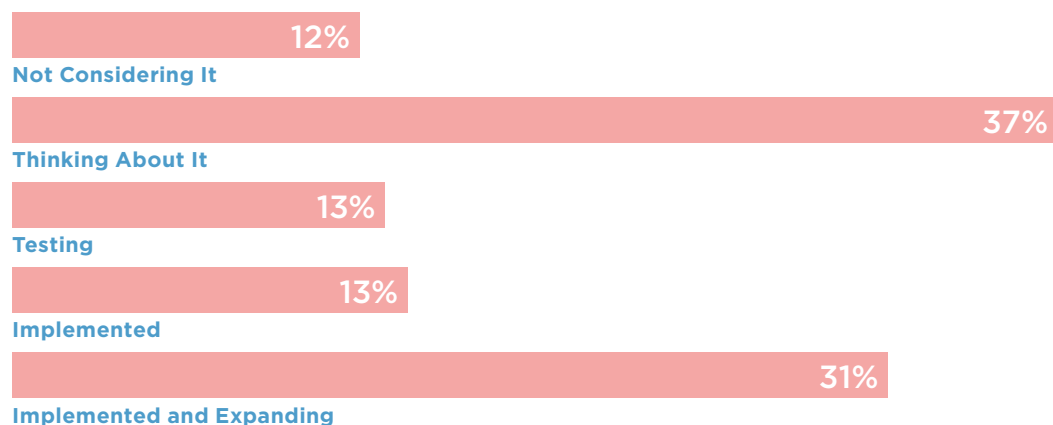
Their reporting level



Their functional focus



Where are the survey's participants in their RPA implementation?



WHAT IS ROBOTIC PROCESS AUTOMATION?

Robotic Process Automation is still nascent, but promises to be transformative in the business environment. RPA doesn't *actually* involve real robots, for now, computer coded software is what drives RPA, allowing organisations to automate repetitive, mundane tasks.

The most common place to find RPA is within shared services centres or in other similar back-office functions. The software, or robot, can take a task - like distributing travel expenses - and complete it faster than a human, and with fewer errors.

It's currently been as divisive as it has transformative. Certain IT departments, for example, have lambasted RPA due to its ability to displace tasks once undertaken by humans. In response to this, however, companies have been keen to accentuate that RPA will free humans to do more strategic tasks.

WHAT IS ARTIFICIAL INTELLIGENCE?

If you believe Gates, Musk and Hawking, this is where it starts to get scary. Artificial Intelligence, although often envisaged as a super-human lifeform, is commonly implemented as algorithms which process large datasets in order to carry out tasks more efficiently than humans.

While RPA and AI have similarities, they are different beasts. The main difference is that AI has self-learning capabilities, which means that it can tackle tasks which don't involve repetition. AI can make sense of unstructured data-sets where there's variation, and it also gets better with time.



IT

INTRO

Is the IT sector running out of momentum or is it on the cusp of a revival? This is the question many within the sector are asking themselves.

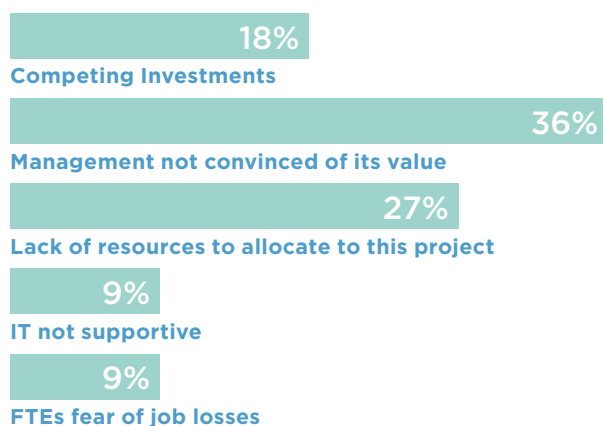
The IT department is no stranger to the mundane, with simple tasks potentially taking days, if not weeks, to complete. Data entry, for example, would be an obvious contender for automation. As a task, it requires little to no skill, but concentration for hours at a time. RPA software doesn't get tired, disheartened, hungry or thirsty, it just gets the job done, and with no errors.

The manpower currently spent on data entry, and other automatable tasks – like system integrations and reporting – could be used to concentrate on strategic issues that have a wider business impact.

In this section, we take a look at how the IT industry is being affected by RPA and AI.

ROBOTIC PROCESS AUTOMATION

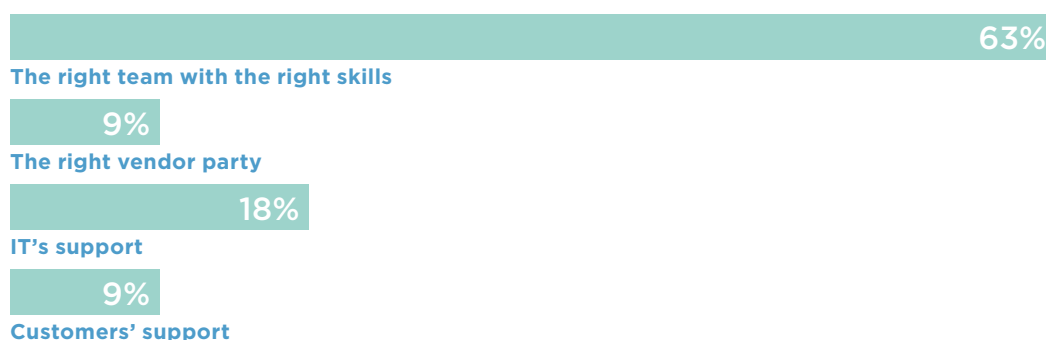
The IT industry's main RPA challenge



Senior managers within the IT industry, according to our data, are not yet convinced about the power of RPA, with 36% highlighting this, and a further 27% stating that there was a lack of resources to attribute to the

project. This was unanticipated, but indicates that short-term goals are still taking precedent over RPA. Whether this lack of concentration impacts the RPA implementation process, however, is unclear.

Their key to implementing RPA



It was not surprising to see the IT sector vote overwhelmingly in favour of the importance of people, with 63% stating this. The rise of robotics has prompted many to question whether people still have a role to play in the IT department, so it would seem natural that they would oppose any future where their role is displaced.

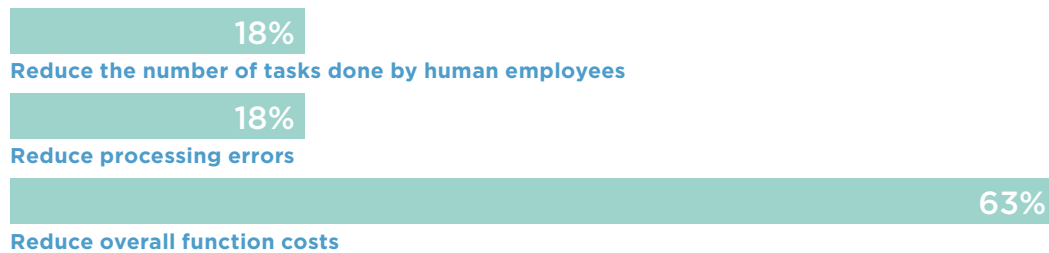
It's not just about protecting their future. Gartner has already called the

IT department "a catalyst" for the next phase of robotics in the enterprise. The department's common burdens – troubleshooting and data entry – will no longer be an issue, meaning they can play an important strategic role as robotics permeates the organisation.

A smaller percentage – 9% – stated that choosing the right vendor was the most important aspect.

ROBOTIC PROCESS AUTOMATION

The savings they expect to make



The general consensus was that the IT department would make cost savings across the board, with 63% stating that it would reduce overall function costs. It was also interesting to see that 18% believed that RPA would specifically reduce the amount of tasks undertaken by human employees.

It will likely come as a relief to IT workers that monotonous tasks like data entry are being eaten up by machines. The Institute of Robotic Process Automation (IRPA), however, predicts that RPA could allow companies to curtail their workforce by at least 18%. Even with current technology, the need for IT support roles, in particular, is likely to decrease – potentially wrecking havoc for those trained in the area – and this can only increase as machine learning and AI start to play a more important role.

Embracing technological development, however daunting for the IT department, has been essential in society's development. As many will point to, the battle between man and machine goes back centuries. Back in the 1800s, the Luddites were destroying the textile machines

which threatened to render their skills useless. In 1871, agricultural workers accounted for fewer than 7% of the workforce, now that figure stands at less than a percent. Neither human muscle nor precision can compete with technology – making it logical for companies to look to RPA implementation.

This does not necessarily mean that there is no future for people in the IT industry. It does, however, mean that certain functions will be automated and operated by machines as we move forward. The fact that the majority of respondents highlighted an overall reduction in costs, not just a reduction in the amount of tasks undertaken by employees, demonstrates that there is a belief that the department's efficiency will also improve.

The IT department is set for a facelift, but its final position remains unclear. According to our data, however, it's clear that RPA is going to reduce costs and streamline the department – whether that leads to job losses remains to be seen.

ROBOTIC PROCESS AUTOMATION

Will RPA replace Business Process Outsourcing (BPO)



The survey points to an unequivocal “no”. Not one participant stated that RPA would replace BPO, with 82% believing that RPA would enable them to leverage their own solutions more effectively and refocus their BPO provider to deliver more value add.

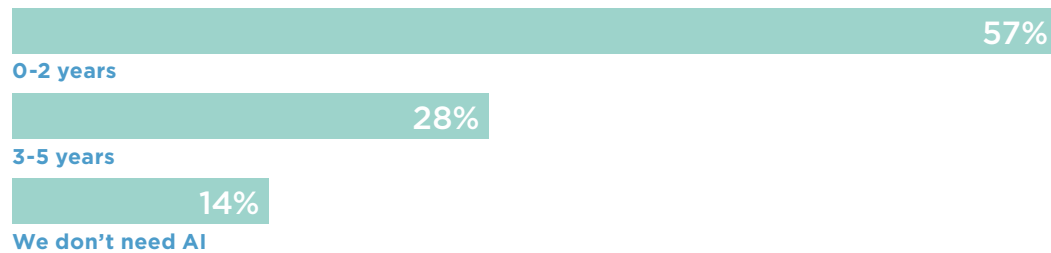
The processes they plan to automate



There was no real consensus about the processes which were most likely to be automated. Accounts Payable was most regularly cited, with 27% stating this. Other functions, such as Purchase-to-pay, were also highlighted more readily.

ARTIFICIAL INTELLIGENCE

The audience's AI timeframe



Technology giants are already releasing impressive AI products as they look to become first movers in the market. The usual suspects – Google, Facebook, Apple and Amazon – are the obvious companies to look out for.

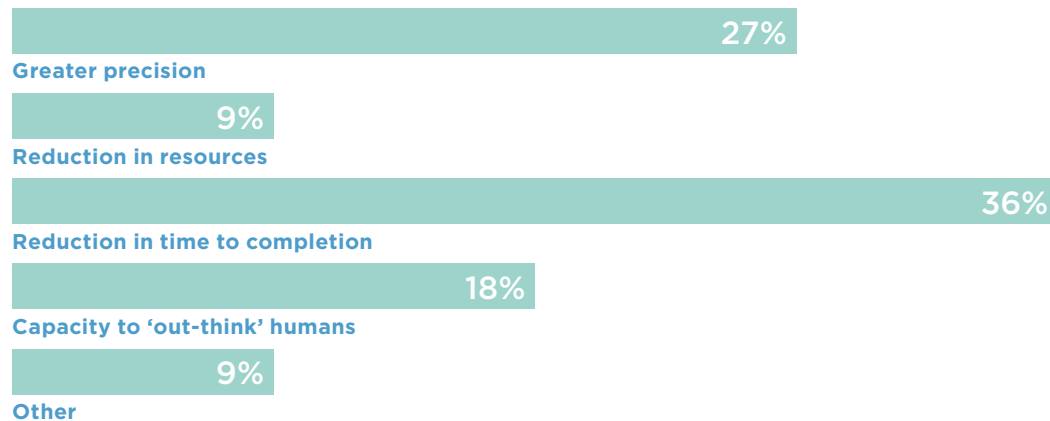
While there was a divergence of opinion in the IT industry about when AI would become an important innovation driver, they all agreed on one thing; it was going to be impactful at some point.

In fact, the majority thought this would happen in the next 0-2 years, with 57% stating this. Spurred by the potential to significantly reduce the time taken to complete tasks and the potential for AI to outthink humans, the emphasis is on enterprises to act, and act fast.

Of the remaining respondents, 28% believed that their AI implementation would happen in the next 3-5 years. A very small proportion, 14%, stated that they wouldn't need to introduce AI to their business at all.

ARTIFICIAL INTELLIGENCE

The main advantage of AI



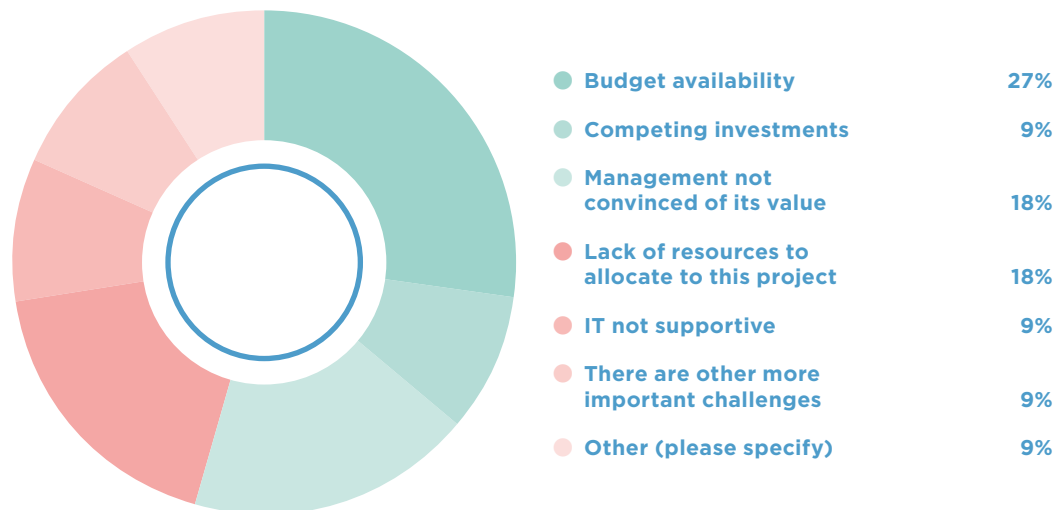
Our data indicates that enterprises are anticipating a wide-range of advantages from AI. This is perhaps unsurprising considering AI's versatility.

A reduction in time to completion, however, was deemed by the most respondents as the main advantage, with 36% stating this. Greater precision also ranked highly, with 27% of people stating this.

A clear difference between AI and RPA is that it can detect variations in text. This puts non-repetitive tasks well within its grasp, and makes the likelihood of an error decrease even further. And while this would clearly allow enterprises to complete tasks with greater precision, it also means that they will get completed quicker.

ARTIFICIAL INTELLIGENCE

The main AI challenges



As a nascent technological development, companies are still struggling to obtain the necessary budget to make the most out of AI - with 27% highlighting this.

This implies that AI is not a priority for many IT companies. This, to some extent, is at odds with the last section which stated that many believed that it would be implemented within 0-2 years.

Are you worried about the impact of AI?



Like most of other industries, the answer was a resounding "no" - with 54% stating this. Despite this, there does seem to be more anxiety

surrounding the IT industry, and that's reflected in the fact that 36% believed that it was too soon to tell if AI's going to negatively affect the workforce.



FINANCE

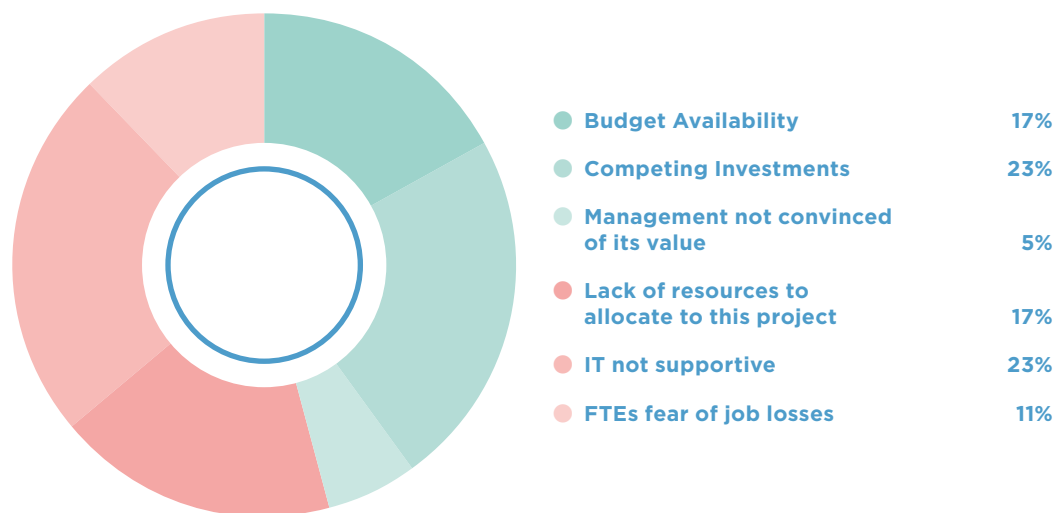
INTRO

While technology has been a driver of change in the finance industry, it has stopped short of disrupting it entirely. Aside from cryptocurrency companies – like Bitcoin – technological improvements have been incremental rather than radical. The physical bank remains antiquated, built on an infrastructure that almost goads new institutions to challenge the status-quo.

Due to this, there has never been more pressure on finance institutions to embrace technology and empower their workforce through new technologies. Robotic Process Automation (RPA) is at the forefront of this.

ROBOTIC PROCESS AUTOMATION

The finance industry's main RPA challenge



Again, the emphasis here is clearly on project prioritisation, and the fact that other tasks – which may have a short-term bearing on company fortunes – are, according to our data, taking precedent over RPA, and AI for that matter.

The main challenges brought up in the survey were budget availability, lack of resources to allocate to the project and competing investments. Like in the IT industry, this indicates that companies are yet to be won over by RPA and AI.

Their key to implementing RPA

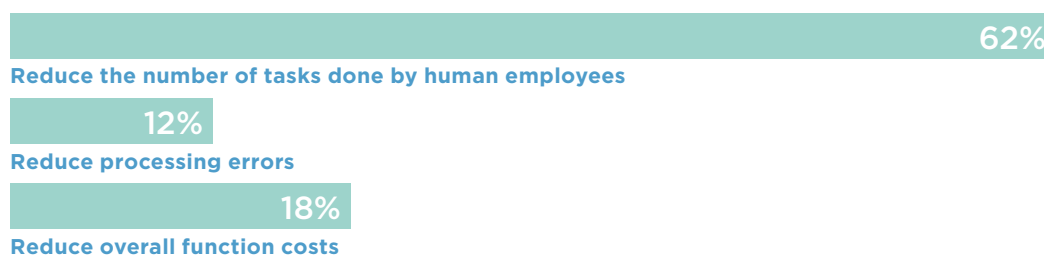


The right team with the right skills was overwhelmingly highlighted as the key to implementing RPA successfully. The fact that this was accentuated

consistency by all industries shows the power of people in RPA and our continued importance in the space.

ROBOTIC PROCESS AUTOMATION

The savings they expect to make



In comparison to IT, the Finance industry seems clear about one thing; RPA is going to reduce the amount of tasks undertaken by employees, with 63% stating this. As cited previously, this will come as no surprise; although those working in the industry will hope that this means that their job is changing, not disappearing completely.

A smaller proportion believed that RPA implementation would allow companies to reduce processing errors, while also reducing overall function costs, with 12% stating this respectively.

Will RPA replace Business Process Outsourcing (BPO)

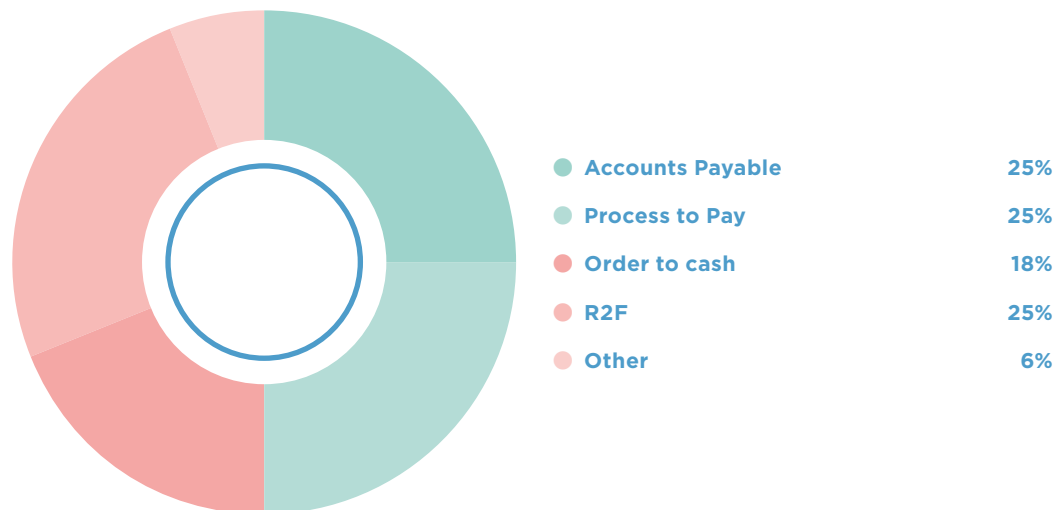


According to the survey, 50% of respondents stated that RPA would enable them to leverage their own solutions more effectively and refocus their BPO provider to deliver more value add.

Just 12% believed that RPA would allow them to replace BPO, with the majority stating that RPA would likely create something of a happy medium between it replacing it entirely and there being no change whatsoever.

ROBOTIC PROCESS AUTOMATION

The processes they plan to automate

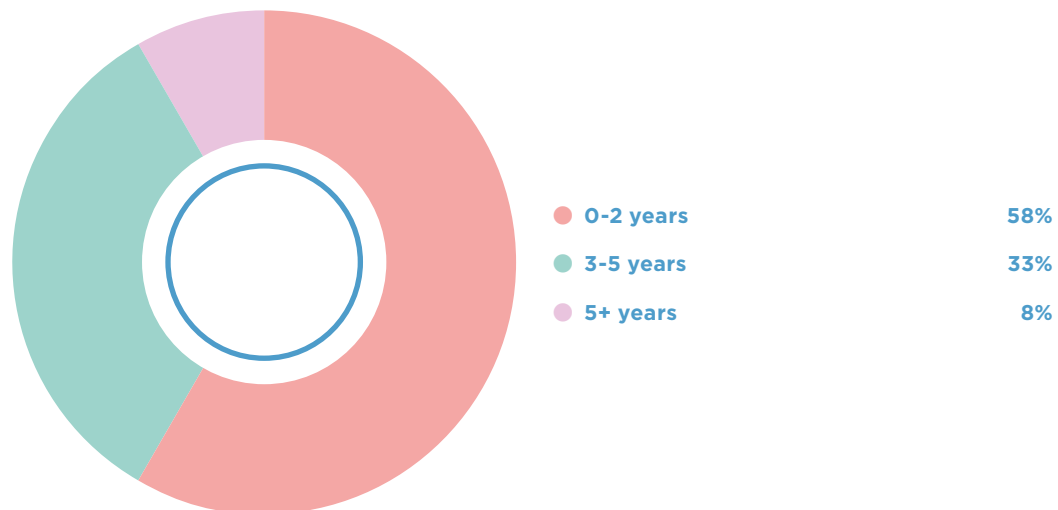


The finance industry highlighted four functions that it felt were primed for automation. They included accounts payable, purchase-to-pay, order-to-cash and record-to-report. This was in contrast to the other industries we surveyed, all of which saw RPA impacting their function in a more varied manner.

This indicates that the finance function is still unsure of RPA's capacity to impact the entire function, and this, to some degree, is backed up by the fact that 63% stated that they are still "thinking about" their RPA deployment strategy.

ARTIFICIAL INTELLIGENCE

The audience's AI timeframe

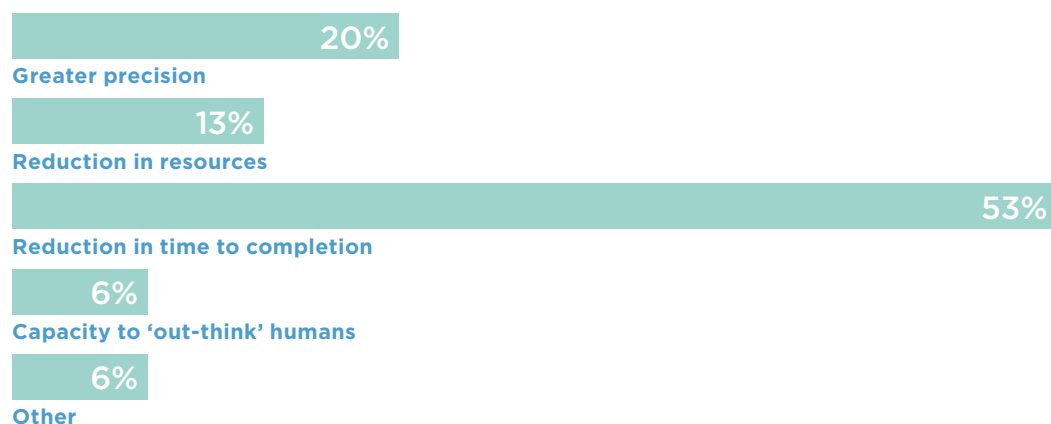


Like the IT industry, a high proportion – 58% – of our finance participants believed that AI is likely to be impactful in the next 0-2 years. After that, 33% stated that it would

take 3-5 years before they see the effects of AI in their company.

Interestingly, there was a single respondent who believed that they didn't need AI moving forward.

The main advantage of AI



The participants agreed – almost in their entirety – that the main advantage of AI would be that there would be a reduction in the time to complete tasks. This was mirrored in the IT industry, which also saw this as the

main advantage of AI deployment.

Fewer finance workers, however, believe that one of AI's main advantages is the ability for it to out think humans.

ARTIFICIAL INTELLIGENCE

The main AI challenges



There was a mix bag of challenges highlighted, but, again, budget availability and a lack of resources were most regularly cited. This would imply that AI is now currently a priority for many companies.

Our data also shows that there are other challenges not mentioned in the survey, including certain organisations' fear that the maturity of AI would be a major challenge moving forward.

Are you worried about the impact of AI?



The general consensus was that AI wouldn't negatively impact the finance industry's workforce. There was, however, a good proportion

that felt it was too early to say, further accentuating the uncertainty surrounding the industry.



OTHER INDUSTRIES

INTRO

As well as targeting finance and IT, our research also reached out to other industries. In this section we analyse how those

working in sectors such as Human Resources, Operations and Business Development, are reacting to RPA and AI.

ROBOTIC PROCESS AUTOMATION

The audience's main RPA challenge



There was, understandably, more variation in the answers given in this section, meaning that we were able to make fewer assumptions about the RPA space when compared to the other specific industries.

According to our data, there were three challenges which were highlighted as particularly pertinent. In addition to,

“management not convinced of its value” and companies facing other challenges, FTEs fear of job losses obtained 26% of the participants’ vote. A smaller proportion also identified budget availability, competing investments and a lack of resources to allocate the AI project.

Their key to implementing RPA

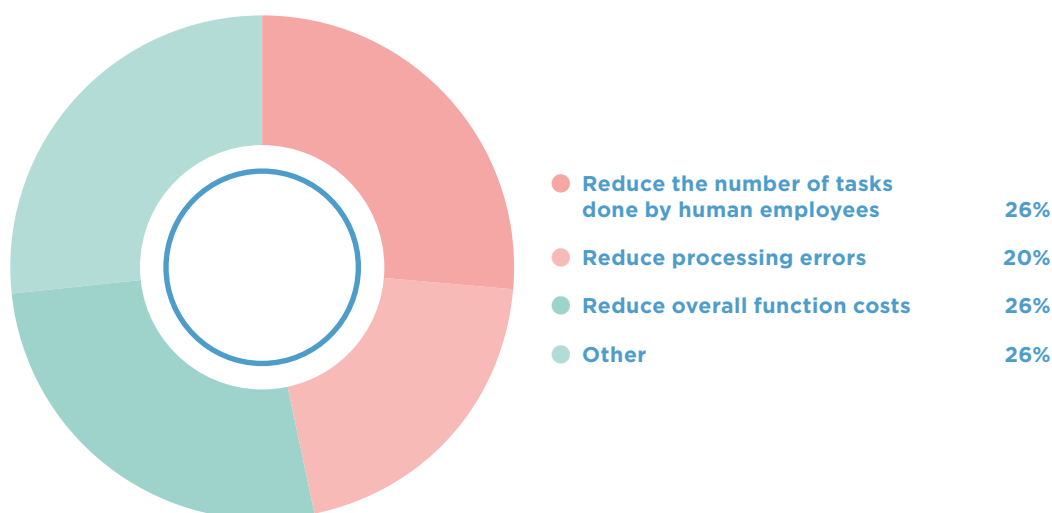


Like the finance and IT industries, the majority of respondents highlighted that the key to RPA implementation was having the right team, with the right people, with 66% stating this.

There were a number of other factors that were submitted. C-Suite ownership, for example, was cited, as was a more strategic response to RPA. For 13% there was more importance placed on getting the right vendor in place.

ROBOTIC PROCESS AUTOMATION

The savings they expect to make



In terms of the expected savings, it's clear that the companies are expecting a wide-range of differing cost-benefits from RPA implementation. There was a real mixture of responses from the participants - with the consensus being that RPA can reduce costs, time to competition and errors.

The largest proportion - 26% - believed that RPA would impact overall function costs, although a significant proportion, 20%, believed that RPA will reduce the amount of tasks done by employees. A finding replicated in the finance and IT industries.

Will RPA replace Business Process Outsourcing (BPO)

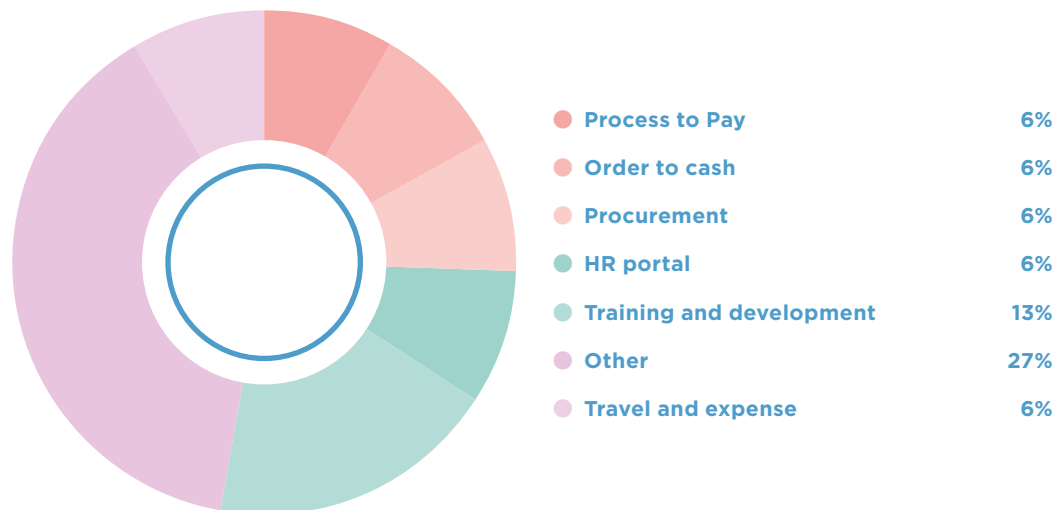


Like those within finance and IT, there was a belief that RPA would not replace BPO, but instead allow providers to deliver better solutions. In fact, the overwhelming majority, 53% %, believed that RPA would allow them to do this.

As reflected throughout our research, it's clear that BPO does not represent an industry on the way out. Indeed, our data indicates that RPA will improve the current BPO solution offerings and refocus the relationship between provider and customer.

ROBOTIC PROCESS AUTOMATION

The processes they plan to automate



This is where other industries seem to differ considerably from IT and Finance, where Accounts Payable and Purchase-to-Pay were clear favourites for automation.

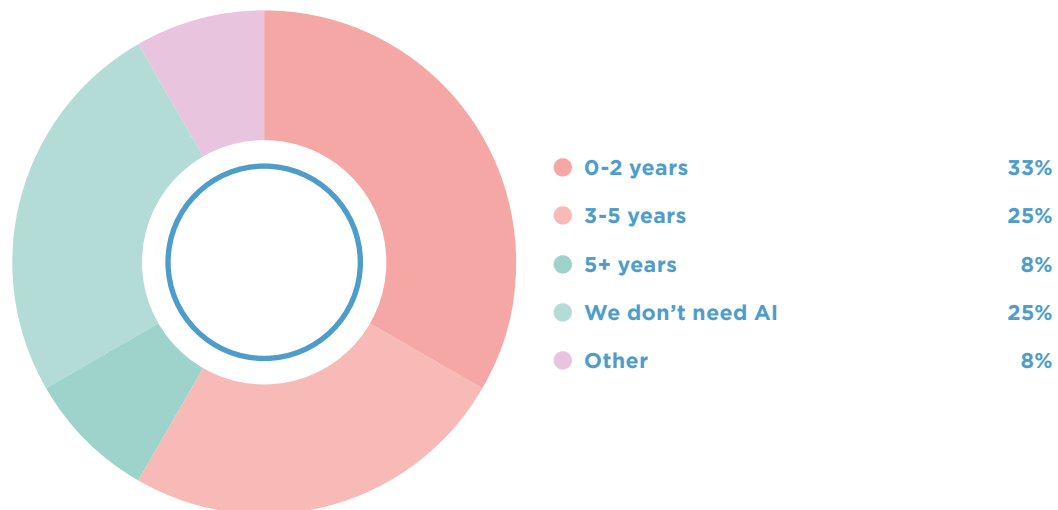
Instead, many highlighted the fact that they were looking to automate a range of services, customer

frontline interactions and operations. In addition, training and development - with 13% - was also regularly highlighted.

As stated before, this indicates that RPA's use in the wider context will be different from IT and Finance.

ARTIFICIAL INTELLIGENCE

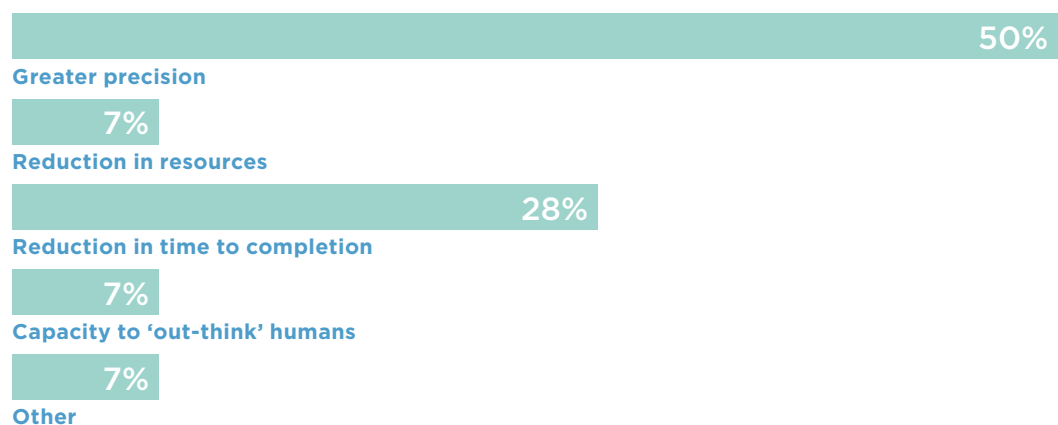
The audience's AI timeframe



While companies operating in finance and IT had, in the main, a plan for AI, our research indicates that this is not the case in the wider-industry context. In our survey, 58% stated they had no plan for AI. This would imply that RPA's capacity to impact the finance and IT industries is particularly potent.

While the majority of participants stated that they expected to be able to implement AI in either 0-2 years or 3-5 years – 58% combined – there were also a good proportion which believed that they didn't need to implement AI. It remains to be seen if they regret this decision.

The main advantage of AI



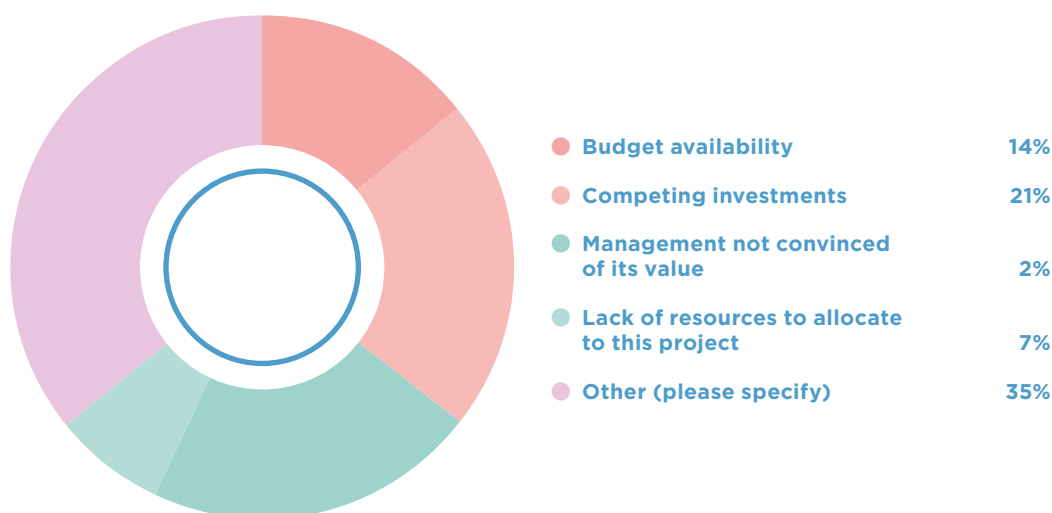
Greater precision and reduction in time to completion were the most frequently cited advantages of AI, with 50% and 28% stating this respectively. This is a finding consistent with the finance and IT industries. Interestingly, not a single participant stated that

AI's capacity to out-think humans was AI's main advantage – despite it often being cited as such.

This would imply that AI might not impact the business landscape in the way many expect.

ARTIFICIAL INTELLIGENCE

The main AI challenges



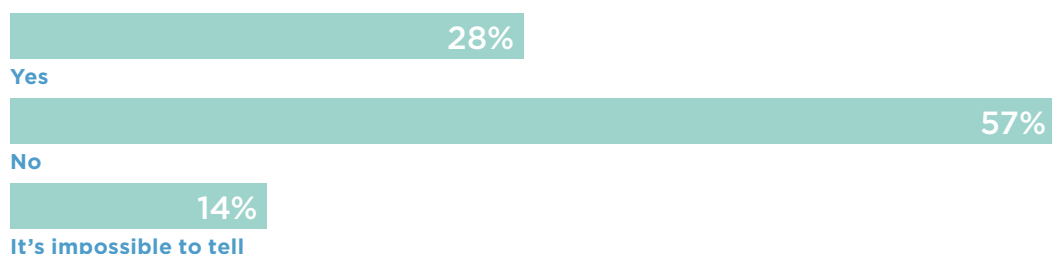
Again, our research indicates that AI investment is far from a certainty in many enterprises.

A total of 21% stated that competing investments was the main challenge they were facing, while budget availability and management not convinced of AI's value also major issues.

With AI set to play such an important role in the Finance and IT industries, it was surprising to see many highlight a lack of buy-in a major challenge. It is less surprising within the wider-industry context, as there is less AI urgency.

We believe that if we take this survey in a year's time the result would be very different – across all the industries we have analysed.

The main advantage of AI



The survey indicates that while more aren't worried about the impact of AI – it is far from the unequivocal response seen in Finance and IT.

In total, 57% stated that they weren't worried about the impact of AI on the workforce, compared to 28% who said they were. Our data indicates that AI could yet impact the workforce negatively.

KEY TAKEAWAYS

Key Takeaway	Description
AI will become a business driver in 0-2 years	Across the three industries we have analysed, just over half – 50.3% – stated that they believed AI would be implemented within 0-2 years. This is exciting news.
Senior management teams are yet to be convinced by RPA	While the technology is there to make RPA a success, 19% of respondents stated that management had not been won over by RPA. Other issues – such as obtaining the correct budget and resources – were also cited as major obstacles.
People are key to RPA implementation	In total, 64% of respondents stated that they felt people were central to RPA implementation. This flies in the face of the assumption that robotics is set to cause widespread job losses.
FTEs fear of job losses is not a substantial issue	Just 17% stated that FTEs fearing job losses was their main concern, and in the IT industry this was as low as 10%.

FOUND THIS INTERESTING?



The RPA and Artificial Intelligence Summit unites the needs of the 250,000-strong SSON and PEX Network communities to bring together those furthest along the maturity curve in automated and intelligent service innovation, like Vodafone, Barclays , ENGIE and even NHS Wales Shared Services, with those who are just starting out, like SAB Miller, LV and National Grid, for a frank and open discussion surrounding the best ways to compete in the digital business era.

Combining scores of practical end-user case studies, multiple conference streams surrounding human workforce augmentation across the front and back-offices and over 15 hours of interactive sessions and networking, this is your one-stop shop for ensuring you build the value-adding, scalable, intelligent processes that meet the business needs of the future.

Delivered in association with:



ABOUT THE AUTHOR:

This report has been authored by Simon Barton, the portal's Editor. Barton has been working with process excellence professionals throughout his career, interviewing industry leading figures and providing his own opinions on the space's development.