



Embracing robotic  
automation during  
the evolution  
of finance

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Amid times of economic change, technology advancement and industry disruption, KPMG has the depth of expertise, global reach, clarity of insight and strength of purpose to work shoulder to shoulder with our clients – now and into the future.

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# Embracing robotic automation during the evolution of finance

## About this report

In early 2018 ACCA and CA ANZ conducted a survey among its members globally to seek their views on robotic process automation (RPA) and its implications on the finance function. This report shares the results of the global survey and draws insights from leading organisations around the world on the adoption of robotics in finance, as well as sharing KPMG's client experience in RPA implementation.

Over 2,700 survey responses were gathered from a broad range of sectors, as follows:



- Up to US\$50 million, **43%**
- US\$50m - US\$999m, **23%**
- US\$1bn - US\$25bn, **14%**
- >US\$25bn, **9%**
- Not sure/ not applicable, **11%**



- Corporate (industry/commerce), **42%**
- Professional services (including accounting), **19%**
- Financial services, **15%**
- Public sector, **8%**
- Not-for-profit, **5%**
- Business process outsourcing, **3%**
- Other, **8%**



- CEO, president, chairman, **2%**
- CFO, **12%**
- General manager business unit, **13%**
- Financial controller, **13%**
- Finance manager, **25%**
- Accountant, **11%**
- Auditor, **11%**
- Other, **13%**



## Acknowledgements

ACCA, KPMG Australia and CA ANZ would like to thank all individuals and organisations that have contributed to producing this report.

# Foreword



**The current evolution of automation technology is transforming the face of the finance organisation for the better, presenting today's business leaders with a unique opportunity. Leaders that choose to embrace the change will thrive. Those that don't risk irrelevance. It's stark and very simple.**

Yet it's tricky: the internal and external data available to organisations is exploding exponentially, fuelling increased demand for real-time insight on performance, while the technology landscape for the finance team is more complex than ever. With so many new and diverse digital options available, it can be difficult to discern fact from fiction and innovate with confidence that the

technology you choose now will still be relevant and supported in the future. RPA presents itself as an immediate opportunity for finance. However, despite the expanding credentials of the proven solutions now commercially available, our research shows that many CFOs are still uncertain and undecided as to how RPA could be applied to benefit their finance teams.

It is therefore timely to go back to basics and explore the key aspects that all finance professionals should understand when assessing and implementing robotics solutions, and considering the emerging potential of intelligent automation. This report explores the significant opportunities automation presents, cuts through the confusion, and dispels the myths that currently exist.

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# Executive summary

**The growth of “digital labour” will affect organisations for many years to come. In the short term some organisations may struggle with disparate and uncoordinated automation initiatives, as well as fragmented underlying IT systems and applications. There will be continuing uncertainty over where to best start, when to, and how to invest in automation. In particular, talent management challenges will need careful consideration.**

Within the automation choices available to CFOs that have recently emerged, RPA has garnered significant market attention, and for good reason. Our research suggests that the benefits of adopting RPA in finance go way beyond cost reduction bringing improved control, faster processing speed, better data quality, and happier finance team members freed up from mundane tasks for interesting and value-add work.

An examination of the leading practices organisations are deploying to implement RPA and the current rate of adoption suggest that finance has

some way to go, with 50% of survey respondents stating their teams had not either trialled or fully applied robotics. This is a missed opportunity, particularly for smaller organisations who are less likely to have started the RPA journey (according to this study).

That is not to say that RPA adoption is without its challenges. There is opportunity to extend the understanding of the technology and its successful application across finance, and the case studies in this report demonstrate that deploying RPA is as much about change management and stakeholder engagement as it is about

implementing the software. Depending on the ambition, combining RPA with traditional automation tools, such as workflow, lean methodologies and new intelligent automation solutions can be the cornerstone of an extreme automation strategy for finance that is truly transformative. CFOs have the opportunity to reshape their organisations and take a proactive approach to shaping their teams to combine human and digital labour. This will require visionary leadership from the CFO, a change in culture, and the digital mindset of finance and the whole organisation.

# RPA in numbers

## 50% OF RESPONDENTS

to this survey have not trialed or implemented RPA in the finance organisation

## 75% OF RESPONDENTS

in the largest organisations (>US\$25billion) had either trialed or implemented RPA in the finance function, versus only 1/3 of respondents in the smallest organisations (<US\$50m)

## 56% OF RESPONDENTS

confirmed *Purchase to Pay* and 55% of respondents confirmed *Record to Report* are the most popular finance processes for RPA application

## 63% OF RESPONDENTS

who have trialed or implemented RPA, say they have a dedicated RPA team/COE, versus 37% who say all managed locally

## 45% OF RESPONDENTS

who said they were not trialing or implementing RPA cited "wanting to know what it was exactly" as the key impediment

## KEY PEOPLE CHALLENGES

1. Shortage of RPA skills
2. Cultural resistance
3. Loss of knowledge around core processes as they become automated

## STRATEGIC DRIVERS FOR IMPLEMENTATION

1. Part of a business wide digital transformation
2. Strategic focus on cost cutting
3. Shift of finance talent to higher value roles



## KEY BENEFITS CITED FROM THE SURVEY

1. Improved Control
2. Increased processing speed
3. Reduced cost

## KEY CHALLENGES CITED FROM THE SURVEY

1. Employee resistance
2. Combining with other technologies
3. Working with IT legacy systems



# 1. The opportunity for robotics

In the face of growing disruption, business leaders are increasingly aware of the threat and opportunity presented by technological innovation. Organisations seeking a competitive advantage have adjusted their strategic priorities to deliver digitisation across the business to enable greater speed to market and data driven insights. They realise that delivering on this strategic priority demands rapid innovation across the supporting technologies, processes and people capabilities to make the necessary step change in an increasingly competitive environment. This transformation is touching every facet of corporate life and the role of finance to support this change is critical.

In response to this challenge, CFOs are recognising the opportunity a digital transformation of their business can deliver, not only for the potential efficiencies but also the greater agility and responsiveness realised from deeper and quicker insights and analytics. CFOs recognise that it is incumbent on them to provide the “right” balance of automation for their organisation if they are to reliably meet customer service demands and investor expectations while slamming the door shut on competitive disruptors. They anticipate that a successful digital transformation will amplify finance’s ability to provide strategic insights that enable the selection of the “right” new products for investment, the identification of the most profitable customers as well as optimising business performance<sup>1</sup>.

Increasingly it is disruptive technology that is playing a critical role in transforming finance capability. Disruptive technologies are being successfully deployed to support finance’s role at the heart of the business, helping shape its future strategy, managing its performance, driving innovation, supporting more effective risk management and better decision making.

Technology alone is not the panacea to finance transformation, and tomorrow’s transformed digital finance organisation goes way beyond implementing a few shiny new tools. In this brave new world, one thing above anything else is needed by the business. Speed of execution. And for CFOs, that is a call to arms for finance automation. So to understand what automation really means to finance, we start by exploring robots in the finance team, and go on to take a brief look at Intelligent Automation.

<sup>1</sup> *The Race for Relevance*, ACCA (2017).



## 2. Defining the robot

### 2.1 AUTOMATION IS NOT A NEW AGENDA ITEM

CFOs are well accustomed to selecting from different automation choices. Using process improvement methodologies including Lean and Six Sigma, the finance team has a long history of successfully implementing tactical solutions such as simple macros and workflow tools, through to more complex IT infrastructure led deployments and ERP enabled transformations. Interestingly, these historical approaches and tactical solutions are now being used in conjunction with emerging technologies to yield significant benefits. While previous improvement projects have driven standardisation and elimination of non-value adding activities, the question that should now be asked is **"How do we automate it?"**

### COMMON AUTOMATION CHOICES

1. Macros	Programming code which can be used on common applications such as Office applications – for example Excel spreadsheets – to automate tasks which are highly repetitive. Process actions are recorded and translated into code via "Visual Basic for Applications (VBA)" which is a computer programming language to ensure the process can be exactly repeated.
2. Optical Character Recognition Software (OCR)	Software that enables the extraction of data from different types of documents, for example scanned invoices into core applications such as ERP systems. The software processes images and recognises text, extracts and validates key information fields, converting it into searchable and editable text, thereby reducing the need for manual indexing and manual data entry.
3. Traditional IT Process Automation	Traditional automation technology is primarily programming based and uses API (Application Programming Interfaces) to create software that enables enterprise applications to link together, integrate and drive automation of processes across different systems.

RPA is software that can be easily programmed or instructed by end users to perform high-volume, repeatable, rules-based tasks.

## 2.2 WHAT IS RPA?

Robotic Process Automation (RPA) may evoke images of sophisticated robot-like machines assembling computers or cars, but the reality could not be further from the truth. RPA is software that can be easily programmed or instructed by end users to perform high-volume, repeatable, rules-based tasks in today's world where multiple loosely integrated systems are commonplace. This "swivel chair" automation product, so called because it replicates the actions of a human accessing multiple systems, cuts across the IT legacy landscape and helps connect the flow of data. It automates the logical transfer of data within processes quickly and accurately, freeing up valuable resources from mundane tasks. RPA "user-interface" technology utilises the same application interfaces as a human would, i.e. USERIDs, for integrity and audit trail purposes. This eases implementation because no underlying system changes are required (Figure 1 and Figure 2).

### RPA v Traditional Automation Technologies

RPA is system agnostic. It sits "on top of" existing applications and replicates the actions of a human user at the user interface level. This means there is no need to change, replace or compromise existing enterprise applications for the software to work.

Traditional automation solutions, in contrast, operate by integration into the system environment through APIs (application programme interfaces) which enable the transfer of data and information between one application and another. As the corporate IT landscape has become more complex it is becoming more difficult to integrate and automate processes across multiple systems.

APIs are created by "source code" and are typically IT developed rather than being led by end business users, such as the finance team. Some existing applications and legacy systems are not compatible with API technology e.g. there may be no API option / source code with the particular system in question. Even where there is API compatibility, the development of API interfaces is sometimes complex, time consuming in terms of source code programming and often involves considerable IT resource. In the absence of a source code / API option, the only way to deliver system integration will usually be through RPA.

In choosing between API integration or RPA integration the issues to consider include:

- The availability of the API / source code to facilitate integration in the first place
- The licensing and operating cost of connecting through APIs versus similar RPA costs (cost benefit analysis)
- How quickly the automation fix needs to happen
- The complexity and business criticality of process automation
- The likelihood of significant on-going system application changes or a future system upgrade – in such cases, APIs will generally be a better option as RPA can be more vulnerable to changes in the underlying systems in terms of reprogramming.

RPA may not be the one stop solution for all automation opportunities, but the speed, ease and relatively low cost with which it can be implemented to connect data across different systems can differentiate it from other traditional automation approaches.

RPA is system agnostic. It sits “on top of” existing applications and replicates the actions of a human user at the user interface level.

FIGURE 1: Key characteristics of RPA

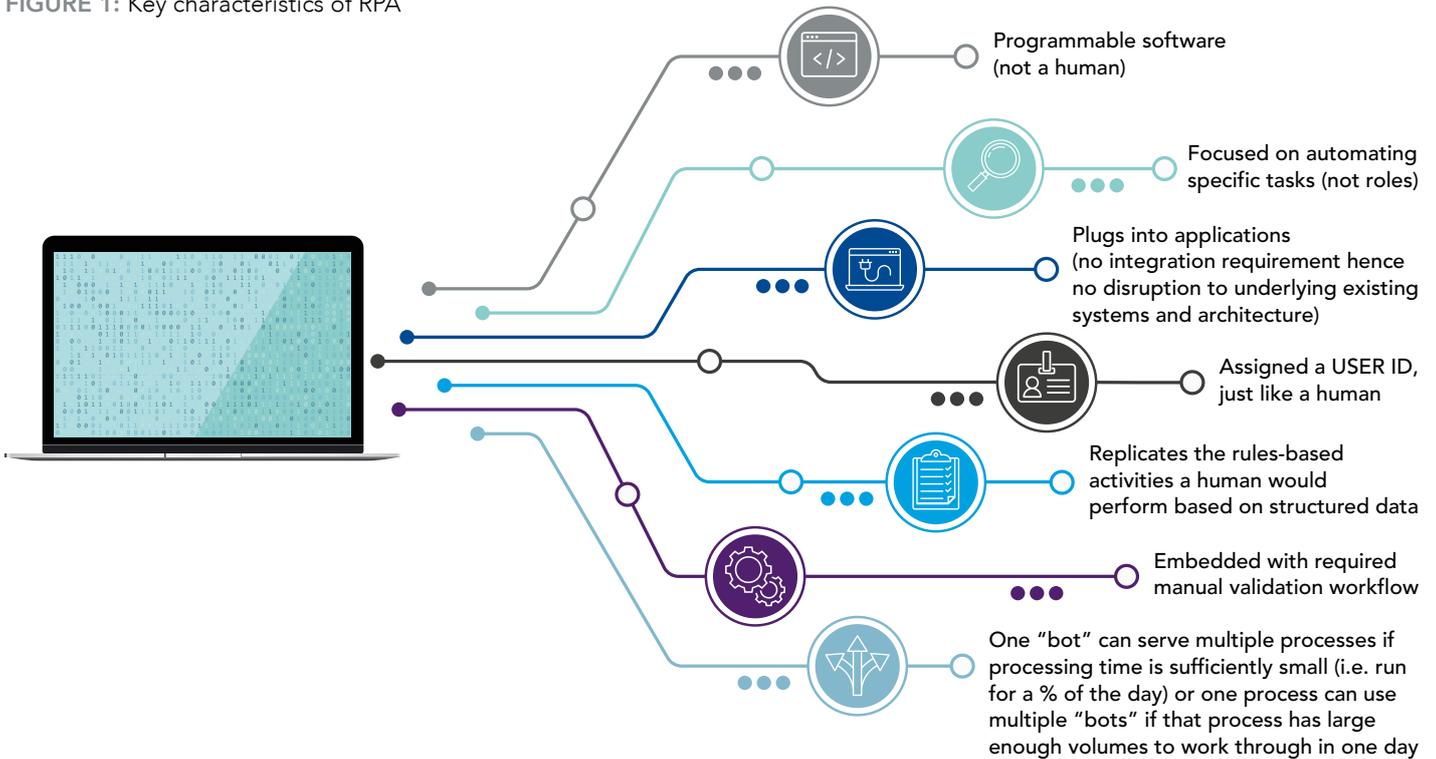
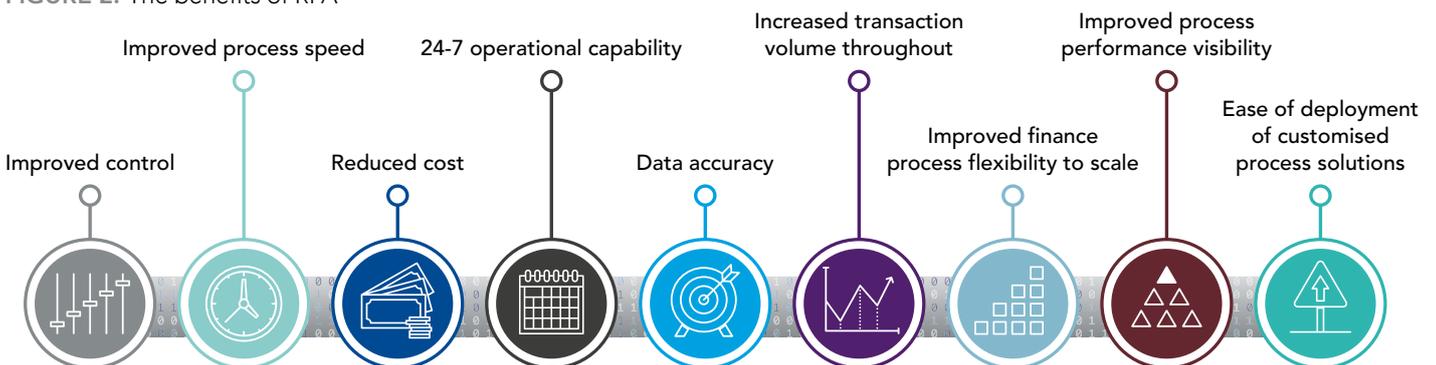


FIGURE 2: The benefits of RPA



A woman with long brown hair, wearing a grey sweater and dark blue jeans, stands in a server room. She is holding a tablet and looking at it. The server racks are dark and filled with equipment. A red rectangular box highlights a text block on the right side of the image.

The adoption of unattended RPA usually involves the end user, finance, and IT working much closer together to implement and maintain the "bots" compared to simple desk-top based RPA solutions.

## Not all "Bots" are created equal

### "Attended RPA"

More simple RPA solutions require you to deploy the software to a desktop or localised virtualised environment. This is sometimes referred to as "Attended RPA". Typically these desktop based RPA solutions use desktop recording practices to record keystrokes and clicks of human users to execute tasks. Essentially the recorder is able to create a script for the robot to follow, usually for very simple activities. The scripts can be stopped and started locally by the end user who typically, though not always, is sitting at the machine or workstation when the processing is taking place. Often attended RPA is used where approvals may be required or exceptions need to be dealt with. However, these solutions are limited where the intention is to scale the robots across multiple different processes. They also raise the risk of many RPA "point solutions" being deployed locally and inconsistently.

### "Unattended RPA"

Unattended RPA is not installed locally in the user desktop environment. Instead it is deployed and executed centrally via virtual machines hosted on a server or a number of servers within a data centre. This is sometimes referred to as RPA in "background" mode. It operates at the "Application User Interface" level. Because it is server based, the software is more scalable across many processes, and can be programmed to operate continuously. Being server based also helps with ensuring effective maintenance and control of this virtual workforce of robots in a standardised, centrally coordinated manner. It allows central oversight of robot availability and task scheduling for high volume transaction based activities across multiple tasks and processes. The adoption of unattended RPA usually involves the end user, finance, and IT working much closer together to implement and maintain the "bots" compared to simple desk-top based RPA solutions.

Unattended RPA is typically relevant for more complex processes, and usually the software takes longer to programme. However, the configured "bots" have greater inherent flexibility, scalability and application. The benefits of this option include faster processing and lower risk of robot failure but as this approach involves RPA deployment at the "enterprise level", there can be challenges associated with the reduced visibility of the robot performing the task, as it typically runs in the background.

These different RPA solutions have different capabilities in the extent to which they can write and read data to different systems, their auditability as well as their reporting functionality. They have different capabilities in their capacity to deal with complex business rules, and the depth of coding or programming required. Different "bots" also have different security protocols and capabilities in terms of providing audit trails on system activity and user information.

Once the process has been standardised, then it becomes a question of how the process can be automated.

### 2.3 HOW DOES FINANCE IDENTIFY AUTOMATION CANDIDATES?

For those starting on the automation journey, selecting “the right” tasks within processes to automate in the finance organisation can be a daunting ask. Based on our analysis of leading organisations and KPMG’s implementation experience there are two important steps when commencing the journey:

1. Defining an automation selection charter
2. Running a proof of concept

Defining an automation charter, or business rationale, for the selection of

automation candidates provides a valuable framework to prioritise the best automation candidates for the business. Running an initial “proof of concept” has been found to be a critical step during which benefits to the business can be demonstrated and the approach to implementation can be refined.

There are a number of process features to consider when selecting automation candidates for successful RPA application (Table 1). For the selection of a suitable target for an RPA proof of concept, this criteria is also applicable, but performance must also be easily measurable in order to track the benefit

being delivered (see section 5: Roadmap for implementation).

It should be noted, however, that RPA will not fix broken processes. Automating a broken set of tasks will accelerate poor performance. Traditional approaches to process improvement are still applicable in such cases. Significant efficiency gains can still be made by eliminating, simplifying and standardising finance processes using business process management tools such as Lean principles or Six Sigma. Once the process has been standardised, then it becomes a question of how the process can be automated.

TABLE 1: The process criteria for successful application of RPA

PROCESS FEATURE	EXPLANATION
<b>Rules based</b>	“Bots” delivered for RPA solutions are programmed to follow “if-then” rules, therefore the extent to which a task can be defined by rules is an important consideration. When subjective judgement is deemed necessary, typically such tasks are not suitable for the direct application of Robotic Process Automation.
<b>Manual repetitive &amp; time consuming</b>	Manually performed tasks that are routine and low in complexity but time consuming can be good candidates for RPA. RPA can not only transform the efficiency of such tasks, but significantly improve quality as manually performed repetitive tasks are often prone to human error.
<b>Structured data</b>	RPA solutions are best suited to structured data. Structured data can be defined as data that sits in a fixed field or record and is typically sourced from a database where it is easily accessible.
<b>High volume and frequency</b>	RPA delivers significant benefits when applied to high volume processes, particularly where volumes may fluctuate. This is due to the scale of the efficiency improvement that can be realised and also the benefit in utilising the technology to cover peak volumes.
<b>Minimum Scale</b>	Efficiency gains from RPA solutions are maximised when they are scaled across multiple and / or similar processes. The benefit of replacing FTE with RPA may not be compelling from a ROI perspective where insufficient scale is evident. The potential scale also needs to be sufficient to absorb the licence fees existing in the price structure of some vendors.
<b>Transactional</b>	RPA’s unique strength is the performance of tasks that require access to different systems, such as multiple ERP environments. It is particularly applicable for the automation of tasks characterised as transactional and low risk in terms of complexity and business critical importance.

## CASE STUDY: Shell

### Eliminate, simplify, standardise... then automate (ESSA)



**Shell's Finance & Data Operations is supporting a transformation programme intended to ensure Finance is able to deliver more business impact, enable better commercial decisions, but at a substantially lower cost.**

Shell's finance organisation has largely centralised operational processes over past years into Finance & Data Operations (FO), which is located in four cost-advantaged locations. FO is driving a "smart automation" strategy using low cost tools such as Robotic Process Automation (RPA) to make operational processes more efficient and effective. The goal is to free employees from repetitive, manual work and to focus their time on more value-adding activities. FO sees RPA primarily as a tool to reduce costs, but also recognises the additional benefits of improved process and data quality as well as having the flexibility to scale up during periods of peak demand.

For FO, RPA software is seen as "one tool in the automation kitbag", and they see it as part of a broader continuous improvement strategy. This strategy is based on the ESSA approach – first try to eliminate waste in the process, if you can't eliminate a step, simplify it. Once it is simplified, look to standardise the processes across locations. Once these are standardised as much as possible, then look for the "automation" opportunity around specific tasks or workflow, which may be RPA, may be a different automation tool, or may be RPA working in combination with other automation options. Without simplification and standardisation of finance processes, it is

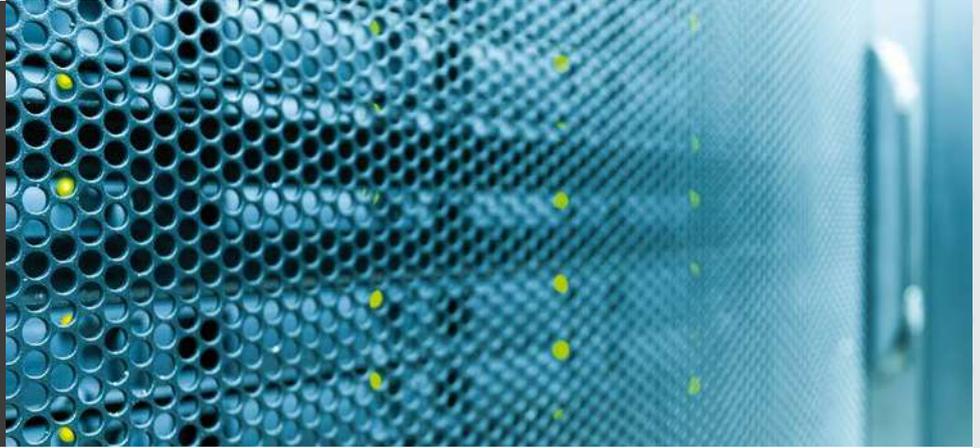
difficult to drive replication opportunities, it takes more time and is more difficult to code and build the robots, and they are not scalable. And RPA is not the solution to a badly designed process.

The combination of heavily streamlined processes with RPA technologies working together with other automation workflow tools and, (looking forward) more advanced machine learning capabilities to make a significant difference on return. Here FO sees the role of the technology solutions architect is critical in supporting the goals of the finance team, helping identify the most relevant automation technology or technologies to apply to the problem once the process maps have been identified, as well as supporting the programming, testing of software and ensuring appropriate integration of the software across the different applications. The selection of the right automation tools is critical, but it also requires individuals with the right skills to programme these emerging workflow automation tools.

An example of a typical project: after implementing ESS stages to the end to end process for updating Customer Master data fields, an RPA "bot" was built to load the data requests in SAP. This was previously a manual and time consuming activity with lots of handoffs and manual data validation steps. The new robot is used to update various kinds of SAP Master Data information in an automated manner and provides a 24x6 execution capability thereby increasing the bandwidth and responsiveness to the business. The average time taken to complete a request has reduced by 40% with 100% data quality being sustained month on month.

## CASE STUDY: AMP Capital Australia

### The benefits of good process redesign



**Over the last 18 months, one area in which AMP's Fund Technical and Finance Services has deployed robotics is in the fees and billing team, where a legacy of older IT systems and infrastructure resulted in multiple workarounds and excel spreadsheet processing to manage on-going and frequent fee changes.**

Initially there were three core interlinked responsibilities identified across the finance and centralised RPA teams to help implement the RPA solution.

- Finance subject matter experts within the Fund Technical and Finance Services team who had deep domain knowledge of the area
- Business analysts in the centralised RPA team who were skilled in understanding the "as-is" process to be automated working with the subject matter expert
- Systems architects responsible for writing the RPA code and helping implement the software based on the processes identified by the business analysts.

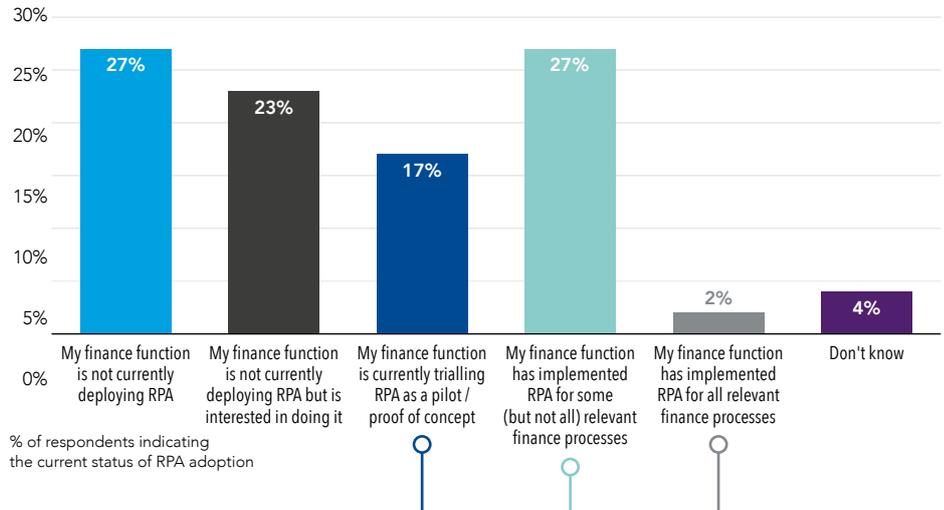
A key lesson learnt from the initial implementation stage was that taking the "as-is" process and applying a robotics solution was sub-optimal and prone to failure because of the number of exceptions or different human interventions still required. This also presented the risk of incorrect accounting treatment and was inadequate from a control perspective. Consequently the Technical and Finance Services team recruited specific experts with both the necessary accounting expertise as well as process design skills to redesign the processes needed to ensure the solution was sustainable from both an operational and accounting perspective with less human touch. This has improved the control environment significantly across the redesigned processes, by reducing error rates as RPA is driven by pre-set rules and ensures accuracy & completeness based on customised checks & controls. Across the wider team it is estimated that these changes have generated an additional AU\$1million revenue benefit so far, from areas such as faster revenue collection, reduction in errors and being able to identify and charge more expenses back to the client funds in the available time window. It has also resulted in automation of the manual tasks performed by 5+ FTEs.

# 3. The current state of play

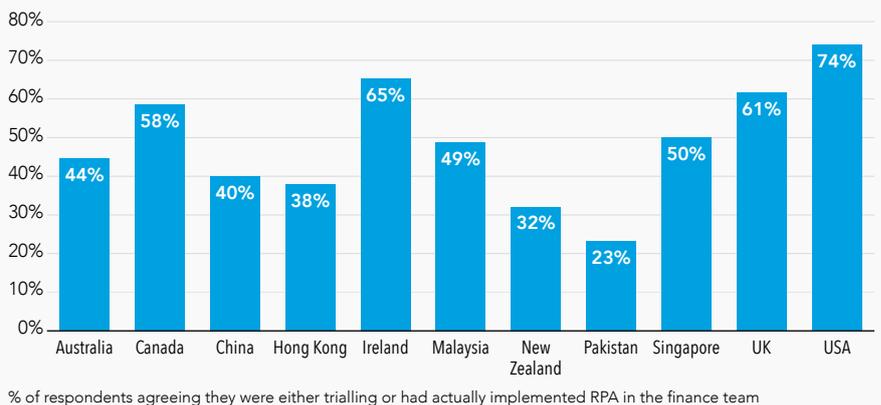
## 3.1 ADOPTION TRENDS

With RPA solutions already well-established in the market, the use case examples of successful implementations in areas such as customer services or claims processing are plentiful. While the applicability and benefit to finance processes is evidenced within the case studies provided in this report, the research suggests there is still significant runway for further adoption of RPA technology in finance. Less than half of all respondents surveyed have deployed RPA (Figure 3), however certain markets are leading the way in terms of adoption rates (Figure 4) and unsurprisingly many large organisations are already benefiting from RPA application across finance (Figure 5). This suggests however, that significant opportunity is currently being missed to drive efficiencies in finance through this technology.

**FIGURE 3:** To what extent is your organisations finance function deploying RPA?



**FIGURE 4:** To what extent is your organisations finance function deploying RPA? (by country)



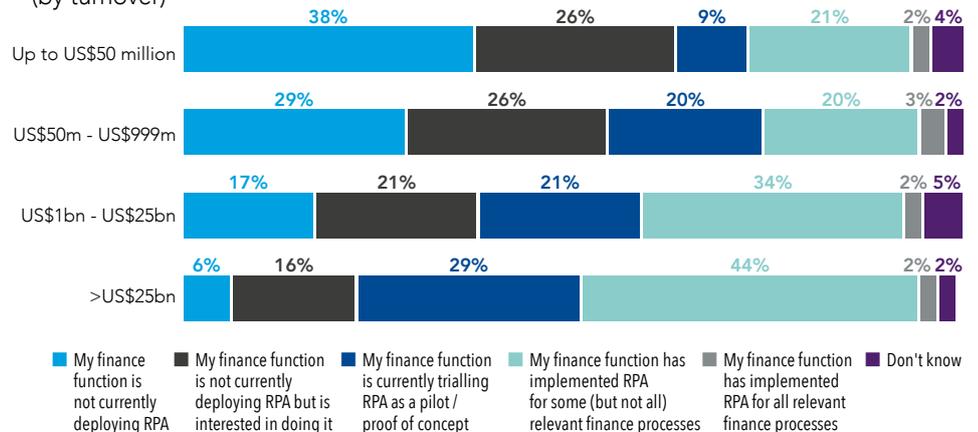
46%

of respondents' finance teams are either trialling RPA as a pilot or proof of concept, or have partially implemented or fully implemented it for all relevant finance processes

### 3.2 WHERE IS RPA BEING APPLIED IN FINANCE?

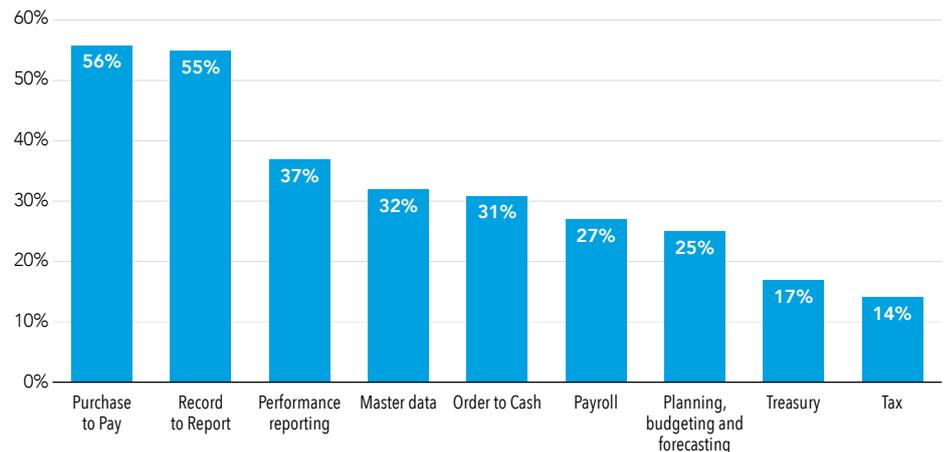
More encouragingly, the research suggests 46% of respondents' finance teams are either trialling RPA as a pilot or proof of concept, or have partially implemented or fully implemented it for all relevant finance processes (Figure 3). There are some clear process front runners for RPA adoption particularly in transactional finance activities with RPA getting traction around the purchase to pay and the record to report processes, as well as internal performance reporting (Figure 6). This correlates with KPMG's experience and benchmarks which suggest that RPA benefits in these processes are typically gained from automating data import and export from numerous sources, rules-based calculations and analysis to support checks and approvals and document management (Figure 7). An example of the application of RPA in the Record to Report process is shown in Figure 8.

FIGURE 5: To what extent is your organisations' finance function deploying RPA? (by turnover)



% of respondents by revenue indicating the state of RPA adoption

FIGURE 6: Where is RPA being applied in your organisations' finance function?



% of respondents identifying where RPA is being applied across different finance function processes (includes all those that indicated they were either trialling or had implemented RPA)

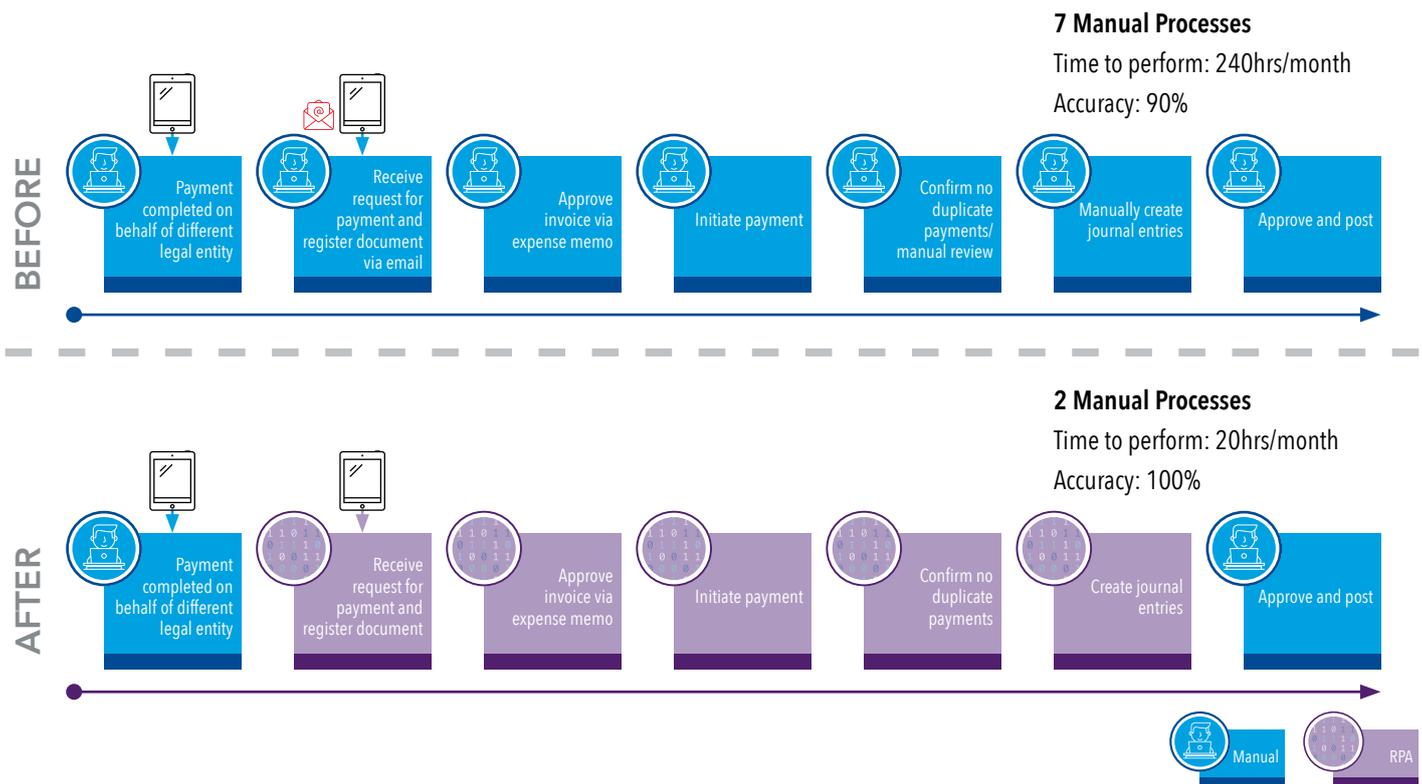
FIGURE 7: Key potential applications for RPA within finance

		PURCHASE TO PAY	RECORD TO REPORT
 Data entries eg fill in forms, post journal entries		Medium	High
 Perform rule based tasks (follow "if" decisions, making calculations)		High	Medium
 Manage the approvals and checks		High	High
 Extracting data and reformatting data into dashboards or reports		Medium	High
 Logging into system / applications, data import / extract between different systems or spreadsheets		High	High
 Repetitive keyboard typing / mouse clicking		Low	High
 Opening emails and attachments, sending and archiving standardised emails		High	Low
 Database creation / updates, merging data, copying and pasting data		Medium	Medium

Source: KPMG estimates are based on percentage of activity that can be automated for organisations with market cap in excess of US\$20 billion

FIGURE 8: Application of RPA in the Record to Report process

The intercompany chargeback process frequently requires a lot of manual effort for little value-add to the organisation. The use case below illustrates how RPA has been applied across this process to significantly reduce manual effort and increase accuracy.

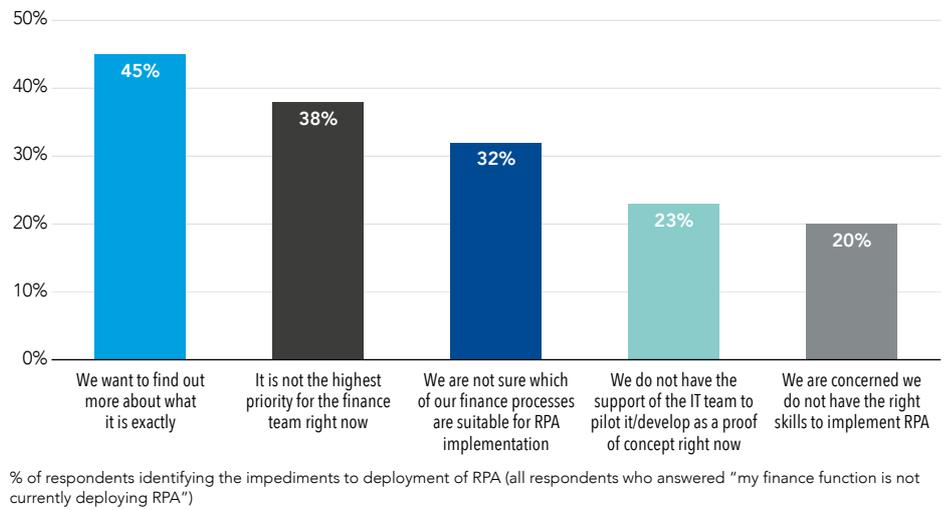


With so many opportunities to apply RPA, the research implies that the hesitation in embracing this technology lies in the basic knowledge of how it works as well as competing priorities.

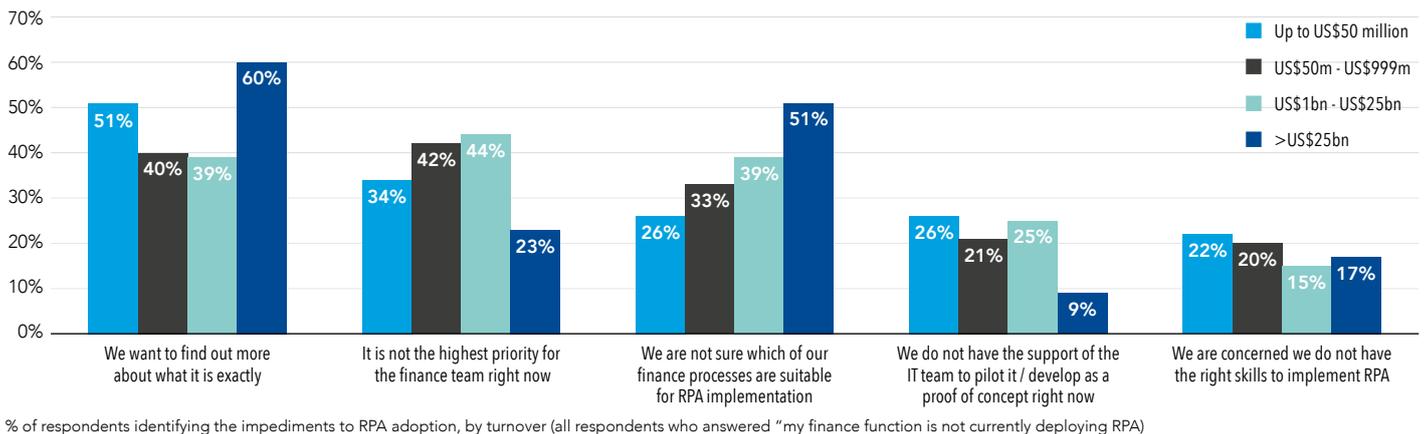
### 3.3 WHAT ARE THE BARRIERS TO ENTRY?

With so many opportunities to apply RPA, this research study implies that the hesitation in embracing this technology lies in the basic knowledge of how it works (Figure 9) as well as other competing priorities. This is an issue across organisations of all size, with even the largest companies in the survey (Figure 10) suggesting this as the primary reason for non adoption. This is particularly relevant because RPA is a business “end user” play, first and foremost led by the business. It is critical that finance teams have a strong understanding of the technology and its functionality so they can play a leading role in its implementation both within and outside of finance, understand where it fits in the end-to-end technology roadmap, and help secure the business case for scale up.

**FIGURE 9:** What is currently stopping your finance function proceeding with deploying RPA?



**FIGURE 10:** What is currently stopping your finance function proceeding with deploying RPA?



For many finance organisations RPA is not the highest priority given other pressures to transform finance. Potentially, these organisations risk being left behind, as RPA adoption can be a key component of the baseline technology infrastructure required to transform the finance operating model. Once the capability is established, RPA can be deployed to reduce both cost and risk as well as enhancing efficiency and helping to create the "white space" the business can use to strategise and look forward.





# 4. What is the business case for RPA?

## 4.1 TARGETING THE "RIGHT" BENEFITS

The benefits of RPA adoption are multifaceted, and typically underestimate the non-labour benefits that can accrue. The capacity released through RPA deployment need not all be harvested but can be directed toward real value-add activity for finance. There is significant opportunity to retrain and redeploy finance staff and leverage their analytical skills for sharper predictive insights to better inform decisions and better deploy capital.

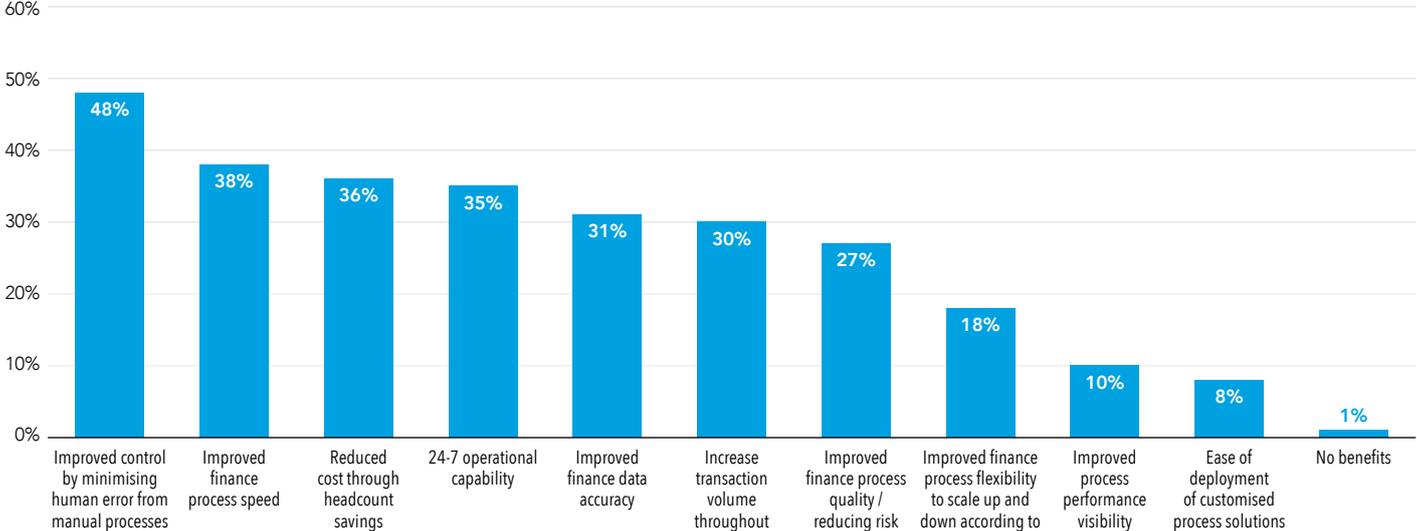
With the relative ease of RPA implementation, many organisations are shifting away from processes that are based on low cost labour and offshore models. Such organisations are reconsidering their operating models, often applying a methodology that seeks to address inefficient processes by eliminating first, simplifying and only then automating, many times bringing these processes back onshore to manage.

Our research suggests a multitude of benefits are accruing from RPA implementation, with improved control cited as the highest benefit (Figure 11).

This was consistent irrespective of size of the business by turnover (Figure 12).

**1. Improved control.** The tasks performed by a "bot" can be checked and recorded at every step. This produces valuable, analytical information on software performance as well as process visibility, and critically supplies an audit trail which can be helpful for compliance. RPA uses existing information security profiles and configurations so it does not compromise the internal control of the application it is working with.

FIGURE 11: What do you see as the main benefits of RPA adoption?



% of respondents

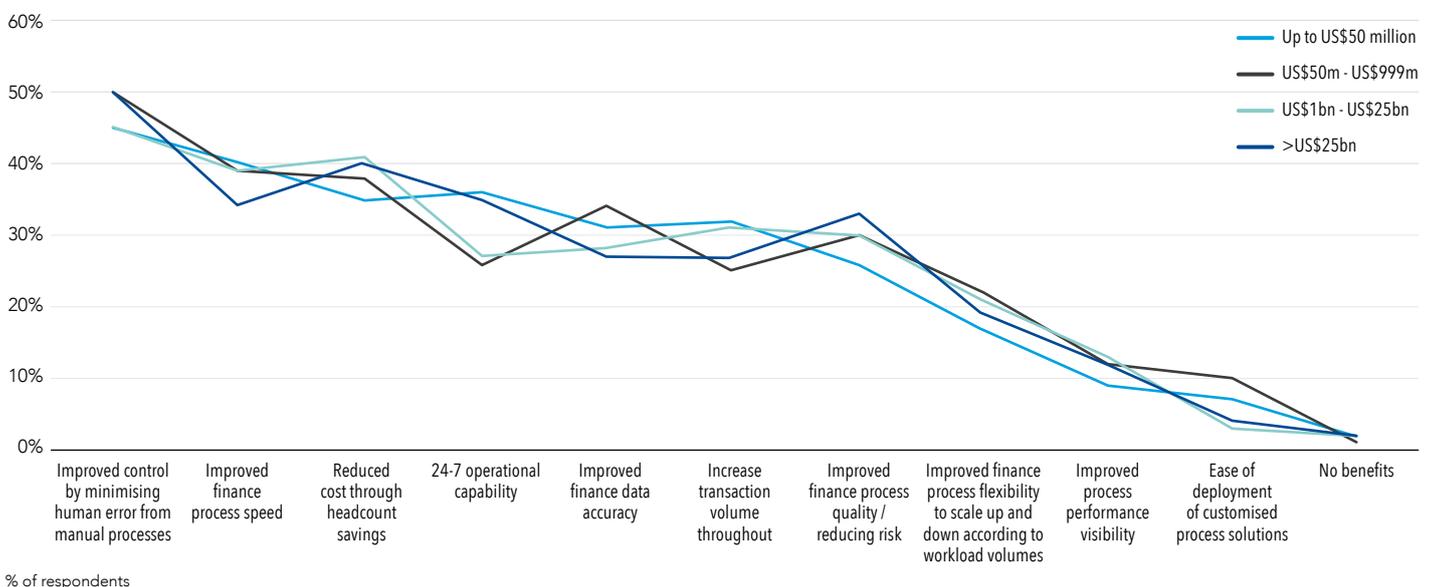
Access to high quality data is the foundation on which finance teams can look to transform the value they deliver.

- 2. Improved process speed.** As the business demands quicker response times, a key imperative for the finance organisation is speed of delivery. RPA transforms the efficiency of routine finance tasks as it can perform a task often within seconds rather than the hours it may take with manual, human intervention. As cycle times are dramatically reduced by the implementation of RPA, process throughput can be increased significantly.
- 3. Reduced processing cost.** The link between RPA and potentially

transformational efficiencies is inextricable. Once scaled, the implementation of RPA can result in significant cost reductions for the targeted finance tasks, however it may be misleading to measure this purely in terms of "headcount reduction" per "bot". Reduction in effort is highly dependent on the process step being automated, and this, based on experience and available benchmarks, can vary between 15% and 55%. A more practical measure considers a target cost reduction hurdle rate in comparison to the cost per "bot".

- 4. 24-7 Operational capability.** Unlike their human counterparts, "bots" can be programmed to operate 24 hours a day, 7 days a week the whole year round. For the right processes this can triple the available time for processing compared to a human shift.
- 5. Data accuracy.** Access to high quality data is the foundation on which finance teams can look to transform the value they deliver. RPA technology adoption can improve the accuracy and quality of data; "bots" are programmed to follow rules, have data validation

FIGURE 12: What do you see as the main benefits of RPA adoption? (by turnover)



RPA's ability to extract and import data from different enterprise applications can improve both the efficiency and consistency of generating reporting information.

capabilities, and do not make mistakes like human beings. This reduces data inaccuracy and quality risk. However, as the software is programmable a mistake in programming instructions can be significant so testing before going operational is vital.

- 6. Improved finance process flexibility to scale.** As RPA is programmable software executing instructions, "bots" can be scheduled to operate at particular times, or to accommodate variations in workload volumes. As volumes increase or decrease the number of robots required can be scaled up or down accordingly, or be reallocated to more urgent activities.
- 7. Improved process performance visibility.** A valuable feature of many RPA software products is the availability of analytics information on "bot" performance, which can provide valuable insight into process performance for optimisation.
- 8. Ease of deployment of customised process solutions.** The very nature of the technology, being end user led, means that the RPA software can be programmed across highly customised and bespoke processes assuming there is cost-benefit in applying the software.

### Cost structure of a "bot"

To calculate the return of investment of a "bot", it is important to have a comprehensive understanding of costs involved in RPA implementation. Also consider that direct comparisons between vendors can be complicated by the fact that different vendors typically have different costs structures.

The primary aspects for consideration include, but are not limited to:

- licensing costs
- infrastructure costs
- other implementation costs such as design and developers
- maintenance costs.

Ultimately, the return on investment of a "bot" can vary according to the complexity of the process step.

### RPA as a control and compliance tool

Improved control through the reduction of human error during manual processing is identified in the survey as a key benefit of RPA adoption. RPA's ability to extract and import data from different enterprise applications can improve both the efficiency and consistency of generating reporting information. RPA is not prone to human mistakes e.g. transposition errors, which can be made during time consuming and repetitive processes. However it is important to ensure programming is duly documented as well as accurate and that appropriate change control procedures are in place to manage any required process changes.

Improved controls are also enabled through the software audit logs. These logs enable "bot" actions to be continuously tracked, exception errors and manual overrides to be flagged and critical information on process activity to be provided. "Bots" can also be used to automate controls to improve the efficiency of internal audit testing.

## CASE STUDY – Australia Post RPA benefits beyond process efficiency



**Australia Post has been leading a programme of continuous improvement across the finance team. This programme has involved activities such as examining the maturity of current finance processes, process mapping, and undertaking process optimisation, including task elimination where possible.**

They have looked to a combination of traditional Lean methodologies as well as digitisation and technology applications to optimise their processes and are now considering the potential use of emerging intelligent automation tools too.

The overall aim is to drive operational effectiveness, reduce the cost of finance and critically free up the finance team to support high value business critical activities. RPA is seen as an important technology as part of a suite of digital improvements to achieve these goals as the finance organisation transforms. However, further adoption of the technology across the wider business remains a work in progress currently, and as the finance team looks to scale the technology new issues such as the appropriate governance and operating model are under consideration, as well as developing more rigour around the quantification of cashable and non-cashable benefits from adoption.

The initial proof of concept of the RPA technology was undertaken on a small number of core processes within the finance team. It became clear to the team quickly at the outset from the proof of concept that RPA was able to automate key tasks within certain processes. It has:

- Provided opportunities to reduce the cost of delivering the processes through labour savings
- Further reduced manual, repetitive and mundane processing tasks
- Enabled handling of higher volume data integrity activities
- Started to free staff capacity to realign efforts towards high value analytical and critical thinking tasks.

A key additional benefit cited by Australia Post has been improved data quality and improvements in the control environment from RPA adoption. For example, the software has been deployed on its business card expenditures process to improve the auditing process. Because of the high volume of transactions previous protocol was to undertake spot auditing on 1.5% of all card transactions, a considerable investment in time and labour against a small number of audit criteria. As a consequence of building RPA into the auditing process, 100% of all transactions can now be audited across a significantly expanded suite of criteria.

The learnings from companies further progressed in the automation journey suggest that the real challenges encountered are often different from those initially perceived.

#### 4.2 UNDERSTANDING THE REAL CHALLENGES

The conceptual benefits of automation may be accepted but the research indicates a significant percentage of companies remain hesitant to move forward with adoption, citing reasons such as change resistance, knowing where to start on RPA implementation and understanding how to combine RPA with other technologies (Figure 13). Interestingly, the learnings from companies further progressed in the automation journey according to KPMG client experience and the case studies that support this study suggest that the real challenges encountered are often different from those initially perceived. As Figures 13 and 13b demonstrate, respondents to our survey identified employee resistance as the key challenge of RPA adoption, yet effective communication at the start and throughout the adoption journey is often key to redressing these concerns.

Another challenge underestimated by companies as they progress on their automation journey occurs as they scale up their automation agenda. It is at this juncture that the issue of "bot" governance arises. Without thoughtful and planned enterprise-wide coordination and governance, organisations risk inconsistent quality, unnecessary labour redundancies and an oversupply of new "bots" deployed across various business units.

It is critical to assign responsibility for "bot" outcomes and change control as business applications and processes are updated, as well as defining how they will be monitored and how IT security will be maintained. According to KPMG, successful companies have centralised RPA delivery through an enterprise-wide RPA approach, balancing the need for speed with control. The approach considers three different enterprise-wide models for organisations establishing RPA capability:

1. An RPA centre of excellence responsible for governance, standards, IT etc. while business units implement;
2. A shared services model with services delivered centrally to all business units; and
3. A hybrid of both.

According to KPMG, successful companies have centralised RPA delivery through an enterprise-wide RPA approach, balancing the need for speed with control.

FIGURE 13: What do you see as the challenges of RPA adoption?

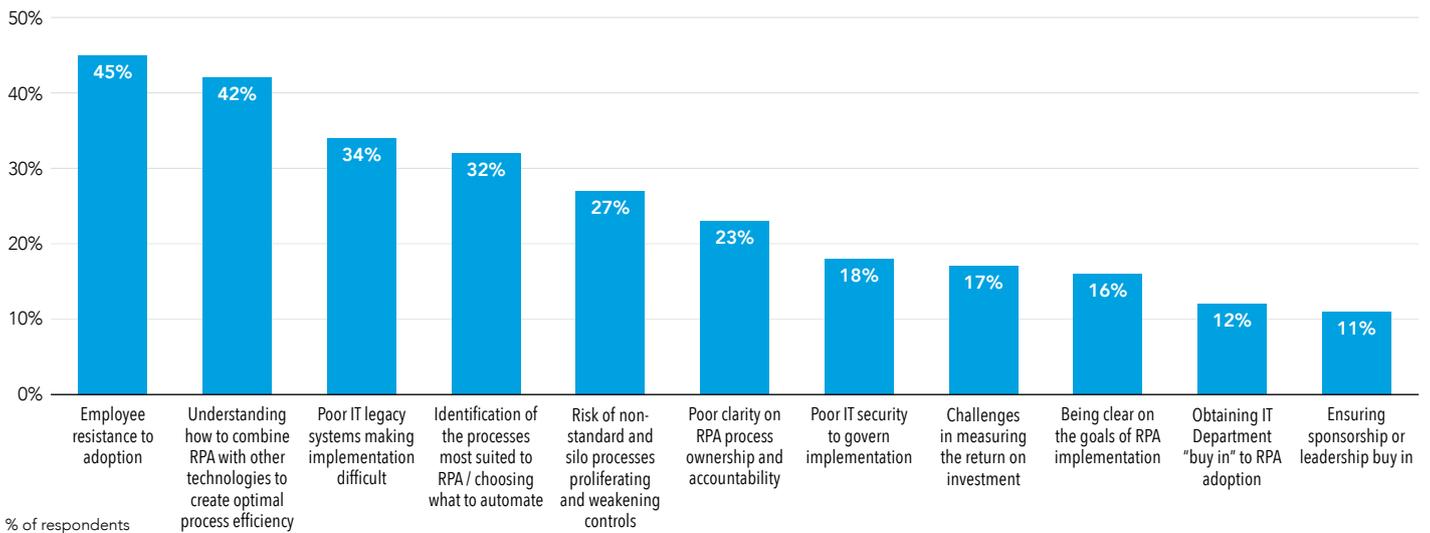
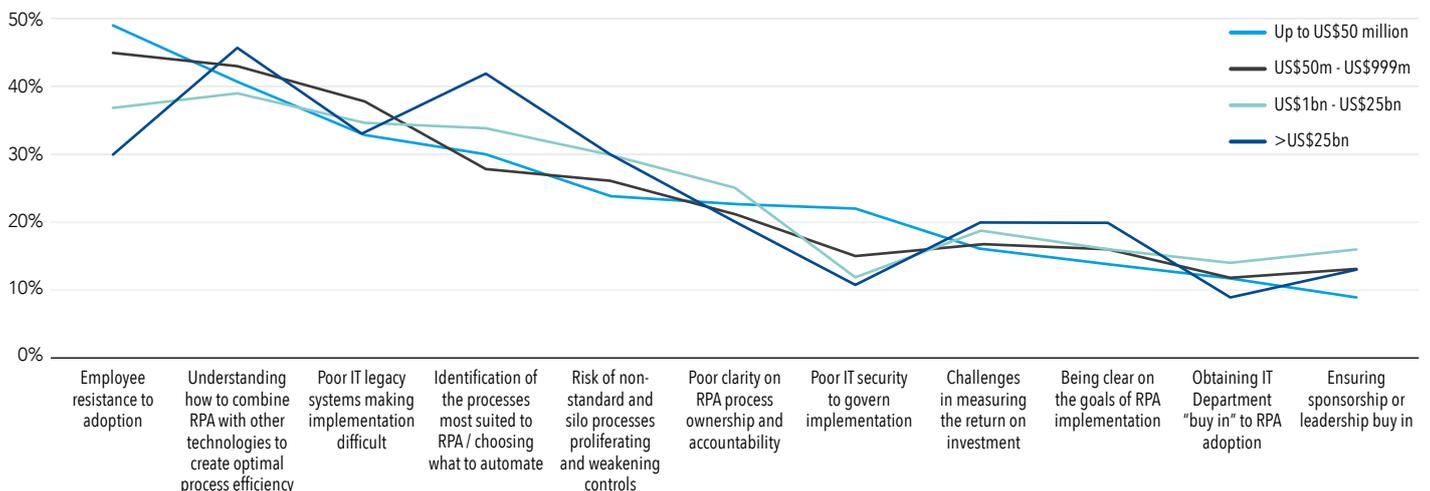


FIGURE 13b: What do you see as the main challenges of RPA adoption? (by turnover)



% of respondents identifying the challenges (all respondents, excluding those who don't know which accounted for 3.93% of all responses to this question)

## CASE STUDY – Smith & Nephew RPA as part of a strategic finance transformation



**For Smith & Nephew, the imperative for RPA adoption was clear – the need to improve quality and cost within the finance organisation as part of a wider enterprise wide Transformation Programme driven by a new CEO.**

In the context of a fast changing business landscape, the finance team is leading the way in radically transforming its operating model to better serve the needs of the business by:

- Exploiting newly created low cost captive GBS locations
- Leveraging new and emerging technologies such as robotics and AI
- Radically reimagining its reporting and BI landscape.

All of these activities will help drive efficiency and cost and critically free up capacity and resource to deliver more effective management information insight and enhanced commercial decision support underpinned by better data.

The implementation of RPA for the group is delivering immediate benefits across the finance organisation in terms of 1) cost 2) control 3) processing reliability. For example, in its inventory reconciliation, the group has applied RPA to assist in reconciling inventory data from multiple finance systems to field counts. Prior to RPA data reports had to be manually sourced from multiple ERP and business systems, multiple screenshots had to be taken to validate completeness and accuracy of the data, and consolidated to prepare “pre-inventory” count sheets. Once field counts were completed a post

count reconciliation process had to be performed, sourcing data from other systems. The process was manual, laborious, and repetitive and labour expensive, partly relying on an external third party to perform part of the reconciliation.

By applying RPA across many of the key tasks specifically within the end to end inventory reconciliation process the following benefits were realised.

- Work performed by the teams was consolidated making the task more seamless.
- The number of resources required to perform the task from end to end were reduced.
- Given the short time-frame between the generation of the reports from the systems to the initiation of a count, timeliness is critical to the process. With the RPA solution working 24-7 more up to date stock position information is available for count teams en- route to sites.
- The adoption of RPA enabled redeployment of the solution to GBS with lower cost base than internal business unit team and use of external consulting firm.
- Total cost saving expected annually of cUS\$400k.

With further larger scale RPA deployments anticipated, S&N is planning to develop a dedicated RPA centre of excellence within its Global Business Service operation to ensure consistency and scalability of the RPA technology across multiple processes.

# 5. Roadmap for implementation

Many organisations will want to accelerate the automation journey, as it promises many gains. In KPMG’s experience<sup>2</sup>, and according to our research, those planning their automation journey should start with a small, well executed proof of concept, and scale up quickly to maintain momentum while ensuring the appropriate “bot” governance and building sustainable internal capability.

A detailed, well considered and resourced action plan can enable scalability in as quickly as three months. The first phase of deployment, 30 days, must raise awareness of the art of the automation possible, identify a sponsor and mobilise dedicated resources. The next 30 days should focus on setting up the framework for opportunity identification, assessment and

prioritisation. This work should consider the context of other transformation initiatives, including the proof of concept, details of the existing technology infrastructure landscape and plans for how internal capability will be developed.

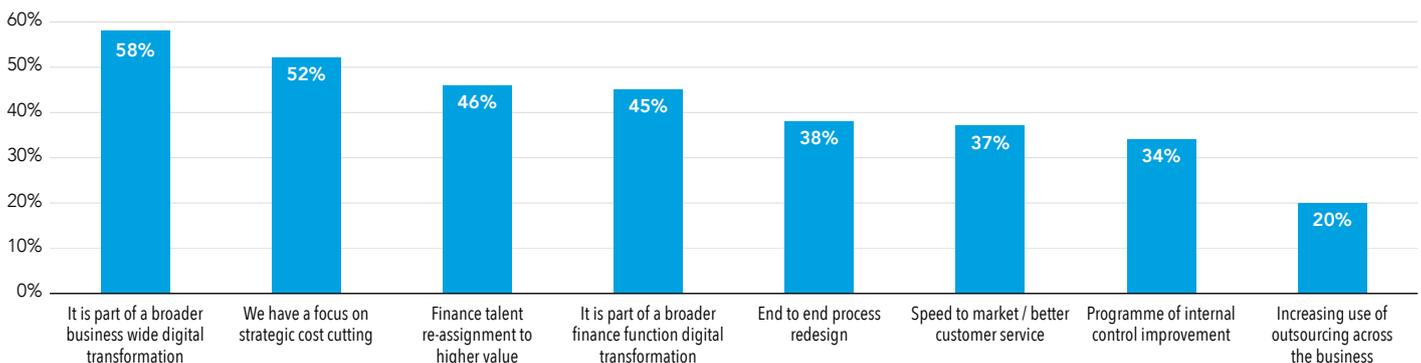
The last 30 day phase is focussed on the deployment of a proof of concept to assess suitability. This phase includes vendor selection, definition of infrastructure requirements and a roadmap for scalability based on the case for change.

## 5.1 THE CRITICAL STEPS FOR IMPLEMENTATION

The adoption of RPA is as much about change management as it is about technology implementation with strong

leadership and executive sponsorship essential. The dynamic nature of today’s business landscape calls for finance to be a strategic business partner, not simply a transaction processing back office function. Automation allows the CFO to marginalise transactional effort and consequently automation initiatives are more likely to succeed and be adopted where they are directly linked to broader strategic initiatives, enabling finance to better partner with the business. This trend is evidenced by the survey results with respect to RPA where 58% of respondents have identified broader business wide digital transformation as a key catalyst for adoption, followed by a drive on cost reduction and the opportunities to augment talent into higher value activities (Figure 14 and 14b).

**FIGURE 14:** What do you see as the wider strategic imperatives driving an interest in RPA in your organisation’s finance team?

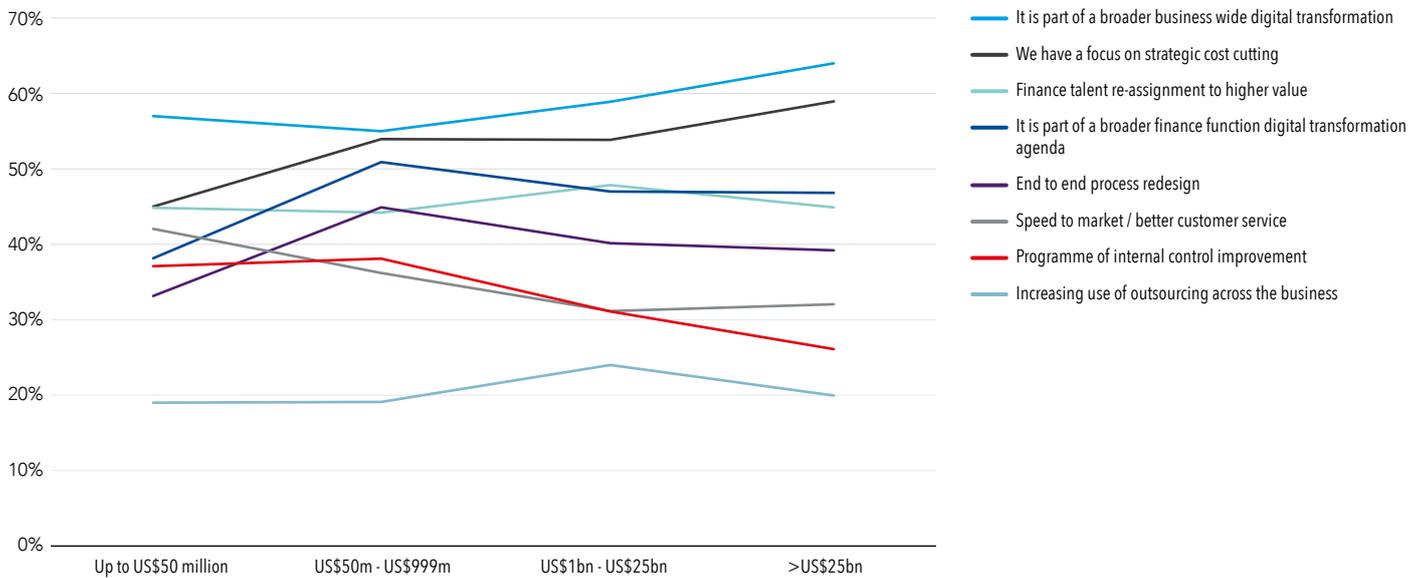


% of respondents indicating the strategic imperatives (based on all respondents who said they were either interested, trialling or had implemented RPA, excludes not applicable who accounted for 1.06% of responses)

2 Accelerating Automation, KPMG (2018).

**58%**  
of respondents have identified broader business wide digital transformation as a key catalyst for adoption

**FIGURE 14b:** What do you see as the wide strategic imperatives driving an interest in RPA in your organisations finance team (by revenue)



% of respondents indicating the strategic imperatives (based on all respondents who said they were either interested, trialling or had implemented RPA, excludes not applicable who accounted for 1.06% of responses)

RPA specialists or third-party developers must be involved in the early stages of design to bring RPA insight, particularly for the proof of concept.

Organisations who have implemented RPA successfully follow a number of key steps during implementation, supported by a process to assess RPA feasibility (Table 2).

**1. Prioritise the finance areas for automation**

Opportunity assessment is an important start for finance to identify the areas for improvement as well as a fit-for-purpose solution, noting that process improvement can be achieved by many enablers including but not limited to RPA. Lessons learnt highlight that a holistic approach is required to ensure RPA is the best solution for what finance seeks to achieve – automating a broken process is not always beneficial, however RPA is another lever that can be combined with more traditional transformation tools such as Lean.

**2. Develop a multifaceted roadmap for implementation**

Finance leadership, stakeholders and team members should define the automation strategy and roadmap together, considering the appetite for the investments required, process maturity, in-house capabilities, data structures, and the technology landscape. The roadmap must address the phasing of deployment, investment, benefits and savings drivers of each initiative, the organisational change impacts of transition, including training and hypercare, and the cultural change to drive adoption, encourage innovation and minimise uncertainty.

**3. Select the right providers and partners to support design and implementation**

Companies leading the way on the RPA implementation stage acknowledge that RPA-enabled process design must be based on what RPA can do, to build the

best process for the “bot” based on its capacity and not the best process for the “human version” of the “bot”. To do so, RPA specialists or third-party developers must be involved in the early stages of design to bring RPA insight, particularly for the proof of concept. This will also help build in-house capability, avoid hardware and software pitfalls and provide software selection as well as implementation know-how.

**4. Build an enterprise-wide delivery model and governance strategy to help oversee the program**

An enterprise wide delivery model and approach provides the checks and balances required to scale in a coordinated way. With an RPA governing body, organisations will benefit from the centralised control to minimise the risk associated with the technology enablement and realise the value of RPA<sup>3</sup>.

TABLE 2: Assessment steps for RPA feasibility

MOBILISATION	DATA COLLECTION AND ANALYSIS	EVALUATION	RECOMMENDATION
<ul style="list-style-type: none"> <li>Mobilise a joint team including programme governance</li> <li>Assess current opportunities against RPA best practice</li> <li>Run centre/process led briefings</li> <li>Develop an assessment criteria definition</li> </ul>	<ul style="list-style-type: none"> <li>Run workshops with function teams to map processes for potential impact of automation</li> <li>Conduct analysis of process steps with sufficient automation potential</li> <li>Identify processes for further deep-dive assessment</li> </ul>	<ul style="list-style-type: none"> <li>Evaluate process automation potential</li> <li>Develop the business case and implementation plan</li> <li>Aggregate benefit to determine holistic automation potential for benefits case</li> <li>Work through follow-up questions with process leads</li> </ul>	<ul style="list-style-type: none"> <li>Review outputs and key findings</li> <li>Identify common process themes across sites</li> <li>Prioritise opportunities</li> <li>Validate RPA solution feasibility</li> <li>Prepare the business case</li> </ul>

<sup>3</sup> Governing the bot revolution. How centralised controls stops ad hoc RPA deployment and drives true transformation, KPMG (2017).

How to manage the transition to a workforce integrating humans and “bots” is a question worth addressing early.

The body manages change control to allow automation to evolve in a controlled fashion with a focus on results, ensures appropriate security and control protocols at the outset, and plans for business continuity and change. The delivery model provides design and implementation capabilities, shares knowledge and lessons learnt for efficiency. Over 60% of respondents to this survey are implementing RPA through a centrally managed and coordinated dedicated team (see Figure 15), most notably in larger organisations (Figure 16).

**5. Establish a change management strategy to drive adoption throughout finance**

How to manage the transition to a workforce integrating humans and “bots” is a question worth addressing early<sup>4</sup>. In doing so, successful organisations have effectively considered the changes to their operating model focusing on people skills and structure as much as process, data and technology. Strategies include initiatives such as developing RPA capabilities in business process leads rather than focusing on technical-staff, using experienced and inexperienced teams for “bot” development to promote skills and knowledge transfer and partnering with organisations that have a deep RPA capability to support the programs as required.

FIGURE 15: How is RPA Implementation currently being managed at your organisation?

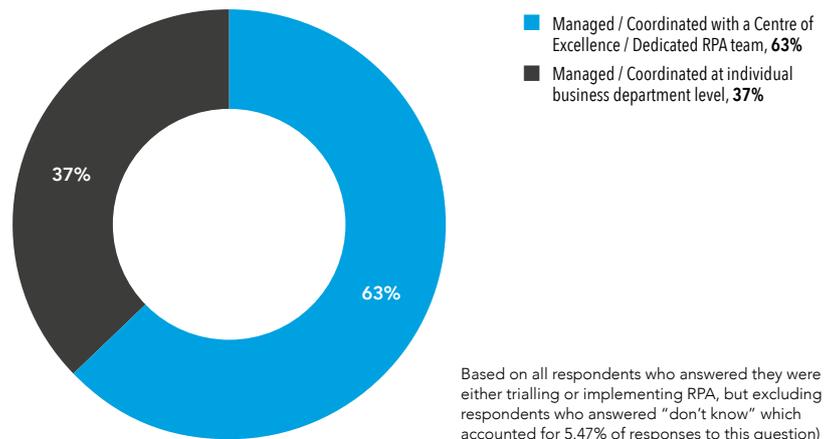
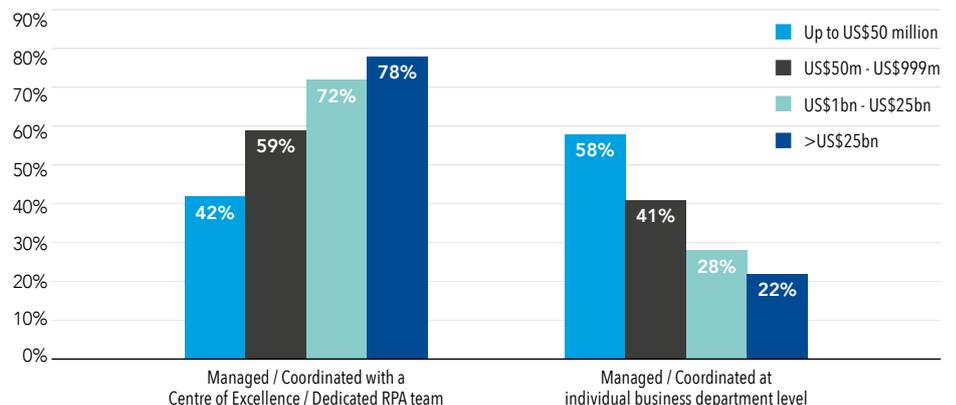


FIGURE 16: How is RPA implementation currently being managed at your organisation? (by turnover)



Based on all respondents who answered they were either trialling or implementing RPA, but excluding respondents who answered “don’t know” which accounted for 5.47% of responses to this question

4 Rise of the humans 2: Practical advice for shaping a workforce of bots and their bosses, KPMG (2017).

## CASE STUDY – GSK China

### The shift to an RPA centre of excellence



**Initially there were two primary goals from implementing RPA in GSK's Finance Shared Service in China as part of a wider finance transformation for shared services to add business value – return on investment savings as well as helping drive improvement in the control environment.**

It was seen as a particularly attractive technology solution because of its "ease of implementation", targeted on high volume and repetitive processes with significant areas of manual intervention. Its programmability on rule driven processes has resulted in significant control benefits, and robot scripts are valuable and relied upon by internal auditors as control flowcharts for auditors.

As GSK has looked to scale its RPA deployment, it has had to review its governance model in terms of RPA adoption. Whilst the deployment initially started locally driven by the finance team with limited IT involvement, as the wider global team has started to understand the benefits more clearly a central technology team based in the UK has been established as an RPA Centre of Excellence. This is the perfect combination of local business user led finance teams

bringing finance process and control knowledge supported by a centralised dedicated RPA team. The benefits to GSK of establishing this command and control hub have been clear:

- Better coordination over software licensing and supplier engagement
- Enterprise wide visibility on work scheduling of the robots
- Centralised maintenance and control of robot performance, including analytical reporting with finance led day to day operational delivery
- Consistency on global deployment of the software at scale with capability to prioritise and select projects against standard criteria
- Better control over technology security issues, password and USER IDs, data privacy and cyber security issues
- Systematic approaches to error resolution, back up plans and root cause analysis
- Flexibility and coordination of robots deployment in the face of application and system changes
- Centralised pool of deeper RPA expertise.

A clear plan showing the impact on employees both short term and long term as RPA is scaled as part of a wider automation strategy is beneficial.

## 5.2 THE HUMAN CHALLENGE WITH DIGITAL FINANCE

Many companies are concerned that the implementation of RPA will result in the loss of jobs across the workforce, yet our research suggests the primary goal of implementing robotics in the finance team is not to reduce workforce but release capacity to focus valuable finance resources to higher value-add activities.

How can the CFO create the cultural change needed to implement an effective RPA strategy, retain corporate knowledge and critically ensure the newly defined finance ecosystem is successful? What should the roles of the digital finance team look like? As with any change, it is most important to ensure the communication strategy is effective and its impact is connected to a wider strategic approach to managing talent. This survey suggests there are a number of key considerations to optimise employee engagement with ongoing implementation.

**1. Strategic alignment.** Ensure RPA implementation is seen as an integral part of the wider finance transformation initiative and aligned to the strategy of the organisation. This helps create the burning platform for the automation strategy and sets the basis for the case for change with employees. Alignment to wider digital transformation initiatives was identified in this survey as a key strategic driver for RPA implementation.

**2. Leadership sponsorship.** Visibility of endorsement of RPA implementation from the top of the finance organisation is vital. This helps with leadership alignment as potential RPA projects are scaled within finance and beyond, and creates confidence in the transition for the team. Communication plans should ensure the leadership is seen to be driving the change process with a consistent rationale to build trust, and the use of change champions can help embed key messages and deliver “buy-in”.

**3. Talent plan.** A clear plan showing the impact on employees both short term and long term as RPA is scaled as part of a wider automation strategy is beneficial. This would include the teams, roles, levels, responsibilities and clear accountabilities on redeployment or role change. It should also consider the emerging skills needed, skills gaps, capabilities and required behaviours, as well as recruitment and retention implications. The implementation of RPA is likely to result in a number of emerging roles in the finance team (Figure 17).

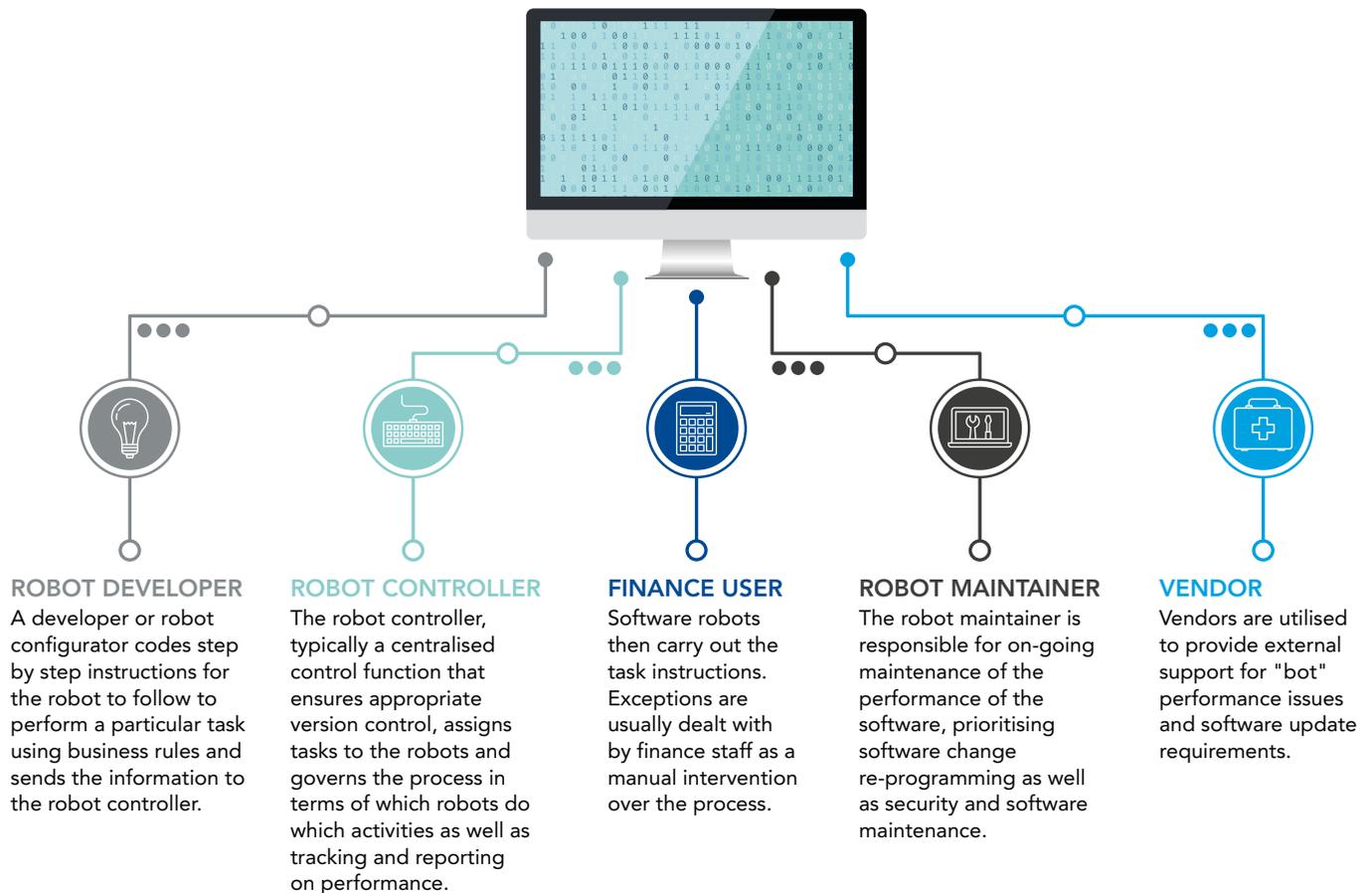
**4. Skills transition.** A shortage of RPA skills and knowledge was identified as the primary people challenge of RPA in our survey (Figure 18 and Figure 18b). At the initial adoption stage it is not unusual for organisations to rely on external third parties to assist with initial RPA implementation and

software coding, but typically capability is then transferred to the internal team. This requires significant knowledge transfer and can take time. It’s important to plan for targeted learning interventions to develop the requisite future capabilities ongoing in the finance team as the end business user.

**5. Change management.** Effective change management and communication skills are essential for RPA deployment from the outset of the automation journey. Fear of technological change is nothing new, and whilst RPA can lead to role displacement, interviews with employers in this study suggests this is more than counter-balanced by the creation of new roles and the removal of remedial, boring tasks away from employees. This creates new learning and career opportunities, and helps create the appropriate cultural transformation needed in the finance team to successfully adopt and scale the technology as part of a wider transformation initiative. It is essential to continually communicate the facts and reiterate the major benefits that RPA technologies will bring, as well as recognising and being sympathetic to employee concerns. As a business end user led technology, effective employee engagement throughout the adoption process is critical to get right. Cultural team resistance to RPA was identified as the second highest concern in our survey (Figure 18).

It's important to plan for targeted learning interventions to develop the requisite future capabilities ongoing in the finance team as the end business user.

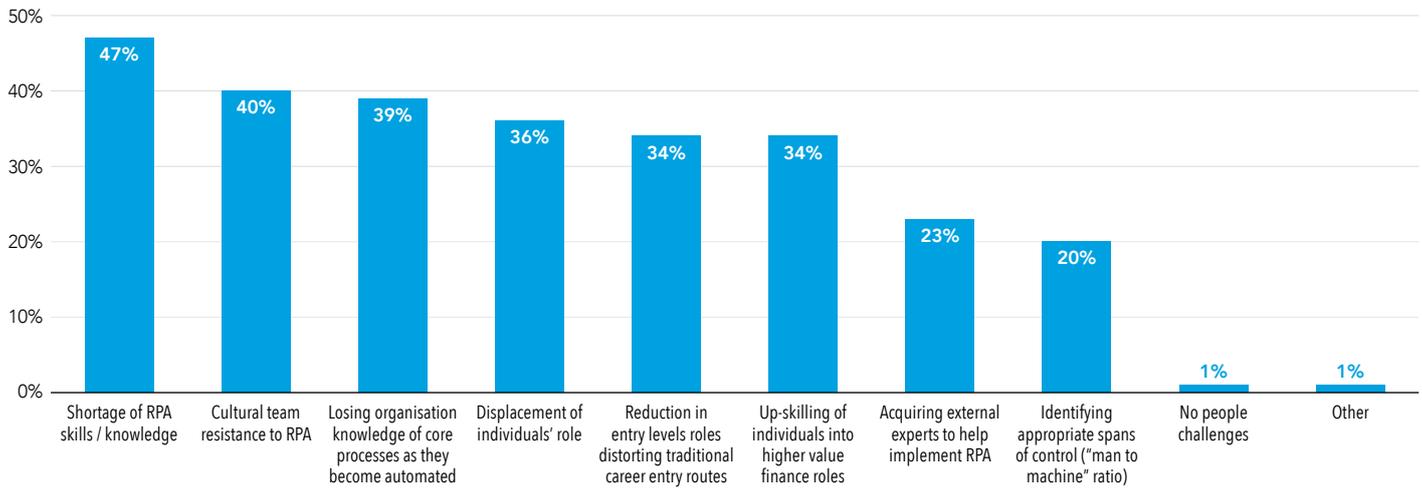
FIGURE 17: Emerging finance roles with RPA adoption



47%

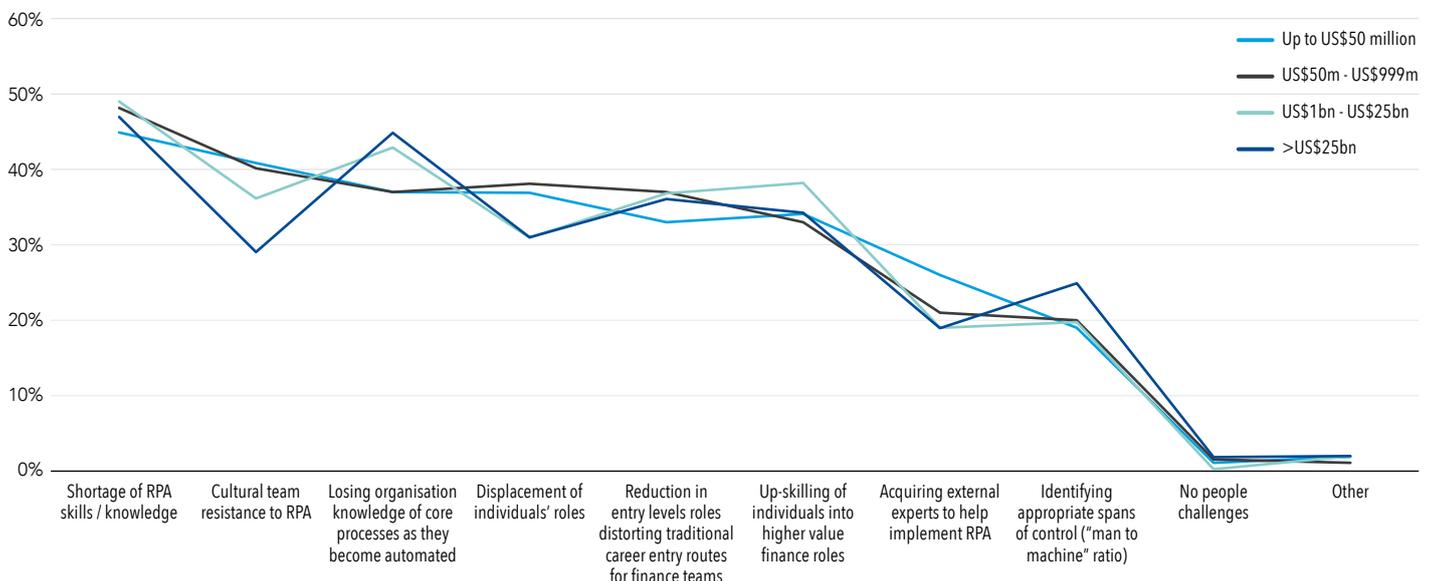
of respondents suggest shortage of RPA skills / knowledge as the main people challenge of RPA

**FIGURE 18:** What do you see as the main people challenges of RPA?



% of respondents identifying the main people challenges (Based on all respondents answering the survey, excluding don't knows who accounted for 3.65% of responses to this question)

**FIGURE 18b:** What do you see as the main people challenges of RPA? (by turnover)



% of respondents identifying the main people challenges (Based on all respondents answering the survey, excluding don't knows who accounted for 3.65% of responses to this question)

## CASE STUDY – Principal Hong Kong Focusing on employee engagement



**The primary driver for RPA implementation in the finance team in Hong Kong was to improve transactional finance processing activities – a legacy of different applications in the organisation as the business has grown mean many finance processes remain reliant on manual interventions across different systems, typically in high volume and repeat processes.**

The cost and time implications of either replacing finance legacy systems or more integrated traditional automation solutions at the current time was not a viable option for time and cost reasons, which is why RPA has been identified as a relatively quick automation solution. The implementation has enabled the organisation to refocus the roles of some individuals in the team into higher value activity.

As part of the implementation process, staff engagement has been a key priority, with recognition that automation would raise some concerns around job security. To address these concerns the finance team have systematically:

- Involved all affected staff right from the start of the process
- Shared RPA demos and workshops with all staff
- Aimed to build consensus and buy in to the implementation at ground level
- Consistently communicated likely impacts at every stage of the process
- Identified new opportunities for individuals to build new skills in RPA over the medium term
- Identified new opportunities to transfer skills to added value finance work
- Facilitated the relationships between finance and IT to aid smooth implementation
- Socialised RPA implementation across other teams to garner further buy in.

# 10 Lessons learned from RPA pioneers

## #1 INVEST IN CHANGE MANAGEMENT CAPABILITY

The implementation of robotics technology into the finance function requires strong change management skills and capabilities to ensure effective programme delivery and to manage employee engagement. It is critical that the benefits of RPA are clearly articulated and continually communicated throughout the adoption process.

## #2 ENGAGE YOUR EMPLOYEES THROUGH THE JOURNEY

It is vital to have employees engaged in the process so that they understand the benefits RPA is expected to bring, as well as the future implications for their roles and responsibilities. This ensures minimal resistance as the organisation goes through the change process and gives opportunities to identify change champions.

## #3 BUILD RPA CAPABILITIES WIDELY IN THE FINANCE TEAM

Ensuring the finance team understand the technology ensures less reliance on external parties or a small number of experts within the organisation. This minimises risk, places responsibility in the hands of those that truly understand the business process, and is a strong platform for wider adoption and scale up.

## #4 START SMALL

Trying to implement RPA across complex and wide processes is problematic, and RPA scale up is challenging because of the wider governance, controls and sign off required. The opportunity to try, test and learn with robotic software in relatively safe environments where risks are minimised on smaller processes is important and a key beneficial feature of the technology.

## #5 GET IT INVOLVED EARLY

Involvement of the IT function from the outset helps ensure buy in to the adoption of RPA technology and provides vital support particularly in terms of security, programme management, and robot coding capabilities, as well as providing ongoing maintenance and ensuring greater performance reliability and analytical insight. This will help drive faster outcomes for the finance team in the longer term as the technology is scaled.

## #6 GET THE GOVERNANCE MODEL RIGHT

The finance team run the risk of a proliferation of RPA "point solutions" if they scale the technology across multiple processes without a robust centralised governance model. Though a key benefit of the software is the ease with which it can be trialled on small processes with minimal risk, significant scale necessitates standardisation, control and dedicated RPA expertise. A strong, centralised RPA governance structure ensures the appropriate supplier and licensing arrangements are efficient, the "bots" are appropriately maintained, controlled, and performance managed, utilisation is maximised through appropriate work scheduling, and where processes change, the change required in programming the "bots" can be undertaken efficiently.

## #7 CHOOSE PROCESSES CAREFULLY

It is important to have a very clear understanding of the process and any inherent complexities or characteristics that exist before applying the software. Organisations often initially go wrong by being too ambitious with their RPA adoption plans on processes which are too large, targeting processes which are too complex, or which simply don't meet many of the core process criteria (Section 2.3).

## #8 LOOK TO OPTIMISE PROCESSES FIRST

There are a wealth of business process management tools and techniques such as Lean and Six Sigma focused on optimising processes, either by eliminating the process, or by simplifying and standardising the process first. The robots are not designed to fix bad processes and will work better with preconfigured processes where much of the thinking has been done up front. The software is also likely to require some process change to be applied effectively and sustainably. Process optimisation is likely to be a better solution than configuring a robot on a process which is too elaborate.

## #9 KNOW WHERE TO STOP WITH RPA

RPA is rarely the solution to automating 100% of an end to end process, and businesses are often faced with diminishing returns where they try to do so – for many processes trying to automate the final part may involve too many "path" options or problematic exceptions – typically resulting in much lengthier programming and higher implementation costs. As intelligent automation products gain traction, its likely greater benefits will accrue from combining different technologies with RPA across processes.

## #10 RECOGNISE WHEN RPA IS NOT THE RIGHT SOLUTION

RPA is not the panacea to all automation challenges. Sometimes replacing legacy systems or building an API interface using more traditional IT automation protocols may be the better solution longer term than applying a "bot". If systems are business critical, or where underlying changes within applications are expected frequently, APIs may be a better automation route.

## CASE STUDY – Target India RPA and strategic technology investment



**The finance team within Target India's Global Capability Centre operation had been involved in automation efforts to optimise processes and drive value over the last several years.**

As part of this journey, they looked at RPA as one of the tools and are currently in year two of its RPA implementation journey where they have implemented robotics across many processes in both the Accounts Payable and Accounts receivable areas. An integrated approach was adopted where automation opportunities were explored in conjunction with process re-engineering to ensure that "bots" were not built over inefficient or broken processes; rather the first step was to optimise the work flows within the process and then automate.

Through the RPA journey, one of the key benefits has been to eliminate non-value added activities and free up staff resource to more interesting work. In the Accounts Receivable function, redeployed staff have had new opportunities to up-skill and change roles, for example, to the audit team focused on revenue leakage. Similarly in the Accounts Payable function, the implementation of RPA has helped headcount optimisation and reduced the

reliance on external contractors to better manage invoice processing around busy peak areas during the retail year reducing processing costs. This integrated approach of process re-engineering and robotics automation is now being socialised and implemented across the organisation.

For the finance team at Target India, a key area of consideration for future RPA implementation is the wider technology transformation ambition of the business and finance team, and one of the key RPA challenges cited is that of timing of implementation. In environments which are stable from a technology perspective, and where there are no planned significant changes to underlying legacy systems, RPA can be seen as a strategic tool - potentially quick to implement, optimal automation solution for sequential, non-cognitive tasks and processes. Yet where organisations are investing heavily in new technology and systems as part of a wider strategic transformation of the business, care should be taken to avoid building "bots" on older platforms as they may soon become redundant. Instead it is recommended to view RPA as a complementary tool to further optimise processes and drive value, during and post the technology transformation.

# 6. Next steps on the automation horizon

The reality for most finance functions is that innovation leveraging automation remains focused around basic process automation, where processes are primarily rules based using structured data. The primary technologies used have been simplistic automation tools such as macros, workflows and web based screen scraping technologies, as well as traditional API based automation interventions. These have been complemented by broader business process management tools, particularly the adoption of Lean and Six Sigma methodologies.

For organisations that have embraced the automation journey, the need for solutions beyond the capability of standard RPA technology such as Intelligent Automation is emerging. Increasingly, progressive finance teams are combining traditional automation tools with advanced technologies to scale process efficiencies further, and provide deeper and faster insights on enterprise performance including predictive analytics leveraging external data e.g. traffic indicators, footfall, weather forecasts. Whilst it is clear RPA tools can confer significant benefits to organisations, ultimately the robots are simply programmed to follow rules, and cannot be considered to be “smart”. Standard RPA technology cannot adapt to changing conditions or self-learn from previous experience.

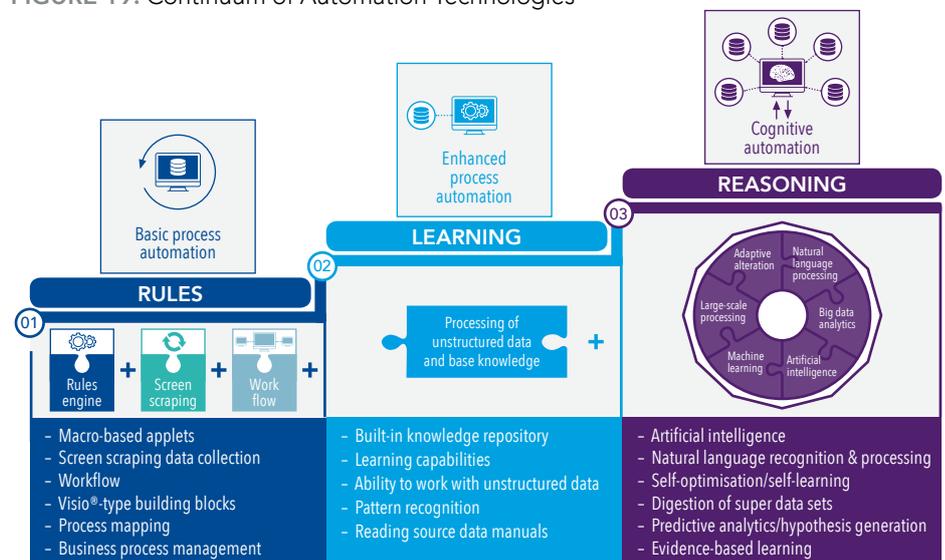
Figure 19 outlines the combination of technologies that will be increasingly used in the future to automate business processes, operations and analysis – from

robotics on rules based processes, including basic OCR and screen scraping, through to the application of sophisticated “intelligent automation” involving “cognitive machine processing” and elements of artificial intelligence. These technologies sit on top of existing IT architecture components and in their most advanced form can interpret data from multiple sources to make decisions.

This capability has the potential to unlock another wave of opportunities for further efficiencies within finance operations. For example, a powerful technology toolbox will strengthen finance’s ability to identify and allocate capital to the right projects

to drive innovation. “Tech Innovation to Reinvent the CFO Suite,” an article produced by KPMG and Bloomberg Studios<sup>5</sup>, notes that the increasing ability to automatically analyse very large data sets will help CFOs decide whether to invest capital to expand capacity, and machine learning will enable them to consider many more factors than just internal company metrics and econometrics when considering risks that may affect the business. The progressive deployment of these technologies across the enterprise will further enable the ‘digitalisation’ of labour, exploding the automation potential for enterprises.

FIGURE 19: Continuum of Automation Technologies



<sup>5</sup> Tech Innovation to Reinvent the CFO Suite (December 2017), KPMG LLP and Bloomberg Studios.

## CASE STUDY – Pearson RPA and the art of the possible



**For Pearson’s retained organisation, the primary driver behind RPA implementation has been to free time to enable the finance team to focus on added value and more interesting work, but RPA has also contributed to process improvement, better quality processes and improved controls in the finance organisation.**

Whilst recognising that currently RPA is primarily used as a tactical automation tool to improve as-is processes (alongside other automation tools), there is also recognition that longer term it will be part of a technology approach that supports much wider finance transformation.

This starts to take the finance team into the “art of the possible”, where it strategically transforms to deliver the next level of value to the business - here alignment to the wider organisation strategy and a clear understanding of how the finance organisation best supports enterprise wide objectives is the starting point. This shapes the wider organisation design of the finance team in terms of structures, the nature of future roles and

skills and necessitates having the appropriate vision for the finance team. There are some obvious areas of future focus, particularly around building more advanced forecasting capabilities and scenario modelling to support quicker business decisions.

With increased access to emerging technologies, RPA has its role to play in supporting this transformation ambition – continued automation of low value, repetitive finance processes using a combination of new automation tools such as RPA with traditional automation API / ERP fixes that frees up valuable finance resource. But it is also the combination of RPA technologies with more advanced cognitive tools such as machine learning that has the potential to unlock the next level of value for the business in terms of insight and decision support. Good enterprise data here is a prerequisite, as is access to the right talent, as well as securing long term executive sponsorship. But for Pearson it’s also about ensuring continued, effective collaboration between the finance and IT teams remains throughout the next steps in the journey.



*“It is an incredibly exciting time for CFOs to enhance their strategies. Digital automation capabilities are extending well beyond RPA: many AI technologies have recently graduated from being interesting concepts to operationally robust; virtual agents can match humans for speech accuracy; platforms can learn tasks and repeat them more consistently than your teams do; and algorithms can decipher vast quantities of data and publish insights in timeframes once thought impossible. RPA is the tip of the iceberg for automation.*

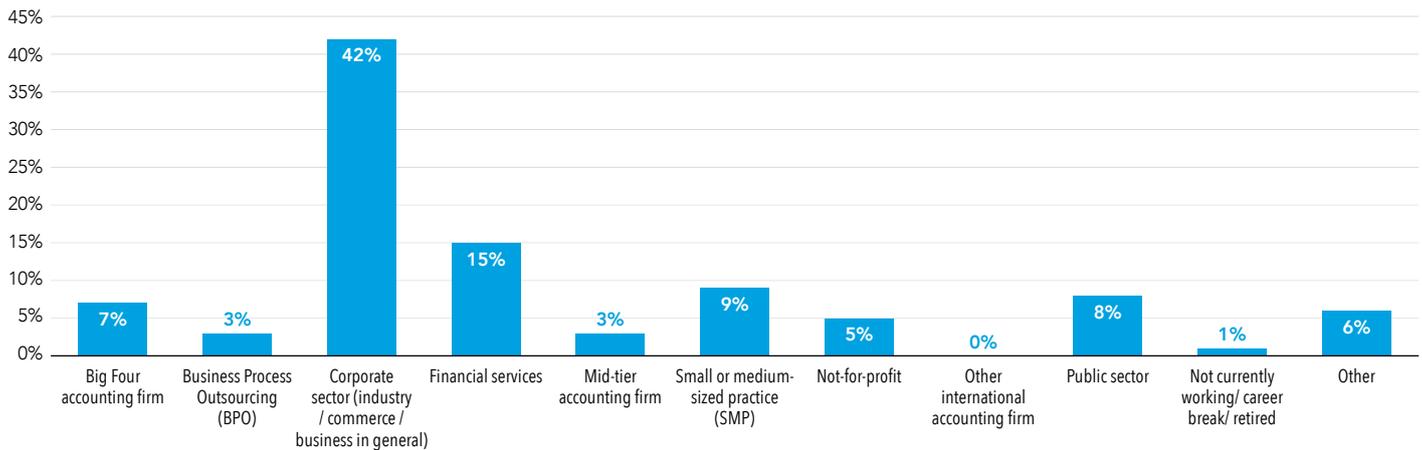
*The challenge for finance executives is not to get lost in the sea of shiny new toys. As automation options evolve, focus on the business objectives and use cases that matter to you, with one caveat. Think about (i) what are the activities that I want to completely automate and (ii) what are the activities that I want people involved in that automation to assist; but let your imagination also consider (iii) what are the things that I want to do that I have never had the time or budget to do. Finance has the opportunity to transform its value proposition and lead the automation agenda by example.”*

**Shane O’Sullivan, Partner, KPMG Australia**

# 7. Methodology – survey information and demographics

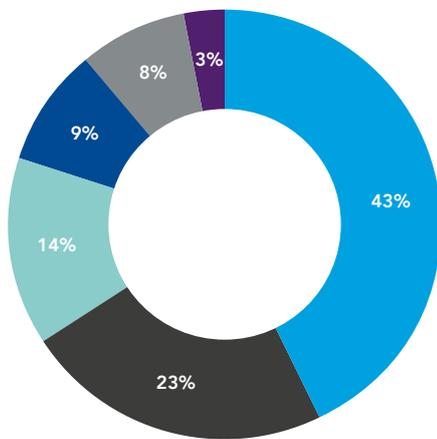
The survey of ACCA and CA ANZ members on robotics was undertaken in March 2018. A total of 2713 responses were received.

## SECTOR REPRESENTATION OF RESPONDENTS



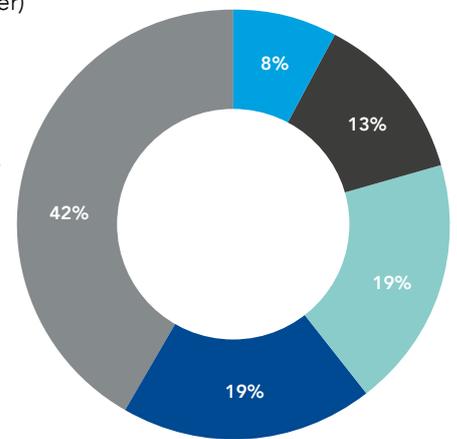
## SIZE OF ORGANISATION OF RESPONDENTS (by turnover)

- Up to US\$50 million, 43%
- US\$50m - US\$999m, 23%
- US\$1bn - US\$25bn, 14%
- >US\$25bn, 9%
- Not sure, 8%
- Not applicable, 3%

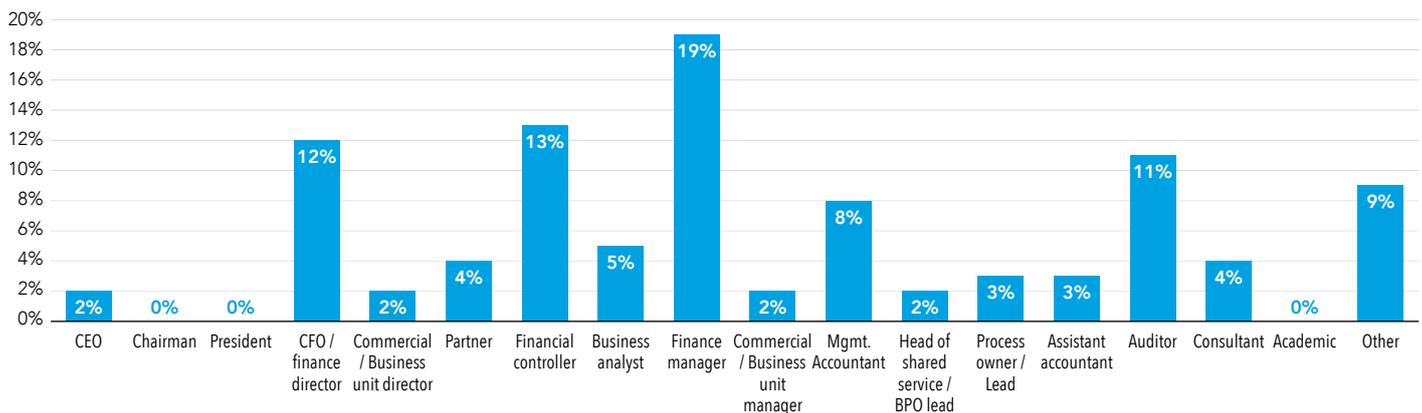


## SIZE OF ORGANISATION OF RESPONDENTS (by employee number)

- 0-9 employees, 8%
- 10-49 employees, 13%
- 50-249 employees, 19%
- 250-1,000 employees, 19%
- Over 1,000 employees, 42%



## RESPONDENTS BY ROLE



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## PI-ROBOTICS-IN-FINANCE

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