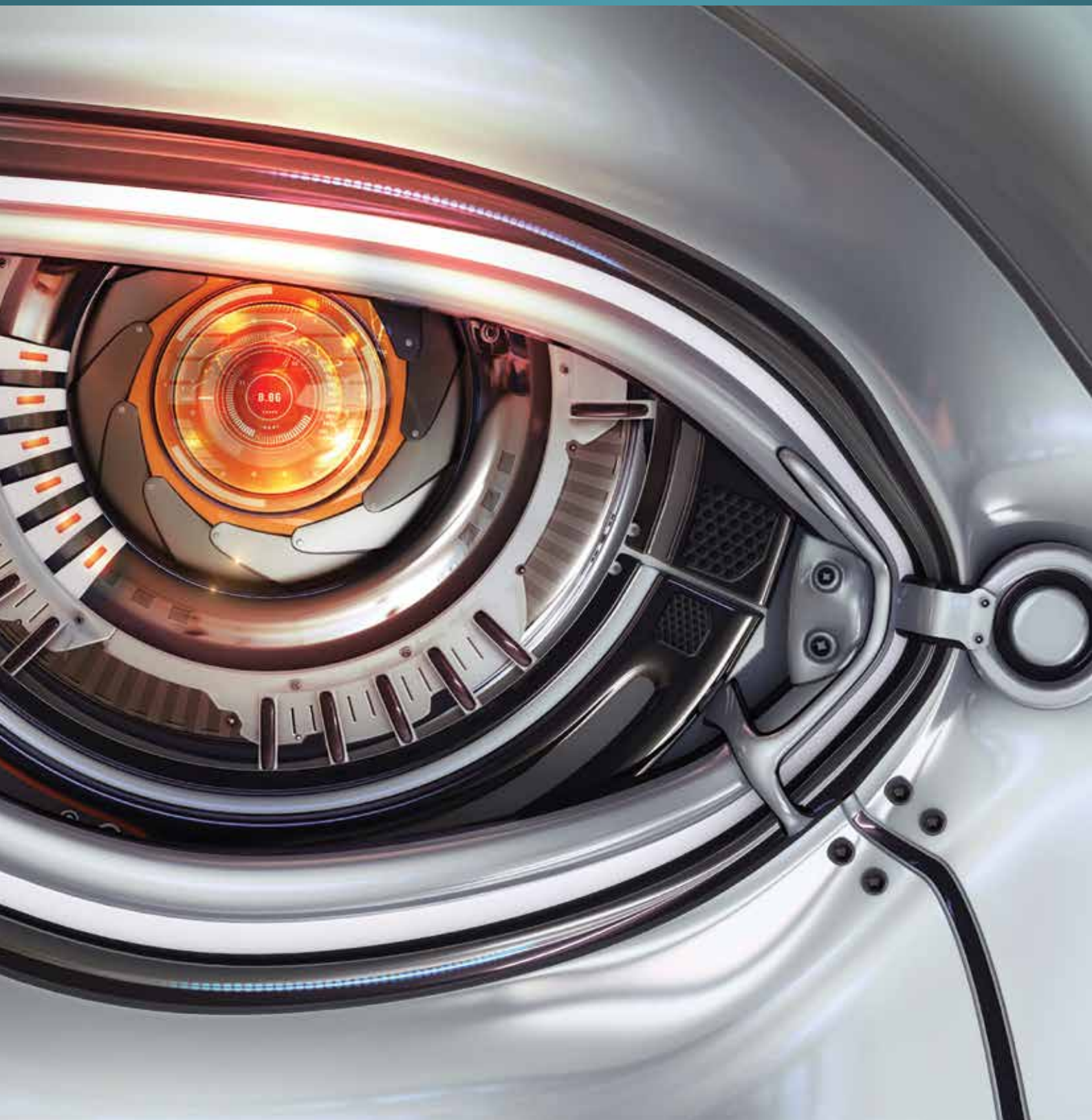




MINDFIELDS

GROW FOR TOMORROW

Robotic Process Automation
Driving the next wave of cost rationalisation



About Mindfields

Mindfields is a vendor agnostic sourcing and management advisory firm that provides strategic sourcing advisory services to CXO level executives across industries globally. Our experienced consultants leverage exclusive IP based proprietary tools and information databases to evaluate and identify the optimal sourcing strategies for our client organisations. For more information about Mindfields, please visit us at: www.mindfields.net.au

For further information on RPA and the global sourcing landscape, please contact: research@mindfields.net.au.

Throughout this document, "Mindfields" ("we", "our", "us") refers to Mindfields Consulting, the Sydney-based IT / BPO outsourcing advisory firm.

Purpose and Objectives – RPA Study

This report primarily focuses on evaluating and assessing the Robotic Process Automation (RPA) market landscape and what it means for clients and outsourcing service providers. The rapid emergence and proliferation of this technology in the coming years has the potential to help client organisations achieve greater operational and cost efficiencies, both short-term and long-term. This report will help enterprise buyers of IT and BPO services make informed decisions while pursuing a case for adopting RPA in their front and back-office operations.

Some key areas of focus in this report include:

1. What RPA is and how it works.
2. What RPA can do for your business and how it can address some of the key challenges experienced by senior and C-Level executives.
3. How the RPA service provider landscape is structured and what different strategies are being adopted.
4. How RPA is impacting outsourcing and off-shoring strategies in the near term and longer-term.
5. How adopting RPA may impact hiring strategies for buyers and service providers in the near term and longer-term.
6. A maturity assessment of the key service providers.
7. How organisations can expect to benefit from adopting RPA and what risks they need to be aware of.
8. A suggested approach for organisations to help assess where RPA may be applicable, and potential go-to-market approaches to adopt RPA.
9. An extensive set of forty live use and case studies of recent RPA implementations by service providers, assessed across a range of industry verticals.
10. What should be optimal 'Target Operating Model' for RPA engagements.

We would like to acknowledge the contribution made by a range of IT/BPO service providers including Dell, IBM, HP, Infosys, Wipro, Genpact, TCS, HCL, WNS, EXL, IGATE, Cognizant, Tech Mahindra and Sutherland Global Services.

Disclaimer: Accuracy of Information

This report has been prepared from information believed to be accurate and reliable at the time it was sourced.

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User Experience

ANZ has a clear cost-down strategy to our operational processing. Over the last three years we have every year successfully reduced costs whilst simultaneously increased customer service, controls and staff engagement.

As such, automation has been core to ANZ's operational strategy for years, and the rise of Robotic Process Automation is a new tool to add to what we have already.

However, at the same time RPA is a different tool as it creates exciting new opportunities to extend our automation reach further and into areas which earlier was "too hard".

ANZ has a unique offshore setup where we are mainly using dedicated captive centres for delivering services to our customers. A key value of that structure is our ability to leverage ideas and capabilities from our offshore teams and the RPA journey is a testament to that.

As part of our launch into the RPA area, we looked at successful implementations in other firms, many of which are in this report, and realised that a top down approach seldom had been successful.

As such, we have taken a different track, and instead of focusing on "doing automation to the operational teams" we are focusing on doing it "with" the teams. This in line with Lean methodology where you always seek to create production floor "pull" rather than management "push".

We have spent significant time and effort in enabling the people whom would benefit from using the toolset and assisted them through embedding dedicated RPA skills within their teams to be deployed against what they see as their biggest opportunities.

This approach has proven very successful and we are now seeing real uptake right across the Hubs network and a clear demand from teams to get and use the technology.

This bottom up build is being consolidated to a "top down" operational blueprint which clearly set out how we expect process design to mature to over time. This is resulting in us being able to successfully operate across the maturity curve, with some teams using very basic capabilities whilst others have started experimenting with very advanced capabilities such as machine learning.

We also recognise that many firms have tried to too hard to create perfect point solutions. However, that is costly and slow. We are intentionally keeping the RPA solution lean through a small project organisation (we are using our existing Business Excellence teams), strong user involvement and monthly senior management oversight meetings with the power to intervene where we are not making sufficient progress. This is being reinforced through RPA investments being taken through the "run" budget thereby ensuring that we are only funding activities which have clear and fast payback.

This is also combined with a clear employee engagement approach, where we are making the benefits of automation clear, whilst dealing with any concerns being raised. We have seen tremendous support from the "floor" and robots are used to augment human capabilities and free people up to do higher value work.

We realise that we are on a journey, RPA is not a magic bullet, but it is a very powerful type of ammunition to help make manual processes more match fit for digital. We are very positive about future benefits from this type of technology, and especially its ability to optimise processes without requiring the time and cost of optimising the associated systems on which these processes are currently deployed.

During our journey we have been working with Mindfields on critical decision points and we believe this new report will help raise awareness and interest about RPA for other companies whom are wanting a real step change to how they are approaching process innovation in a new world.

Simen Munter,
General Manager, Group Hubs at ANZ
Melbourne

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EXECUTIVE SUMMARY

01

Executive Summary

Until recently, there was a lot of scepticism about Robotic Process Automation (RPA). Some believed it was just another version of an automation strategy being touted by software vendors and service providers. With a lack of real-life examples and case studies, client organisations were cautious about RPA and its perceived benefits.

Based on an extensive independent study conducted by Mindfields Consulting, this report examines the impact RPA is having on the end buyers and providers of these services. It includes detailed reviews of the major players, based on direct engagement with key experts and industry leaders, as well as case studies of real-life implementations.

Currently only a few of the top ASX companies have strategies in place to leverage RPA but mostly are in “Proof of concept” stage. This report will help enterprise buyers of IT and BPO services make informed decisions about adopting RPA in their front and back-office operations.

A brief look at RPA

RPA is a relatively new automation-led service delivery model. It enables the cost effective automation of basic rule-based tasks across client functions, replacing low-value processes performed by human FTEs (full time employee) with virtual or robot FTEs operating robot applications or software robot. These platforms operate on a 24x7 basis at about one-third of the cost of similar off-shore operators or about one-ninth the cost of an on-shore operator performing similar roles. RPA also provides for strong governance and auditability as it enables detailed and real-time traceability of all process steps.

We expect to see a new breed of software vendors developing advanced capabilities to expand the scope of what automation can do, especially in the areas of self-learning and artificial intelligence capabilities. The next wave of RPA will likely see a shift from simple “rules based judgment” to an increasing level of artificial intelligence in the tools, potentially replacing even higher level human jobs.

A new business model for service providers

More than 90% of the service providers surveyed confirmed their commitment to invest in RPA technologies. There are strong incentives for adopting RPA, namely a rise in wage rates in off-shoring hubs like India and Philippines, and increasing operational and overhead costs.

Service providers will need to ensure they not only adopt RPA tools to improve their own businesses (currently, only 40% have done so), but also solution/embed it a key service offering for their existing and prospective clients. With increasing competition amongst players adopting RPA, a typical service provider would need to lower its costs by 40-50% to be able to deliver a measurable return in efficiencies to its clients and make a respectable margin.

RPA capability and toolsets have been largely developed by a small group of specialist software vendors. According to our research, 64% of service providers have partnered with specialist vendors to move more rapidly into this emerging space. Pure BPO and integrated players are partnering with automation tools providers like Automation Anywhere, Blue Prism and IPSoft. In the RPA ecosystem, partners are becoming competitors and vice versa as the market continue to evolve.

Service providers might have to cannibalize their Revenue to gain share in RPA domain both at existing and prospective clients. They might have to bundle freebies to retain the clients.

New non-linear version of Outcome based pricing

As service providers start moving up the RPA learning curve, and slowly shift to more complex high value engagements, they will have to move away from obsolete pricing models based on per FTE to non-linear outcome-based pricing. RPA engagements pricing models are still in initial phase. Service providers have different pricing strategies depending on type of buy-side organization ie either existing or prospective client.

Redefining hiring strategies

RPA will have an impact on low-level roles and functions in the short to medium term. Around 43% of service providers surveyed have witnessed FTE reductions of more than 20% as a result of RPA. However, as with many disruptive technologies that have gone before, the market will continue to evolve and new job opportunities will arise. RPA would enable Employee Transformation than Employee Replacement.

In the next few years, service providers will need to redefine their hiring strategies and re-skill appropriately, as the market looks to employ qualified professionals in key areas such as mobility, cloud, big data and advanced visualisation. Most of the resources doing routine jobs would require intense training and more time to them viable to be utilised for these upcoming technologies.

Organisations that implement RPA-based solutions can also expect to see impacts on their workforce and hiring strategies. They would also need to focus on hiring IT skilled resources along with functional experience. Key process operator roles will disappear, freeing up resources to concentrate on higher value adding functions.

Significant cost and operational benefits for client organisations

Large global organisations are already seeing a significant return on their RPA investments and short payback periods. Buyers are increasingly aware of what RPA can do, and they are actively seeking out service providers with RPA capabilities to bring transformational improvements to their back-office operations. In most cases, RPA adoption is being led by a combination of the CEO, COO and CIO, with strong support from the delivery units.

In terms of back-office processes and functions, our service providers ranked Finance & Accounting (F&A), Order Management and Customer Services Management as the areas of the most interest to client organisations considering RPA. In the next three to five years, decision makers can expect to see cost savings of over 30% across key RPA-centric functions (F&A, Human Resources and Supply Chain). Based on service provider responses to our survey, client organisations in Telecom, Banking, Insurance and Healthcare have shown the most interest in adopting RPA.

Organisations considering RPA should first assess business viability to ensure the investment will be justified. After this, we recommend conducting proper due diligence to assess which service providers should deliver RPA as a capability. It will be important to make an informed decision about which partner to work with and what contractual arrangements will be most suitable in the long run. And to guarantee a successful RPA-led implementation, it will be vital for organisations to re-engineer their existing processes and standard operating procedures.

What the future holds

With license fee revenues of RPA tools vendors estimated to grow at 400% CAGR over the last two years, RPA is projected to be a multi-billion dollar industry by 2020. This presents a massive opportunity for service providers and strategic partners, who, in order to survive, need to take the lead by incorporating RPA into their value proposition and sales solutioning.

RPA tools are also evolving and next generation would have inbuilt Artificial Intelligence and Cognitive learning features or interfacing with leading tools available in Artificial Intelligence and machine learning technologies.

INTRODUCTION

02

Introduction

Across the industrial and manufacturing sectors, robots have dramatically changed the way organisations operate. What were previously highly manual tasks have slowly been replaced by automated robots.

These robots in turn are becoming more and more sophisticated, taking on more complex, higher value tasks. This has had a dramatic impact on overall operational performance in organisations. It is boosting production levels, significantly reducing costs and, at the same time, increasing quality levels.

Now, in this next phase of automation, software robots are enabling the automation of back-office jobs. In the manufacturing world, robots replaced humans doing repetitive tasks. In today's services industry, technology has advanced to the point where software robots are doing it again, especially in the BPO sector. A few years ago, there was hardly any activity in the automation of business processes, functions and rule-based process-oriented tasks using robotic automation software. This is no longer the case, and it's changing rapidly.

Other drivers will accelerate the adoption of this emerging technology by IT and BPO organisations, namely, a rise in wage rates in off-shoring hubs like India, and increasing real estate and transport costs. Coupled with increasing competitive pressures among service providers, this is significantly squeezing margins.

It is becoming critical for providers to re-think their operational models, cost structures and project execution strategies. In particular, providers will need to develop revenue growth strategies that are not tied to the number of FTEs they engage for any given client. The advent of robotic automation capabilities now makes this possible.

What initially started off as an experiment will now not only become mainstream, it will disrupt the market for large IT/BPO providers in years to come. And it will deliver substantial benefits for client organisations which will be difficult, even risky, to ignore.

Until as recently as a year ago, there was a lot of scepticism around RPA, with some believing it was just another version of an automation strategy being touted by IT/BPO service providers and RPA software vendors. With a lack of real-life examples and business cases to discuss, client organisations were cautious about RPA and its perceived benefits.

This is no longer the case. RPA has already proven its value and we expect it to be adopted and deployed well into the future. The RPA market is maturing steadily and has witnessed significant levels of adoption rates, with large global organisations already seeing significant return on investments and short payback periods.

Much of the hype around robotics is the fear it could lead to large-scale elimination of jobs across multiple levels and a mass of redundancies. The term "jobocalypse" has even been coined, creating a fear among employees and professionals in the service provider industry.

In reality, yes, RPA will have an impact on low-level roles and functions in the short to medium term. However, as with many disruptive technologies that have gone before, the market will continue to evolve and new job opportunities will arise. In coming years, there will be a need for redefining hiring strategies and re-skilling professionals in key areas such as mobility, cloud, big data and advanced visualisation.

For client organisations, we would recommend conducting proper due diligence to assess the service providers offering to deliver RPA as a capability. We expect most service providers will incorporate RPA into their marketing and value proposition either by themselves or forced by competition. Service providers are presently defining their RPA strategies - working out how to showcase their strengths and overcome some limitations. And it is important to be aware that not all processes may benefit from RPA.

WHAT IS ROBOTICS AND PROCESS AUTOMATION?

03

What is Robotics and Process Automation (RPA)?

RPA is a software robot or application/tool that can be configured to perform tasks normally performed by a human, using rule-based processes.

The “tool” can be configured to capture and interpret actions of existing applications used in various business processes, just as a human operator would do. These tools can mimic human actions without associated errors. The most important attribute of these tools is audit and logging. Any action or step taken by them can be logged and audited. Human resource can watch and perform a surveillance of each steps and actions of these tools. This feature also differentiates RPA from Straight Through Processing (STP) tools where there is no visibility to human eyes of the steps/action taken by a automated process.

Currently, human actions and steps are monitored by automated surveillance mechanisms. Converse will happen in a RPA process.

At its highest and simplest level, RPA software essentially comprises a range of tools used to interface with existing applications at the presentation layer. These are then combined with a rules engine which is customised to the respective process being automated.

Once the RPA tool has been trained or configured with well-defined business rules, it can then perform the functions being automated exactly as a human operator would. These may include processing bulk transactions, manipulating data, triggering real-time alerts or responses and creating audit trails, as well as communicating seamlessly with other enterprise systems.

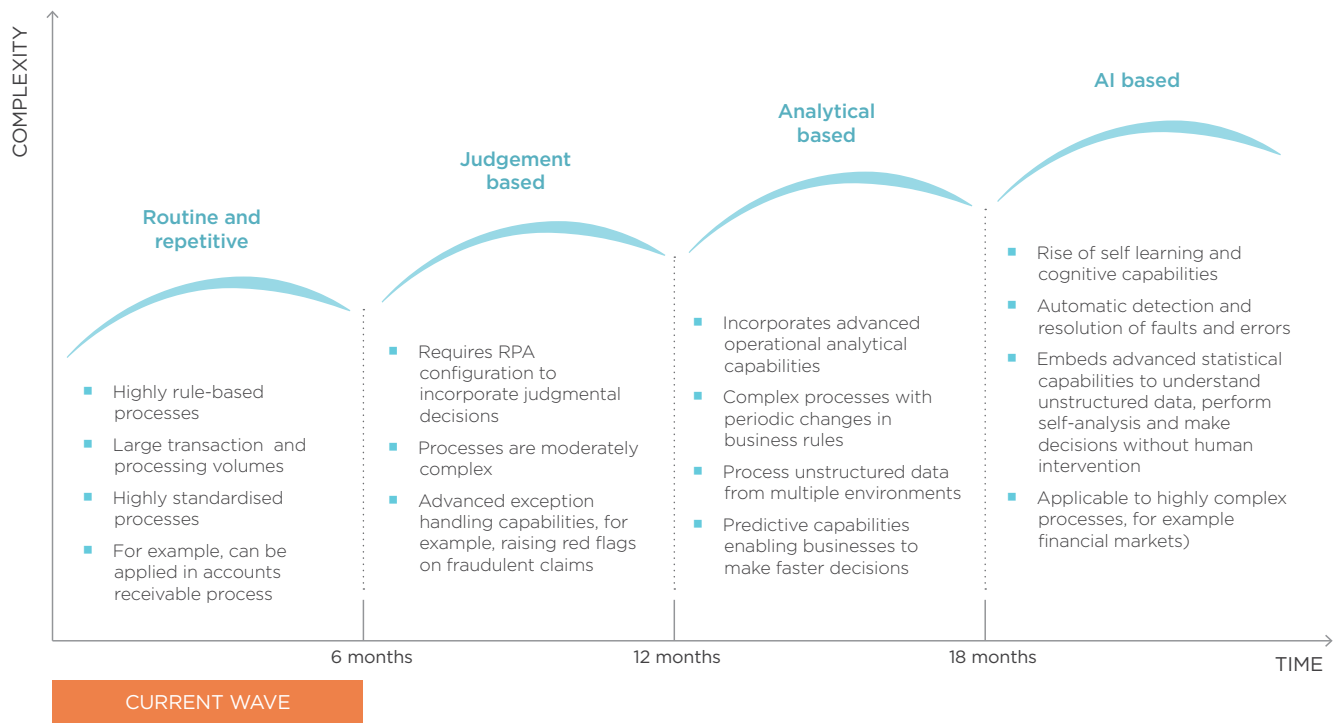
RPA systems are non-intrusive applications which do not require technical integration with other systems. They work at the graphical user interface level and do not need much, if any, IT support. And by replacing significant human error, they deliver substantially enhanced productivity.

RPA technology is best suited for highly repetitive, rule-based activities and processes which are typically associated with high volume, transaction oriented back office processes. RPA platforms have the capability to automate a broad range of processes in key functions including finance and accounting processes, HR, procurement, logistics, customer experience management and supply chain.

RPA platforms can be categorised into four phases or “waves”:

- › **Wave I (Routine and repetitive):** Current levels of RPA automation focus on highly repetitive and rule-based processes which require little or no human intervention. Robot applications operate enterprise software and applications through existing user interfaces based on pre-defined business rules. Some of the optimal tasks or procedures where RPA can be effectively applied include:
 - + Searching, collating or updating information in multiple databases/systems
 - + Accessing and updating one or many systems to complete a procedure
- › **Wave II (Judgement-based):** In addition to the capabilities mentioned above, RPA solutions will have functional enhancements that would enable judgment based decision-making capabilities. The level of RPA technology is evolving at a fast pace, and we are already witnessing platform enhancements embedded RPA capabilities with existing products available in the marketplace

Figure 1 - Evolution of RPA



Source: Mindfields

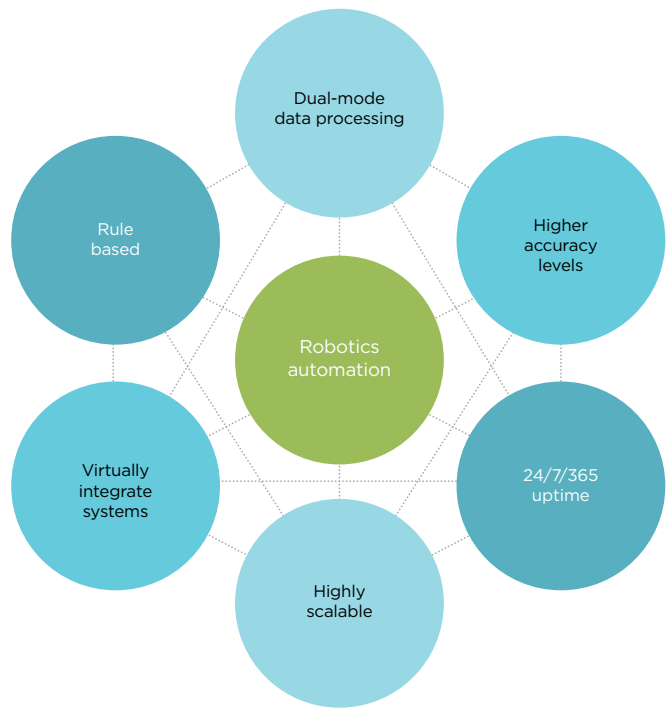
› **Wave III (Analytical Based):** Existing RPA solutions have some element of operational and process analytics features that provide real-time insights on robot operational performance and other vital statistics. However, the next step of evolution will establish predictive capabilities that enable RPA platforms to use existing data sets to determine patterns and predict future operational outcomes and trends

› **Wave IV (AI Based):** The most advanced and complex RPA products is expected to embed Artificial Intelligence (AI) based capabilities that will truly make RPA autonomous i.e. systems having 'self managing' capabilities that enable self configuring features. This will allow RPA tools to automatically detect and correct errors on a real-time basis with no human intervention. These systems are going to be highly complex and expensive, with adoption levels primarily oriented towards highly integrated and complex processes in financial markets, risk and fraud management of large corporations as well as government agencies and defence establishments

3.1 Functional and operational attributes

RPA technology solutions and platforms enable client organisations and service providers to automate rule-based, repetitive processes, tasks or activities more efficiently and cost effectively. RPA solutions mimic human actions. They can operate 24/7 at a fraction of the cost of a human FTE deployed in a similar back-office operation. Because robotic automation tools are technology agnostic, they do not actually replace any existing client systems. Instead, RPA works with existing enterprise systems and applications to perform highly specific tasks that the “virtual FTE” or “robot” has been programmed to perform.

Figure 2 – Functional attributes of a typical RPA platform



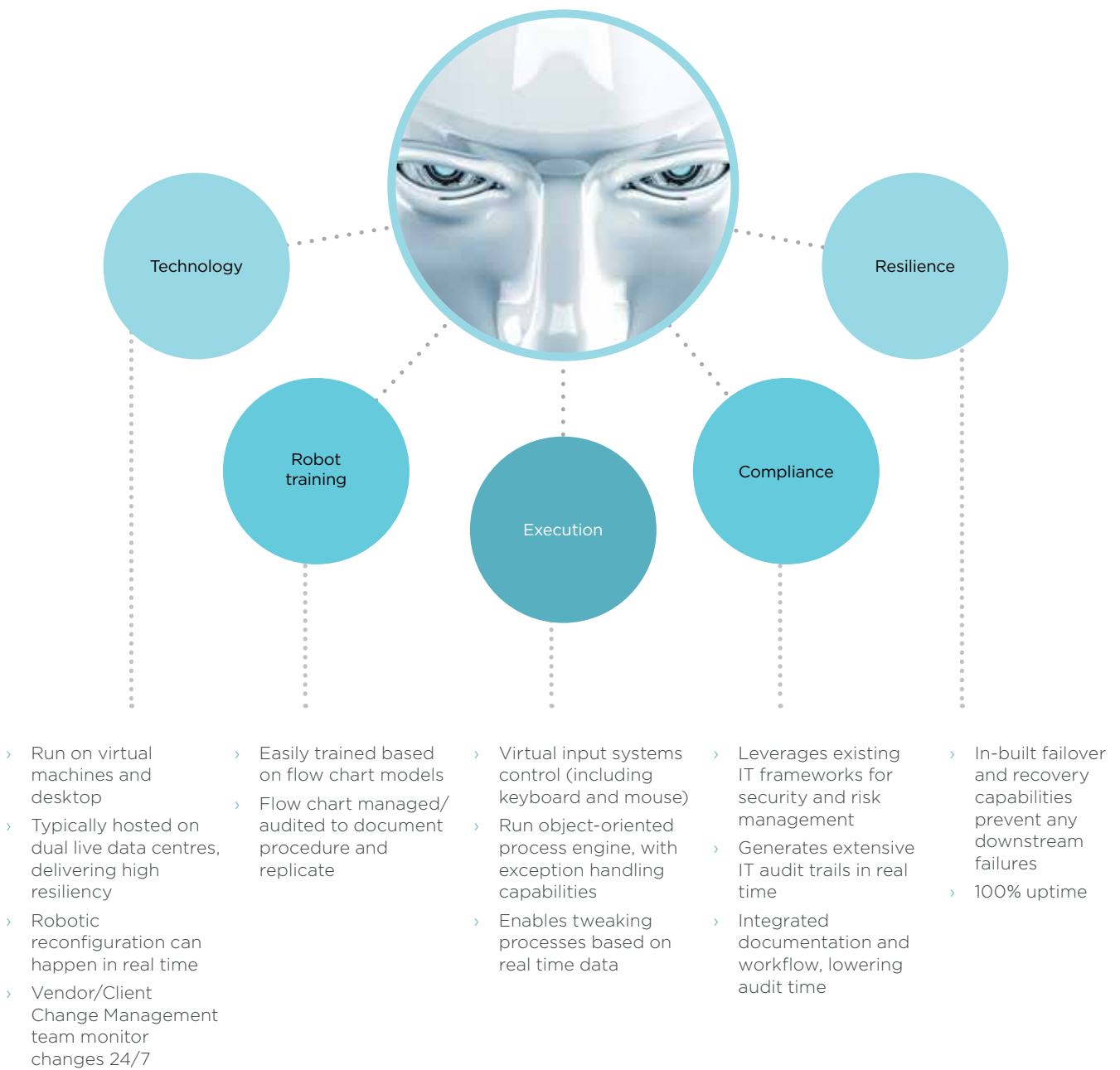
Source: Mindfields

Virtual Integration	Operating in a virtualised environment, RPA seamlessly connects between standalone, legacy, ERP or cloud based workflow systems, at the user interface level Additionally, RPA solutions replace manual re-entry effort across multiple systems e.g. workflow, ERP system, sometimes termed as ‘swivel-chair’ integration and typically involves application of customised business rules as per process requirements
Rule-based	Manage highly standardised tasks / processes where rules are structured into pre-defined steps that can be easily scaled up or down as per changing business requirements
Real-time Auditability	Encompasses audit trail capabilities on a real-time basis. Helps enable business owners manage audit and compliance reviews more efficiently with minimal disruptions to business operations
Technology Agnostic	RPA tools are not dependent on technology and can be used in any data-driven, rule-based processes
Accuracy	RPA achieves near 100% accuracy levels as manual efforts are automated through clearly defined business rules
Highly Customisable	RPA solutions are not ‘Off-the-Shelf’ products for specific industries or functional areas, but can be customised as per business requirements rapidly and affordably

RPA systems are not only functionally rich, they are also operationally powerful:

Deploy anywhere	Whether you have back-office operations onshore, offshore or near-shore, RPA can be deployed anywhere and still provide the benefits of lower costs and increased efficiencies.
Simple and easy to design	A typical robot application or program is trained or programmed through a flowchart based procedure. This is audited and documented on a real-time basis during robot operations.
Operates 24/7, year round	Robot applications are programmed to operate non-stop, 24/7, all year round, without breaks, typically including enhanced security and compliance features.
Highly scalable	RPA solutions are highly scalable applications. Solutions can be ramped up or down within a short time, enabling the flexibility to meet variable demand loads.
Easy to train. Easy to set up	RPA systems are trained in the live environment. There is no need for the test environment setup associated with traditional IT development. During the Go Live phase, robots are actively monitored to ensure that rule-based procedures are being adhered to according to requirements. Any deviation is assessed, evaluated and modified on a real-time basis.
In-built safety mechanism	Advanced robot systems have in-built safety mechanisms. Whenever an unknown change or downstream failure takes place, the system will perform the smart response action it has been trained to perform.
High security	Most RPA tools have strong authentication mechanisms so business rules cannot be easily altered or manipulated.
Extensive performance data	All processes in "live mode" generate valuable statistical profiles as a by-product, on a real-time basis. This makes it possible for process consultants and subject matter experts to fine-tune existing processes and activities, and build in further operational efficiencies.
Strong business engagement	Robotic automation platforms are typically managed, operated, licensed and controlled by IT departments. This is done in conjunction with business owners, business process consultants, IT audit, governance, risk and compliance teams, and other key business stakeholders.
Easily re-usable	Robotic processes are typically built and made available for re-use across business functions and processes, enabling unrelated groups to share and build common resources.
A fraction of the cost	RPA set-ups typically operate at a fraction of the costs of human FTEs deployed on similar back-office operations.
Labour laws do not apply	Labour laws do not apply to RPA, so clients can avoid any potential labour-related constraints in various jurisdictions.

Figure 3 – Operational attributes – RPA platform



Source: Mindfields

3.2 How does it differ from traditional automation?

RPA has several features which set it apart from traditional automation initiatives implemented by organisations in recent years. RPA technology typically embeds, or integrates with any IT application (including legacy IT systems) at a granular level without replacing the underlying IT applications. For service providers, RPA solutions can be highly effective in managing transaction intensive back-office operations, where RPA applications

or “virtual FTEs” are programmed to replicate human actions. This includes using multiple data sets and feeding them into IT applications on a real-time basis, exactly as a human operator would do. RPA applications are configured based on each the unique requirements of each process and embedded with customised business rules.

So, with little or even no room for error, RPA-based process activities are close to 100% accurate and comply with all regulations, wherever applicable.

Table 1 – Key factors that makes RPA different from traditional automation

Robotic Process Automation (RPA)	Traditional Process Automation
› Technology agnostic – Requires no change in existing IT infrastructure. Replicates human behaviour and works across disparate IT systems seamlessly	› Dependent on technology infrastructure – requires customisation and integration with existing enterprise infrastructure
› No complex integration as RPA platforms leverage existing enterprise application systems	› Involves significant integration with enterprise IT systems (e.g. CRM and ERP) often comes at a high cost and impacts speed of implementation
› Fast deployments (around 3-15 weeks) as no complex integration required	› Typically long deployment times as business process improvements, data integrity checks and other steps are required before integrating automation tools with enterprise systems
› Component functions can be re-used to develop other robots customised for managing process loads with no impact on productivity or efficiency	› Inter-operability of resources and components is minimal and happens on a case-by-case basis
› Lowers cost of implementation – quick to deploy, no integrations, no human intervention, and a focus on continued improvement	› Considerable investments in ensuring smooth go-live owing to complex integrations, change management, process re-engineering efforts and other factors.
› Business process and flow charting skills required to design robots and easy to modify in real-time – relatively low cost	› Requires highly skilled process experts to identify business process improvements on an ongoing basis
› Highly scalable: operates in a virtualised environment and can be scaled up or down based on service demand on a real-time basis	› Not highly scalable as compared to robotics software: requires some level of intervention in re-aligning demand requests based on business requirements
› Can be deployed anywhere – onshore, off-shore or near-shore	› Deployment location typically needs to be considered on a case by case basis – preferably managed and operated from offshore delivery centres to keep costs down
› Steps and Actions taken by RPA tool is visible to human eye	› Steps and Actions taken inside automation tool is not visible to human eye
› Audit trails and logging of actions performed can take place in real-time. They are consistently maintained and easily accessible	› Audit trails are often not maintained
› Example: Automating invoice processes and claims administration in an insurance company	› Example: Large-scale Business Process Management (BPM) implementations

Traditional or platform based Business Process Management Systems (BPMS) are aimed at improving IT architecture by allowing a high degree of flexibility in automation and process management capabilities and form part of the core IT enterprise environment.

Robotic automation, on the other hand, does not compete against these platforms, but in fact, extends and complements BPMS and SOA initiatives as it sits on top of existing IT systems and applications. RPA is particularly effective on small to mid-sized automation initiatives, requiring quick turnarounds and high levels of agility, where bringing in rapid productivity and cost efficiencies are among the primary factors for driving automation initiatives internally, or for client organisations. RPA is also highly applicable for larger scale automation initiatives where the set-up time may be longer, however the benefits may also be substantially greater.

As indicated above, currently robotic platforms focus only on rule-based processes/activities. In such cases the current functional capabilities of RPA may not be able to offer a suitable solution to businesses. However, this area is evolving and the possibility of developing smart robotic automation solutions is not far away. Leading RPA software vendors are expected to build and enhance capabilities in the coming years combining further advances in RPA capabilities with self-learning and artificial intelligence.

3.3 Where and how can RPA add value? Sectors, processes and benefits

RPA solutions are typically deployed in organisations which engage human resources on a large scale for high-volume, transactional and repetitive process oriented tasks and activities.

The key processes best suited for RPA tend to:

- › be highly rules-driven (e.g. F&A, HR, and order processing)
- › be data-entry, comparison and validation intensive
- › use several desktop systems involving multiple application tools (Web applications, Excel and enterprise systems)
- › be problematic to send offshore or require quick turnaround
- › have high transaction and processing volumes
- › be highly prone to error

Almost all the functional areas being automated have gone through extensive workflow, process and compliance standardisation over the past few years by adopting industry best practices and transferring knowledge. Implementing RPA solutions has resulted in more efficient re-alignment of human resources. It has also resulted in a vastly improved customer experience for both internal and external customers.

Figure 4 - Functional areas where RPA can deliver benefits today

	Human Resources	Finance & Accounting	Customer Services
KEY PROCESSES	Payroll Administration	Invoice Processing	Query Management
	Benefits Enrolment	Accounts Receivable (OTC)	Billing Support
	Employee Data Management	Order Management	Complaint Management
	Claims Management	Procurement/Sourcing	Order Processing
	Application Tracking	Accounts Payable (PTC)	Subscription Management
	On Boarding/Off Boarding	Records to Report (RTR)	Helpdesk Management
	Routine Query Management	Billing Management	Sales support
REPETITIVE, RULE-BASED, LOW SKILL TASKS			

Source: Mindfields

Key focus verticals where RPA is playing a significant role in bringing in process efficiencies include:

- > Highly regulated verticals such as healthcare, banking, financial services and insurance
- > Telecommunications
- > Utilities
- > Mining
- > Travel
- > Retail

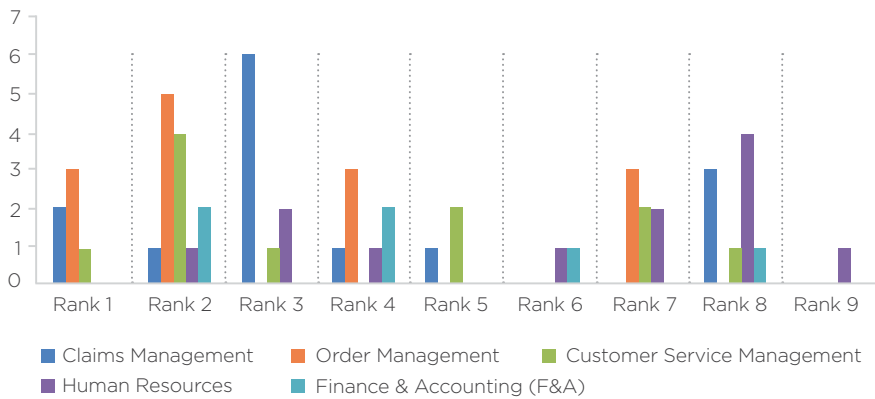
All of these verticals have significant levels of rule-based, high volume, back-office transaction processes. These involve a large number of human operators (primarily operating from offshore delivery centres) and servicing client organisations spread across various locations worldwide.

RPA is already delivering significant cost and operational benefits for typical back office processes and functions including finance & accounting (F&A), order management and customer services management. Our service providers surveyed ranked these three areas as being of the most interest to client organisations considering RPA.

Figure 5 is based on the Ranking of the functional areas in which application of RPA is the most suitable by service providers participated in our survey. They can be classified as “low hanging fruits” which can be benefited in the first phase of RPA initiative. Mostly these functional areas are experimented for “Proof of Concept” pilots to test RPA appetite of an organisation.

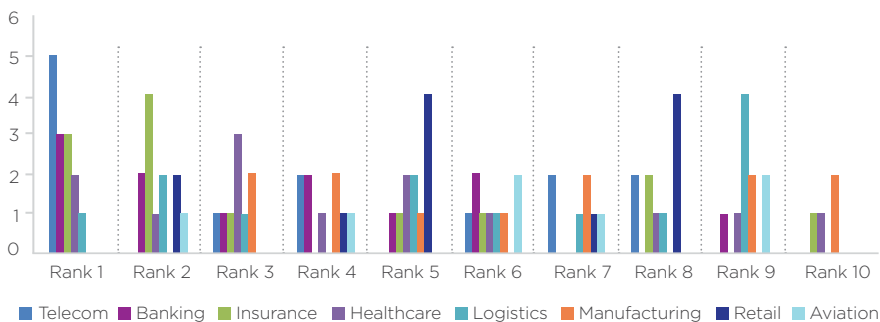
Figure 6 is based on the Ranking by the service providers of the verticals which are early adopters of RPA based on the number of live RPA engagements and Proof of concepts pilots undertaken by them. (based on responses provided by service providers to our survey).

Figure 5 - Ranking of key functional areas by service providers for the RPA



Source: Mindfields - RPA Survey

Figure 6 - Ranking of key verticals with the most potential for RPA



Source: Mindfields- RPA survey



Table 2 – RPA benefits delivered today

Key verticals	Sector-specific benefits of RPA	Cross-sector benefits of RPA
Banks	<ul style="list-style-type: none"> › Automating credit card fraud management including account closures and chargeback processes › Ability to meet seasonal peaks, enhanced customer query resolution timeframes, accuracy and compliancy levels and reduced FTE requirements 	<ul style="list-style-type: none"> › Enhance transaction processing efficiencies (~30-40%) › ~30-40% overall increase in productivity improvements › Near 100% accuracy levels › Cut down existing backlogs to close to zero levels › Significantly lower manual efforts (~40-50%) › High levels of scalability › FTE rationalisation (>20%) › Faster implementation TAT (~4-12 weeks)
Insurance	<ul style="list-style-type: none"> › Consolidating multiple legacy systems, policy books having different data conventions and operating formats onto a single system › Significantly lowering IT support costs › Enhancing supplier collaboration in bulk payments and recoveries typically involved in motor insurance claims 	
Healthcare	<ul style="list-style-type: none"> › Embedding RPA in labour-intensive, error prone processes (e.g. claims administration, enrolment and eligibility, billing and payments, and patient scheduling) › Bringing benefits such as billing and payment efficiencies, accelerated workflows, enhanced data quality and compliance, and optimised claims management processes 	
Consumer Packaged Goods (CPG)	<ul style="list-style-type: none"> › Automating manual processes in data extraction and validation processes (e.g. order management and reporting) › Automating data transformation of multiple input files received from multiple systems (e.g. ERP) 	
Capital Markets	<ul style="list-style-type: none"> › Automating the redemption of funds from stocks and shares › Enhancing customer satisfaction levels 	

Source: Mindfields Analysis

Please also refer to Section 12 for detail Use and Case Studies for the processes for which RPA can be implemented.

3.3.1 Areas where RPA can offer benefit going forward – across industry sectors and specific functional areas

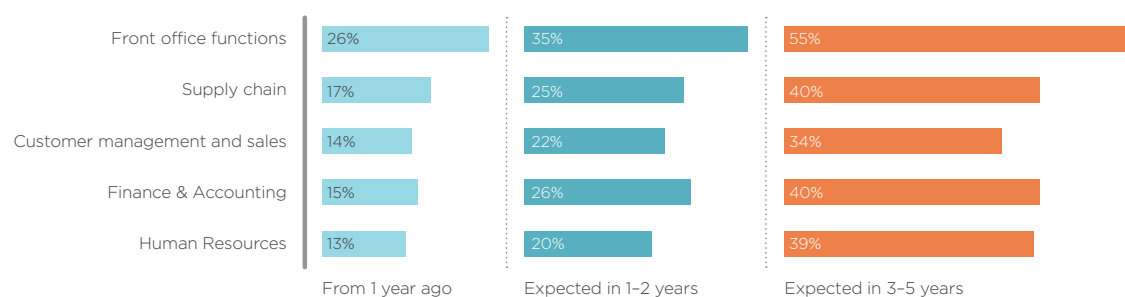
With permission and approval from Cognizant, we have taken data from its survey of key buy-side decision makers. This comprised 437 participants, representing companies with \$500 million to \$3 billion in annual revenues.

We have provided the following graphs as estimates of:

- › cost savings RPA could achieve across a number of industry sectors and specific functional areas
- › how cost savings are expected to increase in the next 3-5 years as RPA capabilities mature and become more sophisticated.

Figure 7 - Estimated cost savings that can be achieved through RPA – Key processes and verticals

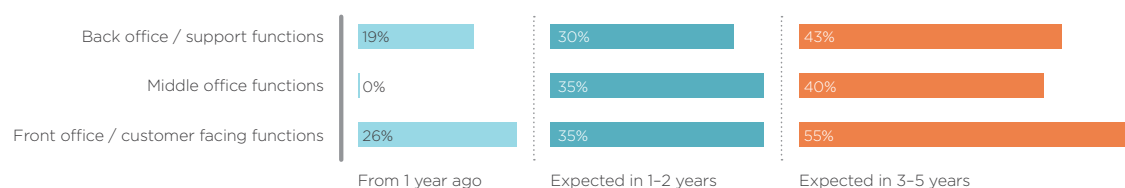
Key Horizontal Processes



Source: Cognizant , Mindfields analysis

Across key horizontal functions, we expect decision makers to see minimum cost savings of 13% as compared to a year ago (since RPA implementation). Over a three to five year period, we expect these cost savings to grow to over 30% across key RPA centric functions (F&A, human resources and supply chain). In some areas, we expect improvements of over 50%.

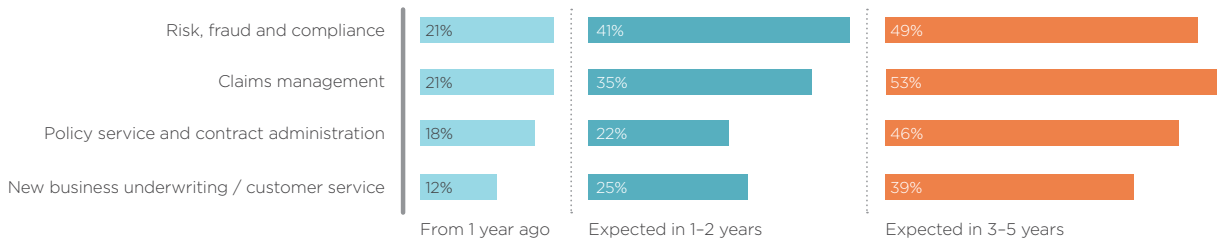
Banking Sector



Source: Cognizant, Mindfields analysis

In the banking sector, middle office functions (e.g. claims coding and transaction processing) are expected to realise the highest cost savings through RPA in the medium (1-2 years) to long-term (3-5 years). Other back-office functions will continue realise over 19% cost savings from a year ago (since RPA deployment).

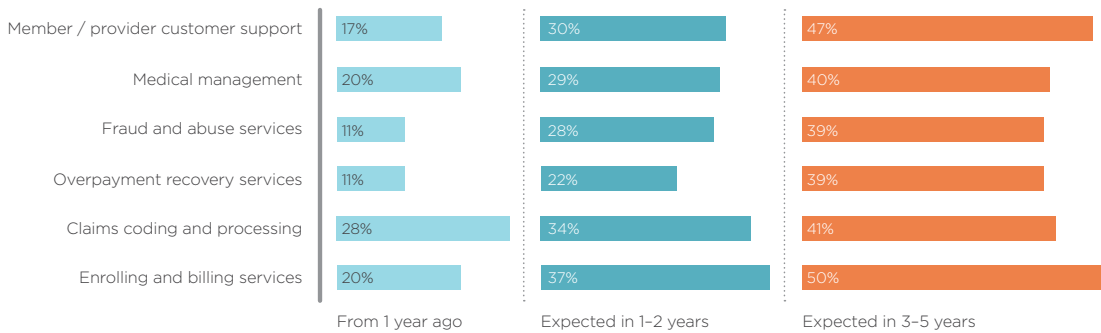
Insurance Sector



Source: Cognizant, Mindfields analysis

The insurance sector, which continues to remain highly regulated as is the banking sector, will realise the most cost savings (over 20%) in the risk, fraud and compliance and claims management processes through RPA, rising to over 40% in the next two to five years.

Healthcare Sector



Source: Cognizant, Mindfields analysis

In healthcare, claims processing consumes a significant amount of time, effort and manpower across markets worldwide. With a centralised, enterprise-wide rule-based process oriented system already established, RPA can:

- › help significantly drive down operational costs
- › improve accuracy and turnaround time
- › enhance end customer experience
- › significantly lower the possibility of claim frauds and litigations.

CURRENT STATE OF RPA IN THE MARKET

04

What is the current state of RPA in the market and what is holding it back?

There has been a steady increase in RPA-enabled integrated IT/BPO engagements in the last year, some at proof of concept stage. Automation capability is now being adopted across all regions, and expanding from manufacturing into the services sectors. However, automation deployment has been limited by high set-up costs and lower labour costs, especially in off-shore locations.

The market is still nascent, but client organisations are expecting their service providers to embed their RPA capabilities, a move which will reduce costs by around 30-50% and improve the accuracy of rule-based processes and tasks. IT/BPO service providers are trying to fully gauge the impact of embedding RPA solutions into their service offering. We expect 2018 to be the year when RPA becomes a buzzword and even a game-changer for service providers.

The potential for significant process efficiencies, cost improvements and flexibility in managing projects will be tremendous but the scale and complexity of implementations is currently limited.

4.1 Current limitations in RPA technology

A number of enhancements will help drive adoption, but RPA technology still needs to undergo further R&D to help overcome some current limitations.

Capturing inputs from diverse formats: Deploying robots to read through different formats remains a challenge. Robot applications cannot, for example, read or capture data from scanned images including handwritten content without using OCR technology. Advances in self-learning and artificial intelligence, combined with integrating current RPA capabilities with more sophisticated input devices such as OCR technologies, will open up a significantly broader set of processes. We expect this will make the RPA business case look more attractive and open up to areas which use scanned images, including insurances claims and invoices.

Processing unstructured email content: Free format email communications between supervisors and process managers with agents have a high degree of unstructured data. This makes it difficult for robotic applications to capture or comprehend information without human intervention. Advances in AI, self-learning and analytics capabilities will make it easier to integrate RPA into such systems and automate processes reliant on such unstructured data.

Frequent changes in business rules and operating procedures:

Currently, the effectiveness of RPA technology diminishes when the frequency of changes in business rules varies on an ongoing basis. RPA platforms perform at optimal levels when standard operating procedures are well defined and undergo minimal changes. In processes where the rules keep changing, the level of re-work on re-programming robots to incorporate the changes goes up. This means additional investment in coding, testing the changes and re-deploying the robots in live environments. This can impact productivity and efficiency, and require frequent human intervention to manage exceptions and re-program the robots.

Most of these issues will be addressed over time as automation software vendors continue to innovate, improvise and incorporate new functionalities and features into subsequent generations of their RPA platforms.

4.2 Factors impeding rapid adoption of RPA

Service Providers, some in conjunction with RPA software providers, are working jointly to address the current limitations of existing RPA technology, but there are other factors impeding more rapid adoption:

1. Industry standards are still being developed. RPA has only recently emerged as a recognised offering and well-defined industry standards are yet to be formalised.
2. RPA initiatives are being adopted in pockets, typically among early adopter organisations that can see the benefits in their environments even while industry standards are still being developed.
3. Many enterprise buyers are cautiously waiting on the sidelines, keen to develop a deeper understanding of this rapidly emerging area, how it applies to their business environment, and how the business case stacks up before they take the plunge.
4. The current wave of RPA is only applicable to a narrow scope of services, namely, simple rule-based processes, typically with a high level of human involvement. Much of this can be replaced by RPA and offer a relatively quick payback.
5. Existing multi-year BPO contracts which are primarily structured on a labour arbitrage model may act as blockers for RPA implementation until contracts near expiry or are due for renewal.
6. Some service providers are reluctant to push RPA too hard at this stage for fear of cannibalising existing revenue streams.

THE RPA ECOSYSTEM

05

The RPA Ecosystem

The drivers for adopting RPA are compelling, so much so that the overall RPA market is projected to grow by as much as 60% annually over the next few years.

5.1 Major service providers

We expect adoption to be high and offer substantial upside in environments with relatively high labour rates, as well as areas where outsourcing and off-shoring have been limited due to local political or cultural barriers. Core RPA capability and toolsets have been largely developed by a small group of specialist software vendors.

Traditional IT and BPO players have now recognised the importance of RPA and are moving into this space quickly. Many are licensing tools from specialist software providers, and some are developing their own tools. Some service providers are becoming resellers of third-party specialty automation tools, which is impacting their margins and

their value proposition to their clients. This will change soon. As RPA continues to evolve, partners are becoming competitors and vice-versa. As the market matures, we expect to see some mergers and acquisitions amongst the specialist software providers.

The global RPA market has continued to witness high levels of growth over the last two years. According to a recent report published by Transparency Market Research, it has been estimated that the global IT robotic automation market will reach US\$4.98 billion by 2020, from US\$183.1 million in 2013.

Figure 8 - Global RPA market forecast (2013 -2020)



CURRENT MARKET SIZE

- Global IT robotic automation market valued at US\$183.1 Mn (2013)
- North America and Europe biggest adopters. Australia is catching up very rapidly

PROJECTED OPPORTUNITY

- Expected to reach \$4.9 Bn by 2020 (CAGR: 60%)
- Increasing awareness and adoption levels to spread beyond core markets

KEY DRIVERS

- Operational efficiencies
- FTE reductions
- Enhanced compliance, quality, performance and uptime
- In-sourcing as a strategy

The RPA ecosystem has been described as follows:

RPA ecosystem components	Examples
<p>A. Independent specialist RPA tool/software vendors:</p> <ul style="list-style-type: none"> a. These providers are automation-centric software companies that focus on developing proprietary RPA tools/platforms. They also develop other automation solutions including Big Data analytics and cloud based solutions. b. Their Go-to-Market strategy focuses on partnering with client organisations and third-party IT/BPO service providers. c. They offer specialised RPA consulting, implementation, training and staffing solutions to clients. 	<p>Blue Prism IPSoft Automation Anywhere Automic Exilant UIPath OpenSpan Samyutam</p>
<p>B. Service providers with only own RPA tools and capabilities:</p> <ul style="list-style-type: none"> a. These IT/BPO providers have or continue to develop RPA capabilities in-house. b. They have the necessary management buy-in, highly skilled talent pool, process excellence capabilities and a broad portfolio of large client organisations. c. They are mature and confident enough to forge ahead and develop their own IP-based RPA platforms without needing to partner with third-party RPA software vendors 	<p>WNS</p>
<p>C. Service providers that partner with specialist software providers:</p> <ul style="list-style-type: none"> a. Primarily BPO providers who have partnered with third-party RPA software vendors (e.g. Blue Prism and IPSoft) to build and expand their RPA capabilities. b. These providers have strong domain and process excellence capabilities (especially in the BPM domain) across industry verticals, but are not quite so mature in the IT space. c. Their Go-to-Market strategy is focused on establishing RPA capabilities through partnerships with specialists, rather than spending considerable time, effort and money in developing their own RPA platforms. 	<p>IGATE Tech Mahindra</p>
<p>D. Service providers with their own RPA tools as well as partner with specialist RPA software vendors:</p> <ul style="list-style-type: none"> a. This is the largest category in the RPA ecosystem where IT/BPO providers have not only developed their own IP-led platforms/tools, but have also established strategic partnerships with third-party RPA software vendors. b. Service providers in this category are quite mature in their automation and service delivery capabilities. They are experienced in driving process and operational improvements across business processes. They continuously focus on and invest in developing proprietary solutions. 	<p>IBM Genpact EXL Infosys HP Cognizant Wipro</p>

Figure 9 – RPA Ecosystem



Source: Mindfields

Automation has existed in different forms for quite some time, especially in the IT industry. Major IT players are continuously investing in R&D initiatives to create advanced AI-based automation systems for large-scale engagements with clients across industry verticals and business processes.

However, they have primarily focused on IT support, application development and management, remote infrastructure management and testing. A large share of repetitive, rule-based activities has been automated. This has reduced human involvement and significantly reduced error rates. These automation tools have contributed to significant cost and productivity improvements, thereby enabling them to move up the value chain at a faster pace.

More recently we have seen increased activity among BPO service providers and third-party automation software vendors, each vying to gain market share and create incremental business value for their clients. This is a relatively new area and players in the ecosystem are beginning to recognise its value. As the market matures, we expect to see some mergers and acquisitions amongst the specialist software providers.

5.2 Types of client organisations

The client/buy-side organisations for RPA can be classified into the following categories depending on the ownership structure and maturity of their outsourcing journey. The target operating model will be different for each type. It will also depend on the complexity and sensitivities around processes.

Table 3: Type of buy side organisations

Type of Buy side organisations	Profile
Private sector shared services and Captives (onshore/offshore)	<ul style="list-style-type: none"> › Private or publicly listed client organisations having mid to large scale shared services/captive operations at offshore or onshore locations › Includes organisations with hybrid sourcing models, e.g. some processes are managed in-house and other processes outsourced to service providers
Organisations who have already outsourced	<ul style="list-style-type: none"> › Private or publicly listed client organisations who have already partnered with third-party service providers › Pricing engagements typically range from FTE-based to transaction based model
Organisations who have not outsourced	<ul style="list-style-type: none"> › Private or publicly listed client organisations who are yet to outsource service delivery of key functions (e.g. F&A, customer service and IT) to third-party service providers
Public Sector Shared services	<ul style="list-style-type: none"> › Government or public sector client organisations which operate and manage service delivery of key functions in-house or by other government-owned (fully or partially) entities › Have not outsourced any functions to service providers › Have extensive human workforce to provide support services across functions › Have limited budgets to develop internal human resource capabilities or invest in disruptive technologies
In-house front and back offices of service providers	<ul style="list-style-type: none"> › In-house front and back office function of service providers to manage support functions across the organisation (e.g. IT, customer service, HR and F&A) › All the service providers covered in our research survey have implemented RPA tools internally in various processes

THE IMPACT ON OUR LABOUR MARKETS

06

The impact on our labour markets

The expected cost savings of RPA are dramatic and will be hard to ignore, but RPA will have a significant impact on labour markets, leading to a change in hiring strategy and the mix of staffing required. In the short term RPA will enable job transformation – not job replacement.

In processes where RPA is introduced, a number of staff will become available to be deployed on non-routine roles. Service providers will, in most cases, want to retain their staff as best as possible and explore various options of doing so. These include:

1. Re-skilling existing FTEs on new roles and job responsibilities (people skilled in implementing, managing and maintaining robots) through learning and development programmes (in-house or through partnerships with specialised RPA consultancy firms).
2. Partnering with reputed global or regional engineering and technology institutions to embed advanced IT skills in existing curricula which their staff may then be considered for.
3. Staff reduction strategies will also be required where staff members are not able to be trained for other roles, to ensure the service providers maintain competitiveness.

Service providers will also need to review their strategies for new hires. There will be a shift from hiring low-skilled resources to more qualified professionals e professionals will benefit from having experience in disruptive technology domains including automation, process improvement, governance and compliance, cloud, mobility, analytics and social media.

Impact of RPA on onshore market – short to medium term

Short to medium term

- > Increased in-sourcing of functions and processing
- > High-volume, transaction roles to become redundant (low level, low skill)
- > Need for operational and lower to middle management roles to manage, report on and configure the robotic process

Long term

- > Changing business models – more functional areas are expected to come under the purview of RPA as maturity, scale and platform functionality enhancements continue to grow
- > Considerable replacement of humans by robot applications on both routine and non-routine, manual and cognitive tasks
- > More robots would be employed onshore as earlier sensitive and untouchable processes can now be made more cost effective
- > As the focus shifts to a small number of higher value-adding roles, HR will increasingly have to re-structure employment contracts, agreements and work/skill requirements including appraisals and rewards and recognition structures with staff in impacted areas
- > Re-deploying human resources (who are displaced by RPA platforms) on non-routine process roles in IT or other internal functional areas (e.g. experts in process automation, continuous improvements)

Impact of RPA on offshore market – short to medium term

Short to medium term

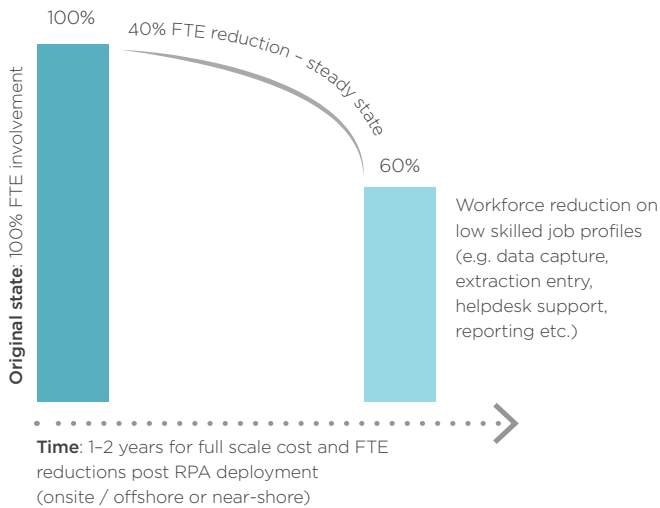
- › Elimination of high volume, repetitive, rule-based job roles impacting low-skilled workforce
- › Increased cross-training or up-skilling of FTEs on new job roles and responsibilities through internal training programs, especially in offshore delivery locations such as India, Philippines and select provider markets in Eastern Europe and Latin America.

Long term

- › Re-deploying human resources (who are displaced by RPA platforms) on non-routine process roles in IT or other internal functional areas (e.g. experts in process automation, continuous improvements) through in-house re-skilling and cross training initiatives (primarily for lower management roles)
- › Realigning middle management supervisory roles with other roles including managing client relationships, monitoring and managing the RPA environments or robot applications and associated support teams, e.g. to update, test and oversee the performance of the software robots, meeting changing business needs.

NOTES

Figure 10 – FTE impact post RPA implementation



Source: Mindfields

SERVICE PROVIDERS LANDSCAPE

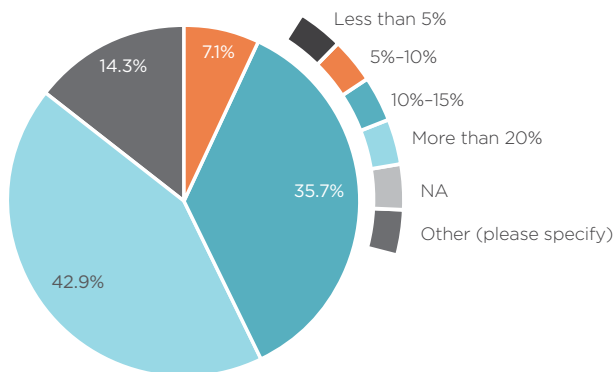
07

Service providers – drivers, hiring impacts, benefits and RPA maturity

Outsourcing service providers are interested in replicating the concept of RPA on multiple project engagements across verticals. The scale and frequency is gradually increasing which has clearly made the early adopters of RPA more confident in spreading their army of robot applications across other functions and processes.

This is directly driving their non-linear revenue growth opportunities. To substantiate this, around 43% of the service providers who participated in our study have witnessed FTE reductions of over 20% as a result of RPA.

Figure 11 – Average FTE (%) reduction as a result of RPA implementation



Source: Mindfields RPA survey

RPA is acting as a game changing initiative in building the next level of operational excellence capabilities internally, which directly becomes a sales strategy for additional business with existing and/or prospective clients. In some cases, the additional business may result in the cannibalisation of existing revenue streams but service providers are recognising that this is inevitable. Any reluctance to do so may risk losing existing clients to the competition. Conversely, this could also be a strategy to win back previously lost clients.

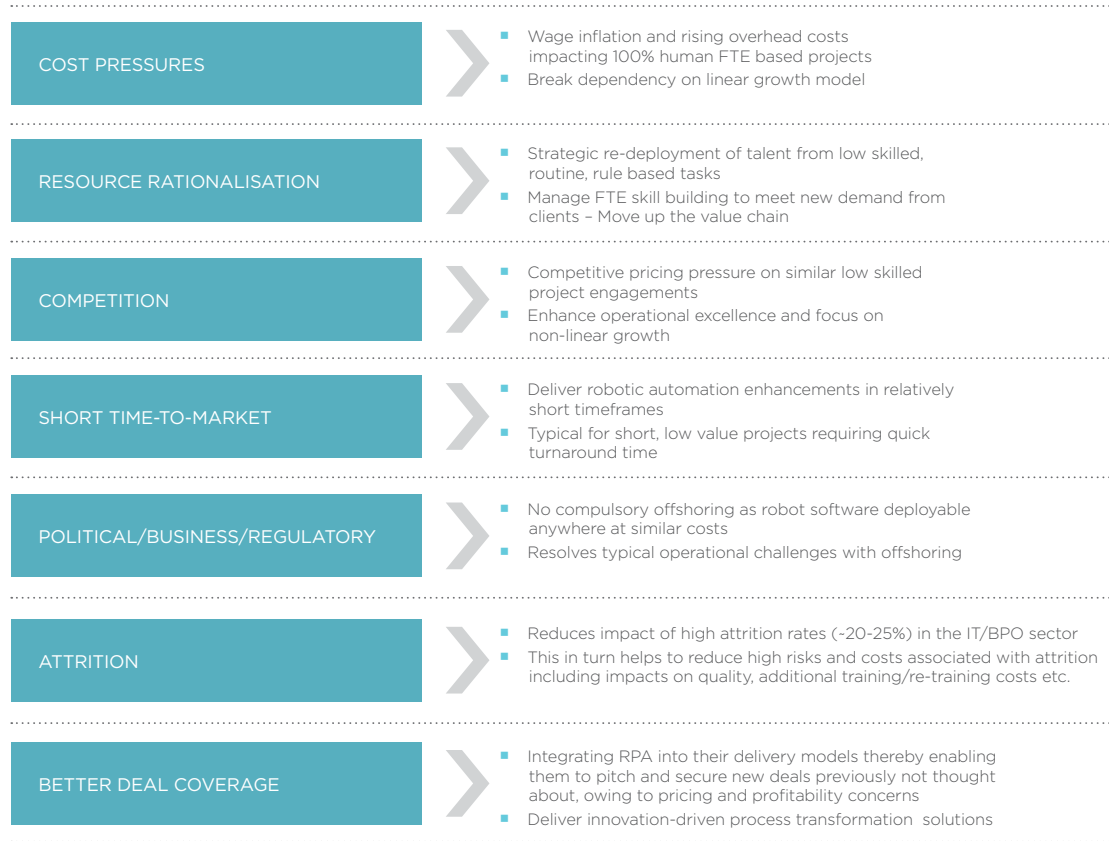
Let's take the case of a BPO service provider. With increasing competition against players adopting RPA, a typical service provider will need to lower its costs by ~40-50% to be able to deliver a measurable return in efficiencies to its clients and make a respectable margin .

Now, under such circumstances, backed up with increasing pressures of wage inflation and currency fluctuations, BPOs are banking on disruptive technologies that enable them to revamp their existing service delivery models to expand their non-linear growth plans. An RPA enabled solution may not incorporate an FTE-based assumption, but rather go immediately to a transaction-based model. This then opens up outcome-based pricing opportunities on other complex project engagements. This is where RPA has got the entire market excited, especially with the larger Tier I service providers which have global delivery capabilities worldwide.

7.1 Key drivers for increased adoption of RPA among service providers

Some of the key drivers resulting in increased levels of RPA adoption initiatives among service providers include:

Figure 12 – Key Drivers for service providers



Source: Mindfields

For service providers, the new age model will primarily comprise of a virtual workforce (irrespective of location) comprising of RPA tools supported by a small team of 'robot trainers' along with a skeletal team responsible for handling exceptions (flagged for human intervention) at any point of time. The highly scalability of RPA solutions enables the virtual team to be able to respond rapidly to spikes on service demand (without impacting on performance). Further, the RPA solutions can be re-programmed on a real-time basis to deal with new demands driven by business needs. The trainers are responsible for embedding rule-based algorithms to conduct repetitive tasks thereby providing the basic feed for robot FTEs to follow protocols accordingly without any errors.

Service providers who have started leveraging RPA in their services portfolio have the potential to significantly increase value for their clients, helping to offer a stronger value proposition for clients and set them apart from their competition. It also can potentially reignite the interests of the clients lost earlier to the competition.

7.2 Hiring impacts expected among service providers

Service providers have been undergoing significant margin pressures over the past few years. Tier I IT/BPO companies have already started investing in disruptive technologies, especially in the areas of advanced automation, analytics and advanced machine learning / artificial intelligence solutions. In turn, this is driving non-linear revenue growth opportunities. As these new technologies take over certain roles previously done by humans, it becomes imperative for service providers to devise well-planned HR transition strategies for affected job roles.

Some of the key impact areas that service providers are expected to observe as a result of RPA led implementations include:

- › Revamping existing hiring strategies – there will be a shift from traditional commoditised hiring roles to on-boarding higher skilled professionals with skills in new technology domains, for example analytics, digital technologies, mobility and social media.
- › An increased cost of hiring to meet growing requirements for more specialised skill-sets. This will in turn mean higher compensation benefits as compared to current roles being displaced.
- › A decrease in client- led training requirements on low skilled roles as project engagements continue to shift towards an outcome driven approach. Clients will also demand from service providers to provide skilled and experienced FTEs on high value complex projects, rather than train low-skilled entry level professionals at lower FTE pricing levels.
- › The need for service providers to proactively develop their employee skills and expertise base through established training academies or partnering with reputed institutions to cross train or up-skill affected job roles (displaced by RPA systems), especially at lower management level.

As per recent NASSCOM data, rate of net addition of employees of top major outsourcing organisations in India is slowing down over last 4 quarters.

7.3 Benefits from RPA – Service providers

Some of the key benefits that service providers are expected to gain from RPA include:

- › Scalability: RPA solutions can be rapidly scaled up to meet significant demand over and above the normal levels. For example, there might be a rise in customer orders as a result of festive season flash sales by a retailer. In such situations, robotic FTEs can be rapidly scaled up and down on demand operating under any jurisdiction (onshore/offshore/near-shore).
- › Significant cost reductions: Robot FTEs work full time without any breaks and at much lower costs as compared to offshore resources deployed in low cost markets. Furthermore, the training turnaround time and making them ready for live environment is significantly less as compared to human FTEs
- › Self-build capabilities: There are no requirements for any specialist IT expert. The service providers' robotics automation competency unit typically provides the necessary code building tools and requirements. In addition, all components are re-usable based on business requirements, further easing the ability to build RPA capabilities

- › New business negotiations/sell strategy: For service providers, RPA becomes an attractive selling proposition as they are able to fundamentally shift from the traditional labour arbitrage model to incorporate RPA as the next marketing strategy in bringing in cost and productivity improvements.
- › Leverage existing talent: Helps free up existing resources from mundane repetitive tasks to do more customer facing, relationship building and other high value adding activities including process improvement.
- › Governance and reporting: RPA platforms are highly secure and can maintain extensive audit trails for compliance and governance teams to monitor and track each activity on a real-time basis, thereby adhering to strict governance controls. Around 70% of the service providers interviewed as part of the study have established well defined governance frameworks for managing, implementing, monitoring and measuring RPA led initiatives.
- › Improved process analysis and improvement: The detailed audit and reporting capabilities also result in a more detailed understanding of process issues and aid rapid resolutions.

7.4 Service Provider Maturity Assessment

Service providers are strategically aiming for non-linear growth in the next five years. RPA is one of the initiatives in this direction. Majority of the service providers are using different definitions and nomenclature for their RPA initiatives but based on their survey responses, it is now one of their top priorities.

As per our survey, 64% of the service providers have partnered with third-party RPA software vendors. A few integrated service providers (service providers with IT and BPO offerings) are offering in-house RPA tools only. These tools are rapidly evolving to meet client requirements but they require higher degree of customisation. Other integrated players in partnerships with third-party tool providers are also developing in-house automation tools to reduce dependency and mitigate risks. Some pure play BPO service providers have developed in-house automation tool for the verticals in which they have strong offerings and are using third-party automation tools for other verticals. Third-party RPA software vendors are also seen as lucrative acquisition targets. Ratings for service providers who are currently depend (solely or partially) on third-party tool vendors would change if their competitors acquire these third-party RPA tools vendors. Service providers that have only in-house tools have budgeted and earmarked large investments to enhance their functionalities to compete with third-party automation tools.

STRATEGIES FOR BUY SIDE CLIENT ORGANISATIONS

08

Buyers – drivers, benefits, hiring impacts, RPA-readiness, target operating model and roadmap

Enterprise buyers are increasingly becoming aware of RPA as a disruptive technology that is driving exponential improvements in productivity, operational efficiency as well as cost rationalisation, which all lead to a significant impact on the service provider's bottom line.

8.1 Key drivers for buyers

RPA also provide the opportunity to re-shore or in-source RPA managed processes. This enables the buyer to regain control of processes without additional costs. Costs may even be lower as compared with off-shored processes without RPA).

Buyers are attracted by the strong returns on investments and short payback potential offered through RPA deployments. RPA implementations provide for greater predictability of costs, improving overall cost management. Buyers also recognise the opportunity to free up staff to be deployed on more strategic higher value roles. These are typically replaced by a smaller number of higher skilled staff involved in managing the software robots.

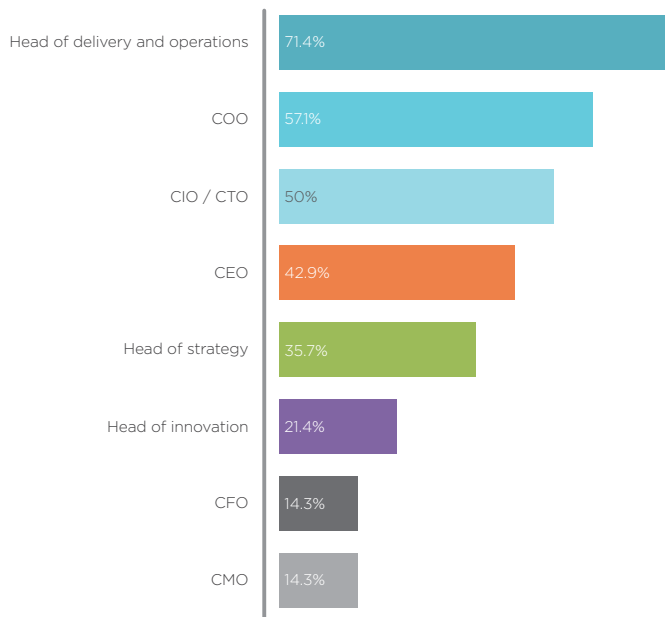
We also believe that, as RPA steadily goes main stream, many client organisations will become more comfortable in shifting to new service providers having RPA capabilities embedded with their service portfolio, from traditional incumbent service providers who are yet to deliver value

beyond traditional labour arbitrage and embrace disruptive technologies quickly. Partnering with a RPA focused service provider, client organisations can leverage economies of scale, process expertise and delivery excellence as well as faster deployments more cost effectively. Service providers with live client site RPA implementation experience can incorporate "lessons learnt" in previous implementation experience with their clients.

With increasing pressures on sustaining profitability, managing rising costs of offshoring and regulatory issues, enterprise buyers are finding RPA driven outsourcing deals appealing. Such deals do not just lower operational costs significantly. They also remove the ongoing challenges of deploying staff including attrition, training costs, annual leave management, and sick leave. Further, RPA-driven BPO deals also enable buyers to engage with service providers on high end work thereby providing a win-win situation for both service providers and buyers.

RPA initiatives are receiving a high level of support from the most senior levels of client organisations.

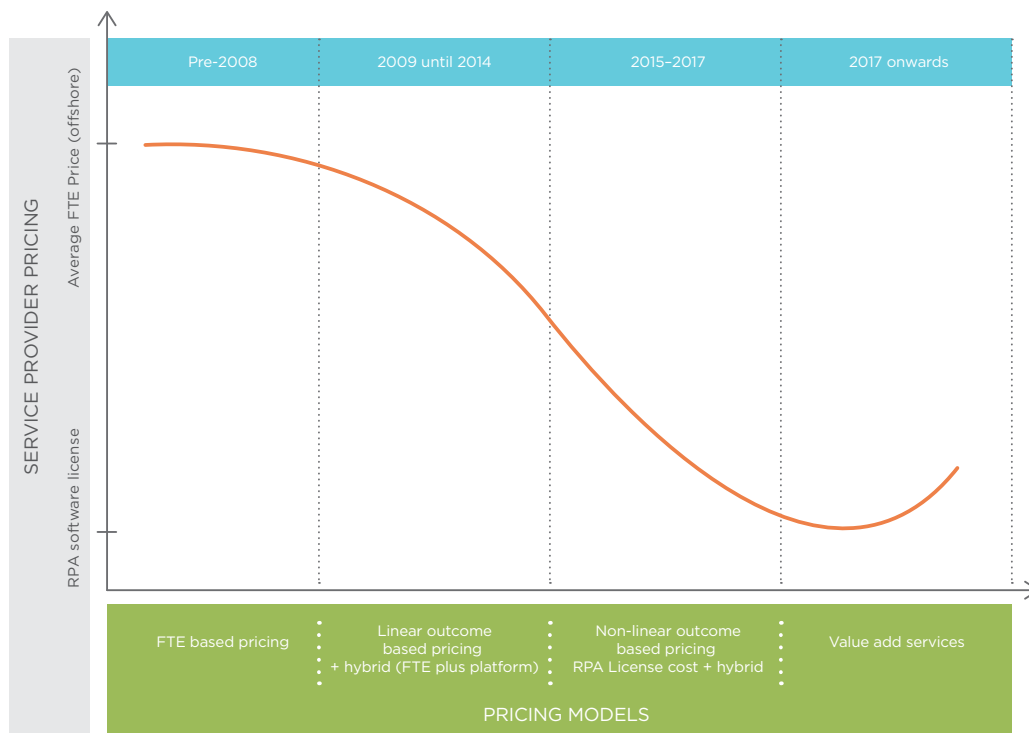
Figure 14 - Who is leading and driving RPA initiatives at client organisations



In most cases RPA adoption is being led by a combination of the CEO, COO and CIO, with strong support from the delivery units. As service providers start moving up the RPA learning curve, and slowly shift to more complex high value engagements, client organisations are expected to increasingly shift from pure play FTE based engagements to outcome based pricing contracts. Figure 15 below provides an overall scenario of evolving pricing strategies for IT/BPO outsourcing engagements from the last 15 years.

Source: Mindfields RPA survey

Figure 15 - Evolving pricing strategies



Innovation, process/delivery excellence and talent re-skilling are some of the key areas where service providers will need to focus more in the short to medium term.

Figure 15 shows the evolving pricing models for outsourcing over the last 15 years. They have moved from pure FTE (human body) based to Platform to Intellectual Property based pricing mechanism. This is also evident by service provider's strategy to move to non-linear business growth.

Source: Mindfields

8.2 Key benefits for buyers

Some of the financial and non-financial benefits of RPA initiatives for client organisations include:

FINANCIAL	NON-FINANCIAL
<ul style="list-style-type: none"> ■ Cost benefits owing to improved operational efficiencies (up to 60% reduction in contact centre and support staff) ■ Free up IT budgets and resources on more strategic projects ■ High end customer experience resulting in increased sales, profits and end user experience ■ Optimised pricing impact on outsourcing contracts for buyers – typically on repetitive low value task based processes ■ Faster RoI on integration of RPA solutions in their in-house capabilities/shared service centres focused on process, people and technology optimisation 	<ul style="list-style-type: none"> ■ Focus on high-end value proposition initiatives to drive strategic performance improvements ■ Move beyond labour arbitrage aligned outsourcing deals to complex high value engagements ■ Effective re-alignment of talent pool on complex innovation driven engagements ■ Lean and optimised operations ■ Increases scope of re skilling of existing talent by providing them innovative tools for career progression ■ Drive non linear growth model

Source: Mindfields

In the financial services sector, enterprise buyers with advanced capabilities to integrate legacy systems and automate processes will have a strategic advantage over their competitors in winning new businesses as well as boost profitability while demonstrating regulatory compliance and product innovation. With RPA, financial services companies should expect to gain in the following areas:

- › **Reduced transaction time** for high volume tasks while also achieving higher accuracy levels. This can also help achieve enhanced customer satisfaction levels
- › **Limited potential impact of attrition** on resources (onshore and offshore delivery centres)
- › **The automation of repetitive, rule-based tasks** (e.g. claims processing and transaction processing), thereby freeing up resources that can be re-skilled on higher value tasks/ work opportunities
- › **Smoother integration of legacy systems** following mergers and acquisitions (using RPA capabilities to deliver virtual integration)

Buy side organisations will also gain from RPA as outsourcing continues to remain a controversial and sensitive topic across developed markets. This is especially the case in Europe and Australia where political and cultural barriers have constrained the level of outsourcing achieved to date, despite the strong productivity improvements possible. In fact, RPA will even allow client organisations to by-pass any outsourcing debate by establishing virtual back-office or shared service operations with robotic FTEs in their local jurisdiction, at significantly lower costs (as compared to offshore human FTEs). This could be achieved by directly partnering with third-party automation software providers (which becomes another sourcing option for buyers).

8.2.1 The business case for captives

RPA can offer significant opportunities for captive centres of large organisations. The need for offshore FTE deployments will cease to exist where a suitable RPA solution is identified. RPA platforms are virtual, can be deployed anywhere, and still provide higher cost savings as compared to human FTEs in offshore locations.

The business case for captives to adopt RPA is strong and hard to resist. Client organisations operating their captive/shared service centres onshore will have a significant opportunity to gain substantially higher levels of operational efficiencies and performance quality through RPA even in onshore locations.

Client organisations that leverage RPA can have an early advantage over competitors who are yet to decide whether to maintain their captive operations, or partner with RPA software vendors to adopt RPA with the possibility of further cost reductions.

Some key areas where captive centres of large organisations are expected to gain from RPA include:

- › **Improvements to key business fundamentals**, bringing in high levels of cost savings, quality and compliance improvements, and operational efficiencies without the need to set up offshore centres
- › **Move higher up the value chain**, enabling a refocus of more internal staff to higher value adding roles
- › **Improved staff management and reduced operational costs**. As robots take over human FTEs, there will be fewer people management issues including on-going sunk costs on training (owing to attrition) and other operational/administration costs will come down significantly.
- › **Improved Monitoring and Auditing**: Stringent governance, risk and compliance standards will remain, however, the speed and ease of monitoring and auditing standard operating procedures will become streamlined as compared to traditional service delivery models

Reaping the potential benefits places an imperative for key decision makers including business owners to first identify key processes that are viable RPA candidates, and then replicate the same across other processes in a phased manner.

From a long-term perspective, we expect to see significant enhancements in RPA technology. What we are seeing now is just the beginning of the robot learning curve. With cognitive and machine learning capabilities slowly moving into RPA platforms, captive centres will have an opportunity to completely automate substantial processes across the value chain, even where complex judgemental decisions are required.

8.3 Hiring impacts among buyers

Client organisations operating on a pure captive/shared services model, with support centres primarily in developed markets, may not be able to up-skill affected FTEs due to RPA deployments. This is because hiring strategies in developed markets are quite different as compared to offshore developing markets such as India. For example, in Australia, the UK or the US, client organisations hire people having basic school-level education on low-skilled data entry, capture and manipulation roles. On the other hand, offshore destinations such as India employ entry-level graduates and even post-graduates for low-skilled rule-based tasks and activities.

In developed markets, this may not be an easy option for hiring managers to re-skill existing FTEs on other functional areas within the organisation. The minimum criteria (in terms of educational qualifications, work experience and skills sets) will not be aligned with the experience and expertise of low-skilled workers. As a result, we expect to see significant job losses in the medium to long term, especially at lower management level. This will also be the case for shared service centres operating in offshore markets (e.g. India), but the impact will be less as compared to developed markets.

From a short to mid-term perspective, client organisations will need to re-align their hiring strategies in order to move beyond low-skilled job roles, which are expected to be completely taken over by RPA platforms and other advanced business process automation tools in the next two to three years.

8.4 Implementation Strategy – Buyers

Selecting the right RPA technology and choosing the right service provider for a given client, with the right contractual arrangements are amongst the most important aspects of adopting RPA. These decisions can have a significant long-term impact on the value derived from adopting RPA tools. Developing a Target Operating Model is a strategic approach to ensuring wider needs are also fully considered, including issue management, reporting and governance. RPA implementation requires rigorous planning from the start and needs strong support from the most senior levels of the organisation.

Once a decision has been made in principle to adopt RPA tools, are a number of factors need to be considered:

1. What is the long term model that the client should work towards?
2. What type of partnership arrangement should the client adopt?
3. What are the specific steps to take to ensure readiness to implement and transition to RPA Tools?

This section discusses these and related points in detail, providing client organisations with the basis to confidently take the initial steps in adopting RPA within their organisations.

8.4.1 What buyers need to focus on in the near term

Selecting the right RPA technology and choosing the right service provider for a given client, with the right contractual arrangements are amongst the most important aspects of adopting RPA. A poor decision at this stage can have lasting impacts and take years to unwind, often involving significant cost. This is a step where some level of internal and external assessment is highly valuable.

Any decisions to adopt RPA should be made in the context of a broader and well-defined automation strategy. For any enterprise-wide transformation initiative, organisations need to be aware that an ill-designed and unplanned automation initiative can have significant consequences which result in substantially greater costs to the business, including:

- › failed realisations
- › increased in system/data capture failures
- › poor accuracy levels
- › repeated requests for support from IT to resolve issues

Client organisations need to first develop a compelling business case for adopting RPA. Driven from the top (CXO level), some the key areas that business leaders need to question before taking the RPA route are as follows:

Maturity and stability of our internal processes

1. How standardised are our processes? Is there a high frequency of change in business rules/standard operating procedures on an ongoing basis?
2. How many staff do we employ on these processes? And what form of staffing issues do we need to deal with most often?
3. What level of errors do we get? If so, it may be worth refining it to make it more stable
4. Have we completed our own internal process maturity evaluation thoroughly?
5. What is the current level of process automation that may have already been initiated? Will this require considerable re-work if we go ahead for RPA?

Business case for and readiness to adopt RPA

1. Could we get the job done in-house from existing shared services centres (onsite or offshore) by implementing RPA, rather than outsourcing to third-party service providers? And if so, what level of risk is likely to be involved? If the risk is considered significant, it is important to have suitable mitigation strategies in place
2. How much value do we stand to gain from implementing RPA and over what timeframe? Assess current operational costs per FTE via outsourcing/offshoring model versus projected costs using RPA tools (onshore or offshore).
3. Do we have the bandwidth internally to launch an in-house RPA led transformation exercise for our shared service centres in partnership with third-party RPA software vendors or their channel partners (if any)?
4. If not, does it make sense to partner with a consulting partner and / or an IT/BPO service providers who have expertise and live client site implementation experience of RPA (using third-party or in-house developed RPA tool)

Selecting/engaging a partner and tracking success

1. How mature is/are the BPO service providers with whom we are currently engaging or engaged with (in regards to automation)?
2. Do we see our existing contracts with service providers evolving to include automation, or are they primarily focused on labour arbitrage on an FTE-based offshore delivery model?
3. Operationally, how are we performing with respect to competitors (costs, people, technology, and process standardisation?)
4. What cost and productivity improvements have resulted from our process automation programs over the last two years (both internally as well as externally through service providers, if applicable)?

This exercise provides a good start point for client organisations that may be looking for some direction on what approach would suit them best. If done properly, the exercise will force some internal reviews. While it may be time-consuming, such reviews are necessary parts of what is an important set of decisions and investments. Ideally, this would require support from specialist outsourcing advisory specialists with deeper understanding of the RPA ecosystem and an ability to provide an objective assessment of the current situation.

8.5 RPA readiness assessment

Before embarking on an RPA-based program of automation, client organisations should:

- › ASSESS options of RPA tools with incumbent, Third-party RPA tools providers and non incumbent service providers
- › CONDUCT a Process Feasibility to evaluate and assess where the RPA implementation will be most effective
- › EVALUATE the different ownership models of RPA tool and contractual structures
- › ASSESS commercial viability to ensure a valid business case

8.5.1 STAGE 1 – Establish an over-arching plan for RPA implementation

Planning for the adoption of RPA will require a number of factors to be considered including:

1. Key goals and objectives expected to be achieved through RPA
2. Business case for RPA – ensuring the commercials stack up
3. Stakeholder impact assessment – ensure impacted stakeholders are suitably engaged and support is in place, especially in areas where staff are likely to be significantly impacted.
4. Define target areas of RPA implementation opportunity – by verticals, horizontals and regions
5. Order of automation/interdependencies that may exist between different sub-processes along with different systems interfaces.
6. Location of implementation – onshore/nearshore/offshore
7. Establishing resource teams and roles/responsibilities for smooth transition to virtual/robot environment
8. Risk assessment (e.g. impact on current state operations during transition phase – from human FTEs to robots)
9. Short to mid-term impact on business operations (e.g. resource alignments, process and workflow streamlining)
10. RPA implementation schedule and payback period – Clearly defining start and end dates with well documented expectations from implementation service provider (e.g. FTE reductions, cost improvements and accuracy levels)
11. Governance and Compliance framework also need to be streamlined to control and monitor non-human interfaces. They should also be streamlined to meet regulatory requirements (if any).

8.5.2 STAGE 2 – Assessing the organisation's readiness to implement

A current state assessment exercise should focus on assessing the readiness of the organisation and specific processes for the implementation of and transition to RPA tools. Key considerations for this should include:

1. Identifying the specific processes to be automated and assessment of their current state. The implementation plan will need to allow for the current processes to be suitably adjusted with simplification, additional business rules, streamlining or workarounds before RPA can be implemented. How well are the processes defined? How stable are they? How complex are they? What level of judgement is applied by the process operators in different parts of the process and to what extent can this be codified into well-defined and rigorous business rules?
2. Re-engineering current processes to eliminate waste, or unnecessary steps/processes thereby streamlining workflows, preparing the ground for a seamless RPA integration. On some occasions, re-engineering of the process might be postponed as might it be done during RPA implementation.
3. Creating process optimisation route maps to chart, or planning future state process requirements – establishing a picture of the future state which wider stakeholder groups can buy into, highlighting the opportunity available.
4. Ordering automation/interdependencies that may exist between different sub-processes

5. Establishing dedicated in-house function (e.g. a 'Robotic Automation Command Centre' (RACC)) to manage potential bottlenecks or issues during RPA implementation as well as post Go Live (e.g. testing applications, fix bugs, optimise robot execution processes and network connectivity)

Reviewing some of the most critical questions will help clients visualise an organisation-wide "Internal RPA Readiness Assessment" dashboard that will help CXO level leaders devise an approach strategy to reflect their growth ambitions, internal capabilities and visioning for automation and cost improvement initiatives from a long term perspective.

Formalising the internal assessment program may require client organisations to take support from specialised RPA consultancy firms as well as business process consultants (in-house/external) to identify best possible mix of implementation strategies.

For enterprise buyers including those client organisations who are considering RPA implementation in partnership with automation software vendors, it is important that

they conduct their own internal due diligence before committing considerable investment. The support of an experienced and objective consultant can often pay for itself through the service provider selection process, establishing strong contracts, minimising risk and reducing potentially significant costs.

8.6 Implementation Roadmap

A typical high level implementation roadmap for an enterprise buyer embarking on an RPA driven deployment strategy are as follows:

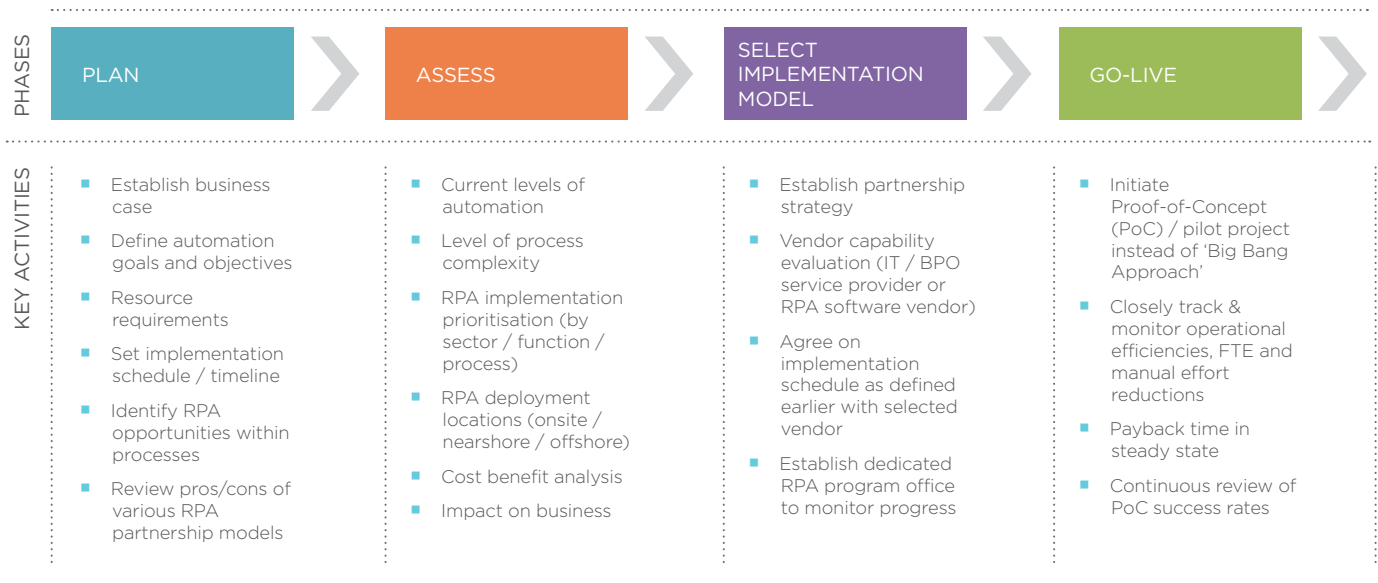
Plan and prepare (it should pay for itself within 12 to 15 months)

- › Define automation goals and objectives
- › Establish business case for RPA – Secure management/ CXO level buy-in (driven from the top to business/ process owner levels across functional departments)
 - + Quantify projected benefits from robotic automation (e.g. setting cost savings targets not less than 50% as compared to current manual/human FTE based costs over the next 12 to 18 months post deployment)
 - + Strategic decision making – Continue delivering the process manually/current in-house teams / or through existing business process automation tools OR
 - + Partner with specialised IT/BPO providers having extensive RPA implementation capabilities OR
 - + Partner with RPA automation software vendors (e.g. Automation Anywhere, IPSoft) for in-house implementation (onsite)
- › Identify and establish core RPA team (in-house) with well-defined roles/responsibilities
 - + Team may comprise IT leads, process experts and vertical/functional business heads
- › Establish set timelines/implementation schedule for smooth transition to RPA from manually managed processes

Assess

- › Review and assess current state of operations (financial/non-financial)
- › Identify processes having a high degree of automation opportunity
 - + RPA implementation case stronger if:
 - + Processes are highly rule driven/repetitive with highly regulated structures in place
 - + Transaction volumes are high
 - + Need access to multiple systems/applications
 - + Limited need for human intervention / judgement
- › Assess current levels of process complexity
- › Prioritise RPA candidates based on the simplicity and ease of the process flow (e.g. highly standardised, well defined business rules/operating procedures)
- › Assess effectiveness of the preferred RPA deployment location – onshore / nearshore / offshore
- › Expected impact on business operations – short to medium term (within first six months of Go-Live)

Figure 16 – RPA Implementation Roadmap



Source: Mindfields

Select implementation model

- › Vendor assessment and evaluation (capability review)
 - + RPA Implementation experience (in-house RPA tools or third-party RPA expertise)
 - + Vertical specialisation
 - + Domain specific excellence
 - + Past success rates on RPA engagements in similar functions/processes
 - + Service provider vision - Value driven philosophy or traditional labour arbitrage focused
 - + Established RPA CoEs (across domains, functions) to manage small to large scale RPA implementations
- › Select service provider (satisfying more than 90% of vendor assessment and evaluation parameters)
 - + Ensure technology selected has strong future growth path; also consider short term duration contracts as this can mitigate the risks of getting locked into an obsolete automation tool in what is still a rapidly evolving space
- › Establish RPA Program Management Office (comprising of key members of the implementation and monitoring team – service provider and the client)
- › Agree on pre-defined RPA implementation timelines
- › Establish governance, reporting and change management protocols for smooth communications and workflow between client and implementation provider

Go live

- › Initiate Proof of Concept/pilot projects (e.g. RPA deployment plan for select sub-processes of F&A – accounts receivable)
 - + Time duration dependent on the complexity and scale of the process chosen for RPA implementation
 - + PoC can be initiated with a small process of around 5-10 FTEs
- › Closely track and monitor operational efficiencies, FTE and manual effort reductions during the PoC phase
- › Keep senior management and wider stakeholder groups appraised on implementation performances, success rates, key learning observed, challenge areas, mitigation steps adopted, and time and cost budgets met
- › Based on PoC success/failure rates, client teams may choose to expand scale of RPA deployment across other processes within the organisation

The above approach provides an opportunity for client organisations to plan out and closely review critical phases of the RPA implementation roadmap more efficiently. In addition to closely engaging key stakeholders as part of the decision making process, enterprise buyers need to be careful, especially during the ‘Select Implementation Model’ phase of the RPA engagement model. Client organisations primarily have three options to choose from:

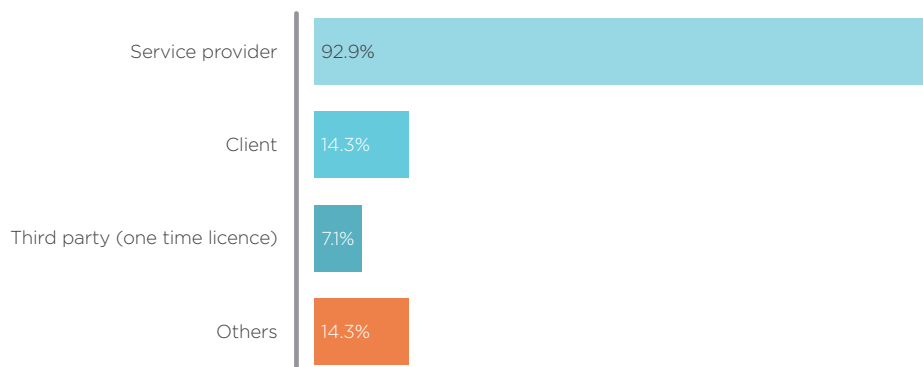
- › Type I: Partner with third-party RPA software vendors (e.g. Blue Prism, IPSOFT or Automation Anywhere)
- › Type II: Partner with IT/BPO service providers having in-house developed, proprietary RPA tools
- › Type III: Engage with IT/BPO service providers that have strategic partnerships with RPA software vendors and considerable experience and expertise in third-party RPA implementations across client sites (onshore/offshore/nearshore)

As per our survey and with reference to Figure 17, 92% of service providers have ownership the tool. This might change as RPA ecosystem evolves and matures.

Pricing and ownership strategies are still in the initial phase of evolution. Both are interdependent and there might not be one answer as an optimal strategy both from client and service provider perspective.

We recommend that client organisations should have different Partnership strategies for different type of processes after in depth due diligence. Please refer to Section 9 for detailed analysis of “Ownership and Pricing Strategies for RPA tool”

Figure 17 – Who owns the tools in RPA engagements



Source: Mindfields RPA survey

Types of Client Organisations	Current Trends (Excluding “Proof-of-Concept” Pilots)
Shared services and Captives (onshore/offshore)	Partnering directly with RPA software vendors or channel partner
Clients who have already outsourced	Partnering through incumbent service provider or use their in-house tool
Clients who have not outsourced	Partnering directly with RPA software vendors or channel partner
Public Sector Shared services	Partnering through incumbent service provider or use their in-house tool

Note: Type (B) Clients organizations are also evaluating other service providers if the incumbent does not have strong RPA offerings to meet client requirements. Generally, Pricing Strategies of non-incumbent service providers are quite aggressive in these instances.

TARGET OPERATING MODEL

09

Target Operating Model – for captives/ shared services and third-party

The key objective of establishing a well-defined Target Operating Model (TOM) is to create an opportunity for client organisations to maximise business value by harnessing the virtual workforce and other organisational resources to best effect, whilst maintaining control over future costs and with stronger risk mitigation strategies.

Client organisations and service providers would be well served by establishing a well-structured TOM before transitioning from the robot build and design phase to Business-As-Usual (BAU) / steady state. This is important as the operations team should be made aware of the pre-requisites of RPA i.e. what needs to be completed in advance, well before processes are automated and transitioned from human operators to robot applications. This is possible when a stable IT environment exists and there are no issues with hardware or software systems either operating on-premise or in a cloud based environment.

Some of the key areas that clients should concentrate on while establishing a TOM from the current operating model are as follows:

Table 6 – Target Operating Model

Focus Areas	Target Operating Model (TOM) – Points to consider
<p>Refining ownership structures</p>	<ul style="list-style-type: none"> › Who will own the software – is this owned by and licensed from the RPA software provider or the service provider? › Who will maintain the RPA tool on an ongoing basis? › What obligations lie with the software provider vs. the service provider vs. the client organization to ensure the robots perform as required and with reliability? › Key considerations to review may include: <ul style="list-style-type: none"> + Licensing directly with the software provider might mitigate risks arising in case a the software provider is acquired by competitor, which has high probability while this new space is still developing + Avoiding in-house tools from a service provider might minimize risk of lock-in to a service provider
<p>Change Management</p>	<ul style="list-style-type: none"> › Establishing a communications roadmap between robot operational teams and business / process owners (client) to prevent any misalignment between changes in service demands, operating procedures etc. › Establish change management procedures to closely monitor and escalate issues to respective owners accountable for issue resolution › Define clear guidelines for situations where robots raise red flags in exceptional areas – Establish a reporting and escalation resolution matrix clearly identifying who is responsible or accountable for what activities › Periodic reporting of progress and issue areas to senior management – Establish real-time accessible dashboards providing a 360 degree view of robot KPIs and benefits realised

Focus Areas	Target Operating Model (TOM) – Points to consider
Performance Management	<ul style="list-style-type: none"> › Establishing revised SLA parameters in-terms of faster transaction processing speeds and accuracy levels › Measuring, managing and reporting the performance levels to key stakeholders (operational leads of client and RPA implementation partner) › Taking course corrective actions in exceptional cases requiring human intervention (involving process experts, software architects and application developers) whenever required – standby team to prevent any impact on business operations › Continuously identify opportunities for improving robot operational performance
Defining roles and responsibilities in a virtual workforce environment	<ul style="list-style-type: none"> › Focus on clearly establishing well defined roles and responsibilities in the following areas: <ul style="list-style-type: none"> + Nominate key resources accountable for managing robot performance, uptime and compliance adherence + Responsibility and accountability of dedicated resources on re-programming robots as a result of change in business rules + Identifying key operational teams (implementation partner) responsible for coordinating together to deliver the required results to business + Defining roles and responsibilities of business (e.g. query resolution, managing exceptions etc.) – Nomination of single point of contact (SPOC) from business to take appropriate action within set time frames › Clearly defining and communicating accountabilities among key parties involved in the RPA implementation phase (RPA software vendor, implementation partner and client organisation). Key areas may include: <ul style="list-style-type: none"> + Keeping software patches updated on a real-time basis + Implementation partner’s responsibility to maintain uptime, service levels, accuracy, reporting, issue resolution and regulatory compliance in close coordination with RPA software vendor + Clearly documenting expectations, roles and responsibilities including achieving revised service levels from the implementation parties in the contract agreement
Robot workforce management	<ul style="list-style-type: none"> › RPA will not ensure 100% automation and elimination of all human operators/managers › Dedicated human resource ‘Robot Manager’ may be assigned responsibilities for managing and monitoring robot performance, issues, robotic resource allocation activities, exception handling and speed and accuracy levels › Creating a robot trainer team may include a team of highly trained software developers and process experts to define development requirements, including testing and deploying robots in live environment
Governance	<p>Having appropriate levels of governance are in place is an essential element of ensuring the RPA tools deliver on expected business outcomes. Key considerations include:</p> <ul style="list-style-type: none"> + Should governance be just within the client organisation or span across the service provider as well? + Who takes the responsibility if a robot malfunctions? (e.g. if payment missed, who pays the penalty – Is it the implementation partner or the RPA software provider) + Who is responsible for establishing robot change control procedures? Does it lie with the client organisation (as part of their change control policies) or should they be refined in close collaboration with the implementation partner?
Reverse Transition Plan	<p>Buyers should develop Reverse Transition Plan to have flexibility to move or swap with another RPA tool or service provider</p>

Table 7: Pricing and Ownership Strategies

Types of Process	Due Diligence Steps	Ownership and Pricing Strategy
Already outsourced	<p>Step 1: Benchmark Incumbent service provider's RPA tools and capabilities to the tools available in the market.</p> <p>Step 2: Assess Business case of moving to other service provider if incumbent service provider RPA solution fails to meet requirements.</p> <p>Step 3: Assess if they can acquire and develop in-house capabilities for reverse transition in medium to long term depending on the other non financial drivers (for automated component of process) and contractual obligations.</p>	<ul style="list-style-type: none"> › Buy side client organisation should own the tool after evaluating the different pricing options for the automated component of the process. › If the Incumbent service provider is selected- the pricing of human interface should be negotiated depending on onshore/offshore location. › Gain sharing: it should be define objectively depending on the quality of data available to ascertain the gains of a RPA initiative. It is generally subjective to estimate the exact efficiency gain in short to medium term.
Not yet outsourced	<p>Step 1: Evaluate service providers along with RPA tools (in-house and third-party tools) depending on the process which has been considered.</p> <p>Step 2: Develop in-house capabilities with training from RPA tool provider and its channel partners.</p>	<ul style="list-style-type: none"> › Buy side client organisation should own the tool after evaluating the different pricing options for the automated component of the process. › If any service provider is selected - the pricing of human interface should be negotiated depending on onshore/offshore location. › Gain sharing: it should be defined objectively depending on the quality of data available to ascertain the gains of a RPA initiative.

Key Points for consideration for Service provider

1. Ability to package a solution with value added services would be key factor.
2. Need to move up the value chain beyond being reseller of RPA tools.
3. Pricing of in-house tools should be competitive.
4. M&A strategy to acquire RPA tool inorganically.
5. Proactive to offer RPA solutions to existing clients and cannibalise the current revenue to grow for tomorrow otherwise client might be lost to competitors with strong RPA offerings.

Key Points for consideration for buy side organisations

1. The ownership of niche RPA tool is critical as they are attractive acquisition targets by competing service provider.
2. Reverse Transition strategies should be planned and tested on regular basis. This will provide flexibility to swap between different and better RPA tools (if need arises).
3. Pricing contracts should be of terms no more than 12 to 18 months.
4. Train and develop in-house capabilities (onshore/offshore) in RPA tools domain.
5. Continuously evaluate existing and emerging RPA tools in the market.

FUTURE TRENDS

10

Future Trends: A shift in how buyers and service providers do business

New levels of process and delivery optimisation are expected for service providers across the value chain. Not only is RPA recognised as a disruptive technology, it has provided the tools to enable service providers to move away from low-skilled, repetitive rule based FTE based contracts to higher value engagements, which also help build deeper and more strategic relationships with their clients.

As a result of RPA implementations across industry specific and horizontal processes, we expect to see FTE reductions of more than 25% and a shift towards non-linear outcome based pricing. As RPA is acting as an enabler for technology-led process automation initiatives, businesses will need to be highly proactive in using their outsourcing partners for outcome-based complex project engagements that derive significant business value. IT/BPO service providers will need to deliver cost effective, differentiated solutions at a much faster pace without compromising on quality. Client organisations will continue to demand more innovation while tying payouts linked with outcomes.

RPA has emerged as a fresh new opportunity for service providers to derive further value from their business model, delivering a more streamlined and effective way to radically shift the way processes have been managed across industries. 92% of service providers surveyed confirmed their commitment to invest in RPA technologies to expand non-linear revenue growth opportunities. This is strong recognition of the significant value expected from this new area.

We believe RPA will revamp how traditional service providers have been operating over the last decade. Some of the key future prospects that we see arising from are now covered in the following sections:

10.1 The rise of autonomics

With the continued rise in labour costs in major off-shoring destinations, robotic automation will offer immediate value as it replaces human operators with robotic FTEs. As next generation robotic automation software vendors continue to invest in new technologies, we expect to witness the rise in self-learning and artificial intelligence capabilities embedded across RPA applications.

In the near to mid-term, we expect a new breed of software vendors to develop advanced data mining and analytics capabilities. These will further expand the scope of automation across more complex processes and enable automation of processes which involve varying degrees of unstructured content/data.

Examples of the type of unstructured data that may be mined or analysed to determine an action include freeform emails or feed from social media.

By leveraging an increase in autonomics, organisations will need to do the following to guarantee a successful RPA implementation:

- › re-engineer their existing processes,
- › streamline evolving business requirements, and
- › have strong change management controls and governance framework

The net impact of increasing autonomics will continue to erode any labour arbitrage benefits from process off-shoring, and this will lead to increasing consideration towards in-sourcing as a strategy, as discussed next.

10.2 In-sourcing as a strategy

Client organisations are expected to increasingly shift RPA enabled processes onshore, although this may not happen immediately. A wide range of challenges that typically arise in off-shoring deals including risk, governance and regulatory issues as well as data security and privacy concerns. By adopting RPA, clients will be able to take back control over these issues.

Over the next few years, service providers that are slow in embedding RPA and passing on the cost and operational benefits to clients will face significant risk of losing new business where clients will prefer to “in-source” back certain processes, thereby removing the service provider from the ecosystem completely.

However, this will not be the end of the road for service providers. In fact, enterprise buyers will continue to partner and engage with visionary service providers and work on high value engagements focused on enhancing business value at a strategic level, rather than focus on low-skilled and human effort based repetitive work process outsourcing engagements.

10.3 Merging CIO-CFO goals and visioning

The CIO's budget has been falling in the last five years due to advances in technology and fewer capital-intensive solutions. There are no longer five-year ERP implementation projects or major infrastructure initiatives. With stringent IT budgets, CIOs and CTOs generally now have strictly defined performance metrics, adopting a “keeping the lights on” approach. New roles like Chief Data Officer, Chief Digital Officer, Chief Security Officer have been delegated with responsibilities which were earlier part of CIO role. These roles still report into CIO but it has released CIO's bandwidth to focus on organisation wide strategic initiatives.

As automation led IT implementation initiatives become the most preferred technologies for operational improvements, it becomes imperative for the CIO office to leverage these technologies, thereby making the CIO's office an agent of change, enhancing their roles and influence within the C-Suite with a clear focus on business outcomes.

The role of the CIO has the potential to be significantly enhanced at the corporate top table, including with the CEO and CFO. As the proponent of automation technologies, potentially very disruptive, the CIO can

help the business drive substantial efficiencies and cost improvements. Achieving this, however, requires the CIO to proactively champion and drive such opportunities across the business. Conversely, where senior business managers and CXOs recognise the potential of RPA and are proactive in demanding this from IT, the role of IT may be limited to that of a provider with responsibility only to select tools that may best sit alongside the existing technology environment. Automation can also be included in the “Digital initiative “ from CIO perspective.

Since the global financial crisis, CFOs have been tasked with religiously monitoring any IT spend and aligning the variability or non-linear Expenses to Revenue ratios. The CFO is focused on getting an optimal outcome and value of every incremental dollar spend on any initiatives including IT. One of the major pain area of CFO is to control/manage the non linear variability between revenue and expenses.

The following key attributes of RPA would assist in aligning CIO and CFO goals/visions:

1. Low capital expenditure
2. Outcome based non linear pricing
3. Combination of IT and business process
4. Auditing functionality of automated component of the process
5. Non intrusion to existing IT applications and systems
6. Time to execute and implement is short with near 100% accuracy.
7. Optimal utilisation of critical human assets
8. No long term contractual obligation
9. Security and ownership of data remains within organisation
10. Processes no longer bound by shifts with overtime rates and labour laws

10.4 Increasing complexity in governance structures

Any traditional IT/BPO engagement model using many human FTEs engaged in repetitive, rule-based, high volume tasks, runs the risk of human error. This can lead to non-compliance of standard operating procedures, and breach of data privacy and security protocols. This non-compliance costs an organization money and can damage its brand, profitability and future success.

Client organisations will be able to address their compliance and security risk concerns through RPA as it provides them an opportunity to proactively identify and manage possible compliance or data privacy and security breaches. As RPA allows data and processes to be retained onsite, it becomes much easier for real-time audit trails to take place on an on-demand basis. Using RPA, clients will be able to manage processes more quickly and efficiently with higher levels of success rates and minimal involvement of human resources.

10.5 Outcome / business value driven

Traditional BPO engagements involved buyers embedding process based outcomes in their service level agreements with service providers.

As RPA becomes part of the service delivery model, client organisations will increasingly focus on re-evaluating and assessing how work is getting done and how it is being priced. For example, instead of pricing deliverables on the volume of transactions processed, pricing will be defined based on how much strategic impact the service providers' actions took to enhance profitability of the client's business division. Complexity of the projects will vary, but will be more successful where mature clients and service providers have a good understanding of and trust in each other's capabilities.

For organisations that are new to the concept of outcome-based pricing, it makes more sense to adopt a hybrid pricing approach during the initial phase. For example:

1. price some work activities on an FTE basis (complex, unstructured and judgment-driven tasks)
2. adopt as a pay-as-you-use model for the remaining automation-enabled tasks/activities leveraging RPA
3. as RPA matures, service providers might look to charge each process on a click by click basis

To substantiate this trend, over 20% of the service providers interviewed as part of the Research study confirmed their approach towards establishing gain sharing pricing models. Around 14% of the participants would prefer adopt outcome-based and transaction-based pricing arrangements.

10.6 Growth in strategic partnerships

As the market continues to evolve, there is significant opportunity for clients to re-shore processes by partnering with RPA software vendors directly. These include IPSoft, Automation Anywhere and Blue Prism. Service providers will not only speed up their 'go to market' strategies for leveraging advanced technologies but also gain exposure in key high-value outsourcing engagements going forward. As most service providers reassess their existing processes and frameworks against today's advanced models for automation, we expect to see more of these strategic partnerships.

Figure 19 shows 64% of service providers surveyed partnering with third-party RPA software vendors and acting as a reseller of RPA or sharing of licensing fees. This creates an opportunity for service providers to gain considerable expertise and implementation experience in third-party RPA tools.

To substantiate this, around 36% of the service providers who participated in our study have live client site implementation experience using RPA tools of Automation Anywhere, 50% with Blue Prism and around 21% using IPSoft RPA tools.

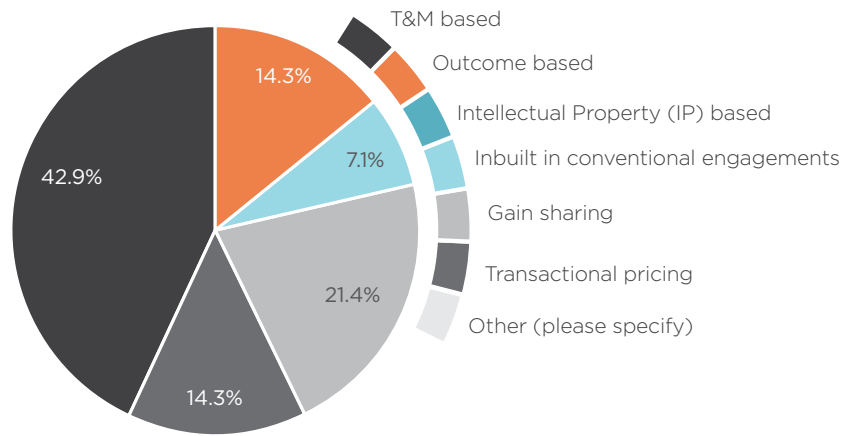
On the other hand, client organisations will have an opportunity to partner with specialised third-party automation software vendors directly, thereby eliminating service providers from the role. They will no longer need to go through long vendor selection processes for outsourcing repetitive, rule-based processes in specific functions, e.g. finance and accounting or supply chain. They will instead be able to deploy RPA onshore without compromising on quality, costs and change in existing IT infrastructure.

Large captive centres of client organisations will benefit from bringing in significant operational and cost efficiencies through RPA without outsourcing back office functions to third-party service providers. Most automation software vendors will identify scalable processes that can be automated, and provide the necessary training and transitioning support.

Currently RPA tool providers are more focussed on License based revenues but they might expand into service based offerings in medium to long term.

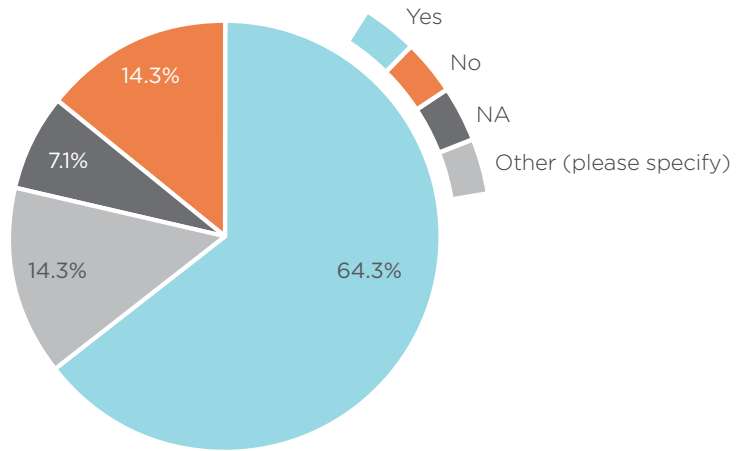
NOTES

Figure 18 - Types of Pricing Models Adopted by Service Providers



Source: Mindfields RPA survey

Figure 19 - Percentage of Service providers having Partnership with Third-party tools provider



Source: Mindfields RPA survey

10.7 RPA software landscape based on capability to scale

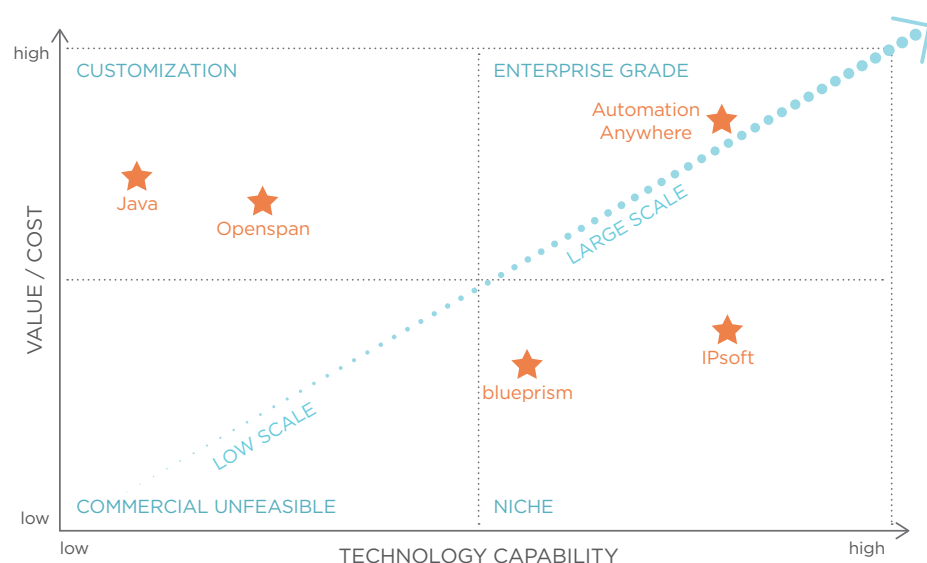
RPA software landscape is evolving rapidly. There are some platforms which might be difficult to scale with and automate any process. Conversely, RPA software with minimum functionalities might be easier to deploy and configure but might fail to achieve desired results. There is a need to think of RPA software as enterprise software platform and for striking a balance between functionality and value cost with capability to scale. Scale is needed to recover initial set up costs which have extreme ranges for different software.

We have segmented the RPA software in this graph. It is based on the following assumptions:

1. RPA software provider data is based on primary research and discussions with the client organizations.
2. Some of the RPA software provider included in the graph have small deployments at this stage whereas some have large deployment base. Hence it might be difficult to conduct a comprehensive assessment.
3. In the last 12 months, there has been emergence of other small RPA tools and also there is acceleration of development of in house tools by service providers. We have not covered them in this graph but we intend to cover them in the next version of RPA report in 2018.
4. We have not covered last generation macros and screen scrapping tools. These tools fail to be classified as RPA on the basis of our definition of RPA.

Quadrants	Description
Customization	The customization quadrant covers RPA tools that require heavy configuration and coding which exemplifies a high cost-to-value ratio. These tools generally have a low to medium technology capabilities.
Commercial Unfeasibility	RPA tools in this quadrant have a low value-to-cost ratio and technology capability. It results in lengthy and costly deployment.
Niche	RPA platforms in this quadrant are expensive, yet powerful, with advanced technology capabilities and low value-to-cost in long term. This combination confines niche solutions to specific domains such as call center or mortgage processing.
Enterprise-Grade	RPA platforms in this quadrant combine high scalability with high configurability (with minimum or no coding required), allowing large scale deployments. They possess a high value-to-cost ratio and high technology capabilities.

RPA software landscape based on capability to scale



OUR RESEARCH METHODOLOGY

11

Our Research Methodology

This independent research-based market evaluation study has been conceptualised and compiled by Mindfields. It provides in-depth coverage of the strategies being adopted by leading outsourcing service providers for RPA to deliver value and cost savings beyond labour arbitrage.

This Research Study is not directly or indirectly sponsored by any service provider.

Our methodology had four stages:

Stage 1: Understanding the drivers for RPA's evolution from buy-side and service providers.

Stage 2: Collecting data through questionnaires completed by leading IT/BPO service providers regarding their strategies for RPA. The questionnaire is focused on:

- › Extent of RPA implemented internally in their own organisation
- › Go-to-market strategies
- › Pricing strategies
- › Live RPA implementation expertise and experience
- › Key verticals and processes witnessing higher RPA adoption levels
- › In-house vs. third-party tools
- › Impact of RPA on work force
- › Pricing for RPA engagements
- › Cost rationalisations realised as a result of RPA implementation.

Stage 3: Validating the survey responses by:

- › Interviewing key senior executives at service provider organisations leading RPA strategies
- › Validating the responses submitted through the questionnaire
- › Mapping key parameters in the live case studies as further evidence of the RPA capabilities of service providers.

Stage 4: Evaluating and ranking each service provider based on the results obtained in Stages 1-3.

11.1 Assessment Methodology

11.1.1 Scope and Approach

The scope of the research study covers 12 leading IT/BPO service providers: HP, Dell, Cognizant Technology Solutions, IBM, IGATE, Infosys, Sutherland Global Services, EXL Services, WNS, Tech Mahindra, Genpact and Wipro.

Our research and data-gathering runs until July 2015. Ratings are evolving and we would aim to release another assessment in January 2018.

Our assessment and ratings of the maturity level of service providers are based on and limited to the following:

- a. Survey responses
- b. Interviews and discussions with key executives of the service providers
- c. Presentations and information decks
- d. Secondary research
- e. Case studies submitted in Mindfields template (Case Studies and Examples section)

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